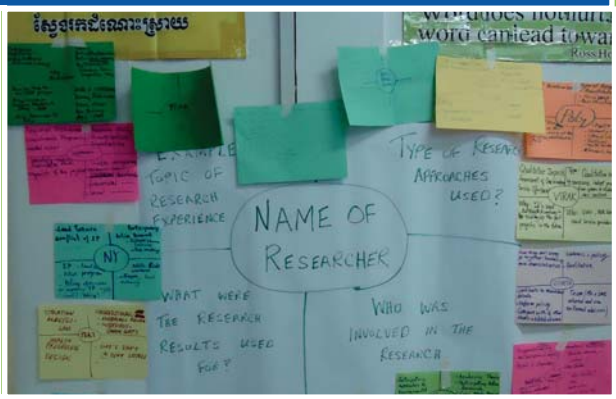
RESEARCH PROJECT DEVELOPMENT AND MANAGEMENT—A HANDBOOK



August 2013
Phnom Penh, Cambodia

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CAMBODIAN ECONOMIC ASSOCIATION
CCC
THE LEARNING INSTITUTE

RESEARCH PROJECT DEVELOPMENT AND MANAGEMENT—A HANDBOOK

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Research Project Management and Development – A Handbook
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ACRONYMS & ABBREVIATIONS

ADB	Asian Development Bank
ANZ	Australia and New Zealand Banking Group
AusAID	Australian Agency for International Development
CAPRI	Collective Action and Property Rights
CBNRM-LI	Community Based Natural Resource Management—Learning Institute
CCC-ADI	Cooperation Committee for Cambodia—Analysing Development Issues Project
CDRI	Cambodia Development Resource Institute
CMLN	Co-Management Learning Network
CSES	Cambodia Socio-Economic Survey
D&D	Deconcentration and Decentralisation
DfID	Department for International Development
DRF	Development Research Forum
EC	European Commission
EoI	Expression of Interest
EU	European Union
FGD	Focus group discussion
FO	Farmers' organisation
IDRC	International Development Research Centre
IFPRI	International Food Policy Research Institute
KII	Key informant interview
LFA	Logical Framework Analysis
LI	Learning Institute
NGO	Non-government organisation
NIS	National Institute of Statistics
PAR	Participatory Action Research
PPA	Participatory Poverty Assessment
PERT-CPM	Programme (or Project) Evaluation and Review Technique—Critical Path Method
PPA	Participatory Poverty Assessment
PPT	Power Point
RBM	Results Based Management
ROM	Results-oriented monitoring
RPDM	Research Project Development and Management
SEILA	Social Economic Improvement and Livelihood Agency (Government programme for decentralisation, socio-economic improvement and local administration; Khmer term for "foundation stone")
ToR	Terms of Reference

PREFACE

The reputation of CDRI, Cambodia's leading independent development policy research institute, stands or falls on the quality and relevance of its research—its design, implementation, analysis, presentation and communication. I am pleased to introduce this new publication *Research Project Development and Management—A Handbook,* which has been developed as part of our ongoing commitment to building the knowledge, skills and professionalism of Cambodian researchers in undertaking policy relevant research on development issues. We are fortunate at CDRI that we attract some of Cambodia's brightest young graduates and postgraduates who are interested in contributing to Cambodia's development through a career in development research. However, they often come to us with limited or uneven knowledge and experience of research project design, methodologies and management, especially when the research aspires to be "policy relevant".

CDRI's 2011-15 strategic plan includes a commitment to "deepen the skills and expertise of CDRI's researchers through technical advice, mentoring, and peer review by other experts in their fields, postgraduate study opportunities for Masters and PhDs, and professional development opportunities to build technical expertise and research management, communication and representation skills". This is achieved through both in-house capacity building and training, made available to wider participation by young researchers from other institutions where possible, and a policy of actively promoting and supporting postgraduate study and professional development through scholarships and programme-based funding.

This genesis of this handbook lies in the programme of the first 2008-11 phase of the Development Research Forum (DRF), a partnership of leading Cambodian research institutions—CDRI, the Learning Institute, the Cambodia Economic Association, the Cooperation Committee for Cambodia, the Supreme National Economic Council and the Royal University of Phnom Penh, supported by the International Development Research Center of Canada. Its broad goal was to build a "research culture" and to bridge the research-policy gap in Cambodia. Under the umbrella of the DRF partnership, a CDRI-DRF Training on Research Project Development and Management programme was collaboratively designed and delivered to young researchers from these partner institutions. We hope this manual, generated by the programme, will be a useful resource for the future training of young researchers in Cambodia.

I would like to express my sincere appreciation to all those who have contributed to either making the programme a success or producing the manual, particularly Dr Rebecca (Pem) Catalla, CDRI's research adviser, who has been the primary coordinator and driver of this important initiative.

Larry Strange
Executive Director, CDRI

ACKNOWLEDGEMENTS

Capacity building is an ongoing activity at CDRI and forms an important part of its mission. The Research Project Development and Management (RPDM) training course was one of the many formal and informal efforts to enhance and strengthen the capacities of CDRI and non-CDRI colleagues. This particular course, supported by the International Development Research Centre (IDRC) through the Cambodia Development Research Forum (DRF), brought together a distinguished set of facilitators and participants, without whom the programme would not have been as successful. Our deep thanks especially go to them and their respective institutions, as well as the CDRI colleagues who made time to engage in this training:

- Mr Toby Carson, Learning Institute (LI)
- Dr Herminia Francisco, International Development Research Centre (IDRC)
- Dr Hean Sokhom, Centre for Advanced Study
- Mr Kent Helmers, research consultant
- Dr Kianwoon Kwok, Nanyang Technological University, Singapore
- Dr John McAndrew, Cooperation Committee for Cambodia—Analyzing Development Issues Project (CCC-ADI)
- Dr Sin Sovith, Australian Agency for International Development (AusAID)
- Dr Graeme Storer, Vicheasthan Bandosbondal Neakropkrong Kange
- Dr Jan Taylor, LI
- Mr They Kheam, National Institute of Statistics (NIS), Cambodia
- Ms Esther Velasco, GenderWorks
- Dr Chem Phalla, CDRI
- Mr Em Sorany, CDRI
- Dr Kim Sedara, CDRI
- Mr So Sovannarith, CDRI
- Mr Ung Sirn Lee, CDRI
- Mr Larry Strange, CDRI

Grateful acknowledgements are also due to the RPDM course participants who actively contributed to the meaningful discussions during the sessions:

- Mr Chen Sochoeun, CCC-ADI
- Ms Hak Sochanny, CCC-ADI
- Mr Huon Thavrak, PhD, Royal University of Agriculture
- Mr Keo Socheat, CDRI
- Ms Khuon Chandore, CCC-ADI
- Mr Kim Sour, CDRI
- Mr Koy Ra, PhD, CDRI
- Mr Kruy Virak, CDRI
- Mr Mean Ratanak, LI
- Mr Ros Bansok, CDRI
- Mr Roth Vathana, CDRI
- Mr Sen Vicheth, CDRI
- Ms Sok Sorphoarn, LI
- Ms Sum Sreymom, CDRI

There were many others who supported the preparation of this handbook. Colleagues at the Learning Institute (LI) – Mr Srey Marona, Mr Toby Carson and Dr Jan Taylor – merit special

mention for their inputs into this training and for the case study on one of LI's project experiences. A documentation consultant, Ms Teresa B. San Buenaventura, prepared the CDRI case study also covered during the course, documented the four course modules as these were in progress and compiled the course materials towards the development of this handbook. Mr Allen Myers extended valuable language assistance on this document. CDRI colleagues to be especially thanked are Ms Susan Watkins for her guidance on a range of concerns in the process of finalising this material, as well as Mr Ouch Chhuong, Ms Oeung Bon Thyda and the other administrative staff who assisted the smooth conduct of the course in a host of ways. Finally, Mr Larry Strange, CDRI executive director, and Mr Ung Sirn Lee, director of operations, gave this endeavour their active and unwavering support, while Dr Srinivasa Madhur, director of research, ensured the completion and publication of this handbook.

Once again, we thank everyone for their solid support to this training course and the development of this handbook.

PART ONE—INTRODUCTION

PURPOSE OF THE HANDBOOK

From March to August 2011, over a period of six months, CDRI-DRF ran a training course on Research Project Development and Management (RPDM).

The contents of the course have been organised and refined into this handbook to serve as a reference guide and tool for research managers at CDRI and DRF in the effective development and management of their respective research programmes and projects.

It is hoped as well that this handbook will be a useful guide and reference for other institutions that share the need for strengthening the research development and management capabilities of their staff.

CONTENTS

Part One provides the background and purpose of the handbook and introduces its contents.

Part Two discusses the concepts, principles and processes that will guide the research managers as they develop and manage research projects for their research institutions. The topics are divided into four chapters:

Chapter One, Conceptualising the Research Project, provides an overview of project management in the context of research, the key issues in research project conceptualisation and the principles and processes involved in research project formulation.

Chapter Two, Planning the Research Project Effectively, includes the use of management tools for planning and mobilising resources, review of the literature, methodological considerations, preparing the work plan and budget and putting the research proposal together.

Chapter Three, Keeping the Focus in Executing/Implementing the Research Project, addresses the exercise of rigour when managing the implementation phases and tasks, coordinating and keeping the research team together, maintaining research project documents and records, completing the project and maintaining effective communication with team members, donors and other stakeholders.

Chapter Four, Monitoring and Evaluating the Research Project, dwells on how research managers can keep track of the strengths and weaknesses of research implementation to ensure quality of activities and outcomes in every phase, enhance their sense of ownership and pride over the project and strengthen their efforts to promote or advocate for the use of research findings in policy and grassroots development interventions.

The contents of the handbook are a summary of the key points of the management concepts, tools and techniques in research that are covered in the RPDM training. They were made richer by the management issues and dilemmas raised during the training from case studies of actual research and the experiences of the various institutions represented, of experts in research project/programme management, of the resource persons/facilitators and of the training participants themselves.

OVERVIEW OF THE COURSE

Rationale

The training was a capacity building activity that is one of key areas in CDRI's in-house training series to advance its 2011-20 Country Research Strategy and 2011-15 Strategic Plan. It was a response to an expressed need for structured capacity building on fundamental research aspects that complement other individual or discipline-specific competencies. It was launched at a time when a number of CDRI researchers have acquired maturity and leadership in their respective areas and require a solid foundation on developing and managing research projects.

The training course was also a response to a call to help build capacities of universities in Cambodia, a need that surfaced in the *Scoping Study: Research Capacities of Cambodia's Universities,* research supported by the Development Research Forum (DRF) for which CDRI is a co-coordinator/manager. It brought in participants from Cambodian research institutions and academia that signified interest in strengthening their research development and management competencies.

Objectives

The training programme had the following objectives:

- Develop in research project holders and managers of CDRI and the DRF partner organisations an understanding of the different elements of research project development and management
- Create an appreciation of the importance of coherence and efficiency in the conceptualisation/development, implementation and completion of research studies
- Strengthen/enhance research team knowledge and competencies for formulating, managing and implementing short-, medium- or long term research projects or programmes
- Generate inputs for the development of a handbook or a research project management guide
- Contribute to the development of a CDRI institutional monitoring framework and mechanism for the standardisation of research project management and coordination across programmes

Participants

Participants to the course consisted of fairly senior researchers (at levels of programme coordinator, research fellow and research associate) across CDRI's five research programme areas. They were:

- Mr Kruy Virak, research associate, Democratic Governance and Public Sector Reform Programme
- Mr Roth Vathana, research associate, Economy, Trade and Regional Cooperation Programme
- Mr Ros Bansok, research associate, Natural Resources and Environment Programme
- Mr Kim Sour, research associate, Natural Resources and Environment Programme
- Mr Koy Ra, PhD, research fellow, Natural Resources and Environment Programme
- Ms Sum Sreymom, research associate, Poverty, Agriculture and Rural Development Programme

- Mr Keo Socheat, research associate, Poverty, Agriculture and Rural Development Programme
- Mr Sen Vicheth, research associate/programme coordinator, Social Development Programme

Other attendees who completed the full requirements of the course were representatives of the core organisations within the Development Research Forum (CCC-ADI, Royal University of Phnom Penh, CBNRM-LI, Supreme National Economic Council of Cambodia, Cambodia Economic Association). They were:

- Mr Chen Sochoeun, research assistant, CCC-ADI
- Ms Khuon Chandore, research assistant, CCC-ADI
- Ms Hak Sochanny, project manager/consultant, CCC-ADI
- Ms Sok Sorphoarn, research officer (Gender and Fisheries), Learning Institute
- Mr Mean Ratanak, research officer (Participatory Mapping and Land Use Planning), Learning Institute
- Mr Huon Thavrak, PhD, vice dean of the Graduate School, Royal University of Agriculture

There were also attendees for several sessions of the course, namely:

- Mr Seng Bundeth, MD, research associate, Social Development Programme, CDRI
- Mr Ngo Sothath, researcher/programme manager, Cambodia Economic Association
- Mr Chhay Vannpoly, research assistant, Cambodia Economic Association
- Mr Chhinh Nyda, research coordinator, Department of Environmental Sciences, Royal University of Phnom Penh
- Mr Ly Kimlong, researcher, Graduate Programme in Development Studies, Royal University of Phnom Penh

Training Design

The training programme was conducted for 24 days over a period of six months starting in March 2011 and ending in August 2011. The specifics were as follows:

Training Strategies and Learning Methods

With the objectives of the programme centred on increasing, enhancing and strengthening the researchers' existing competencies, the training design and learning methods were guided by the principle of "building on what the participants know and starting with what they have". The course thus drew upon participants' skills and experiences in research project development and management. At the same time, it provided intensive training and coaching to strengthen the participants' existing competencies and introduce new ones. Participants were encouraged to share and analyse their related experiences, undertake module-based exercises and enhance their skills in reflecting upon such knowledge and experiences from the exercises.

The course was designed to include the following components: (a) input/workshop sessions on the course content and competencies covered in the modules; (b) exercises to apply the concepts learned; and (c) as appropriate and possible, interim coaching. The content was organised around four modules and delivered over a period of six months, at three to six full-day sessions per month.

A module consisted of intensive four- to nine-day workshop sessions covering the concepts and skills of the topics in each module. The workshop entailed inputs through lectures mixed with exercises. Each intensive workshop and module was structured not only for the facilitator/s to share knowledge and information about the content but also for the participants to reflect on their knowledge and experiences and to distil lessons from them. This was done through analyses of case studies of recent major research projects depicting differing approaches and varying degrees of success in research project management. Success in this context was viewed in terms of the research report's utilisation (indirectly assessed through frequency of citation in other research reports); actual duration of the project (extended completion *vis-a-vis* planned time frame); procedures to overcome management issues and problems; and sustained engagement of the same research staff/personnel during the project's life.

- ***Training/Learning Facilitators***

The facilitators and resource persons for the training were drawn from a core of Cambodian and non-Cambodian experts who have solid experiences in working with Cambodian researchers on empirical studies and policy research. They were:

- Chapter 1: Mr Toby Carson, Dr John McAndrew, Dr Hean Sokhom, Dr Jan Taylor, Dr Sedara Kim, Mr Ung Sirn Lee, Mr Larry Strange
- Chapter 2: Ms Esther Velasco (GenderWorks), Dr Kianwoon Kwok, Mr They Kheam (NIS), Dr Hean Sokhom, Dr Jan Taylor, Dr Herminia Francisco (IDRC), Mr Ung Sirn Lee, Mr So Sovannarith
- Chapter 3: Dr Hean Sokhom, Mr Kent Helmers, Dr John McAndrew, Dr Hean Sokhom, Dr Jan Taylor, Dr Graeme Storer, Mr They Kheam, Dr Hean Sokhom, Dr John McAndrew, Mr So Sovannarith, Mr Em Sorany, Mr Chem Phalla, Dr Kim Sedara, Mr Ung Sirn Lee
- Chapters 4: Ms Esther Velasco, Dr Sin Sovith (AusAID), Dr John McAndrew, Mr Em Sorany, Dr Sedara Kim, Mr So Sovannarith, Mr Ung Sirn Lee, Mr Larry Strange

CDRI's research adviser, Dr. Rebecca Catalla, designed the curriculum, mobilised the training facilitators and served as training coordinator. She facilitated the management meetings with all facilitators and resource persons to firm up the participants' learning needs and interests, focus the facilitators' inputs, advance suggestions for effective learning, make the necessary connections from one module to the next and build on previous modules and participants' learning from the exercises. In addition to co-facilitating sessions across the modules, she also worked with a documentation consultant in recording and putting together all training materials (PowerPoint presentations, other handouts) and finalised this handbook.

- ***Course Content***

The training course was organised around four modules that were sequenced to bring about the competencies that the researchers required:

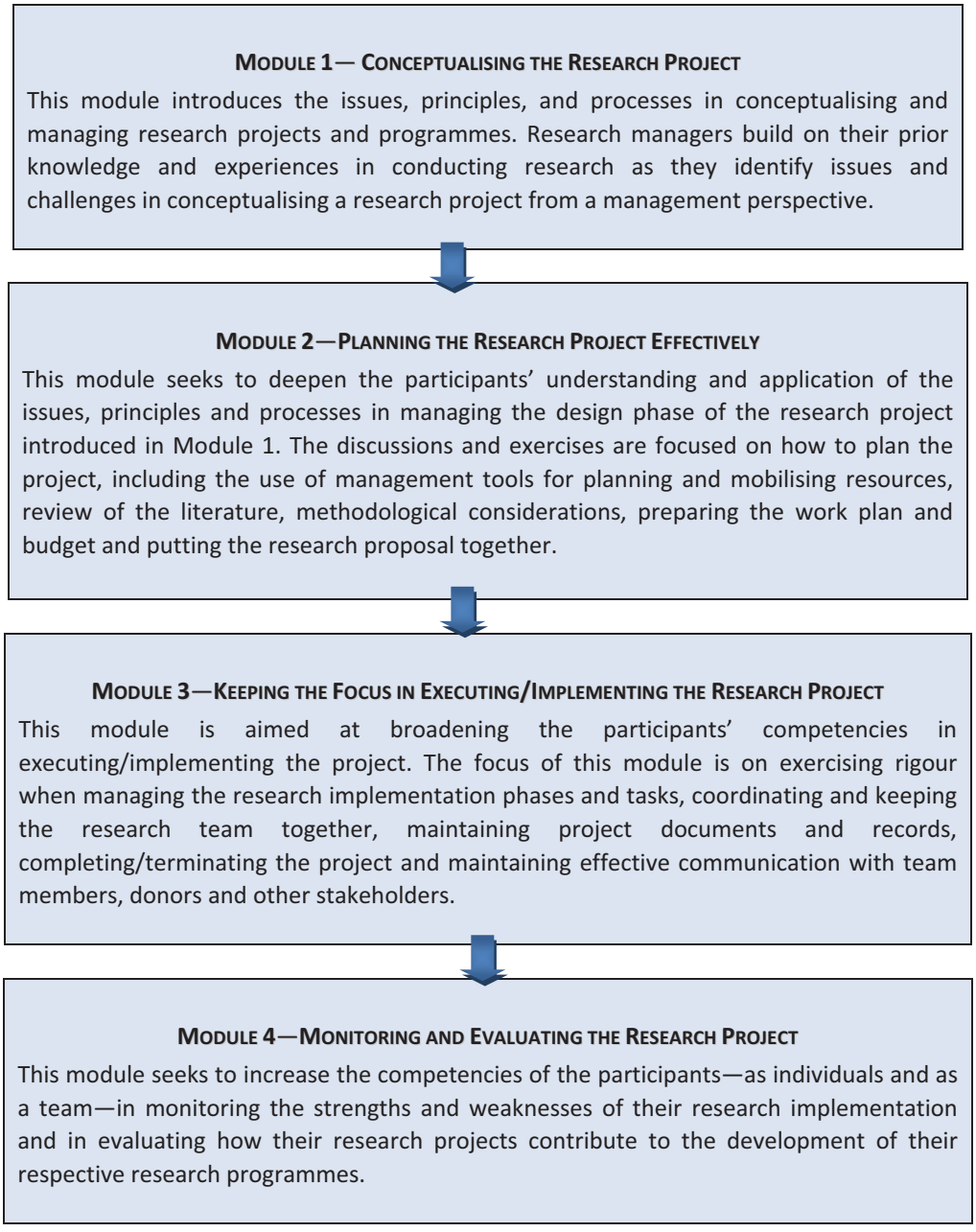
Module 1, *Conceptualising the Research Project*, sought to broaden the participants' understanding and practices in thinking through the development of a research project and the approaches it may take.

Module 2, Planning the Research Project Effectively, provided the overview and discussions on designing a research project, including planning tools and mobilising resources (time, personnel) for the efficient conduct of the project.

Module 3, *Executing/Implementing the Research Project*, aimed to hone the skills of research managers in operationalising the planned project through several checklists.

Module 4, *Monitoring and Evaluating the Research Project*, sought to increase the individual and team competencies of the researchers in monitoring and assessing their research projects' focuses and ensuring the quality of activities and outcomes in every phase of a project.

The flow of the RPDM training modules from one into the other was as follows:



More details of the training design and content are outlined in Annex 1, Summary Chart of CDRI-DRF RPDM Training Programme Design and Content Areas.

HOW TO USE THE HANDBOOK

Each chapter begins with a brief introduction. This serves as the user's guide as to what to expect in each chapter.

The contents of each chapter are divided into main topics and their respective sub-topics. A summary of key points is provided at the end of each main topic. This is designed to emphasise the essential areas for the research manager to apply in the development and management of research projects or programmes.

This handbook is intended to accompany the RPDM training. It can serve both as a personal reference and a guide for capacity building of the research team under the supervision of a research manager. During training, it can be used as the main reference to synthesise and deepen the research managers' understanding of the main points in each module. It can subsequently be used as a post-training manual to support the application of the competencies gained during the training. Once the research managers are in their worksites, the handbook can serve as a handy reference as they go about the tasks of developing and managing research projects and programmes.

PART TWO—
RESEARCH PROJECT DEVELOPMENT AND MANAGEMENT

CHAPTER ONE: CONCEPTUALISING THE RESEARCH PROJECT

This chapter provides an overview of research project management and the key issues, principles and processes involved in research project conceptualisation.

1.1. Understanding Research Project Management

1.1.1. Management Issues, Dilemmas, and Tasks in Implementing a Research Project or Programme

a. What Is Research and Who Is It For?

Research is a rigorous, systematic enquiry with the main purpose to validate and/or refine existing knowledge and to generate new knowledge. In social science, research is generally aimed at understanding the complexities of human behaviour; hence there are complex approaches to it.

The specific objectives of research vary; some aim to understand a situation or phenomenon, others to take action, learn from the literature, apply or find out if a certain research approach or theory is workable. Many research endeavours address problems or aim to solve a problem. For a significant number, however, research is about understanding a situation, not necessarily to solve society's problems.

Table 1 illustrates the wide range of research approaches and purposes in various areas and activities, culled from actual projects in Cambodia.

Table 1.Illustrative Examples of Research Projects/Programmes and Purposes

Example topic of research experience	Types of research approaches used	What were the research results used for?	Who were involved in the research?
Participatory Approaches to Environmental Planning	academic thesis, participatory action research, case study	academic requirements, improve project monitoring, more participation of local people in project planning	project research team, community members
Real Democratisation (D&D) Reform in Post-conflict Cambodia	academic study for PhD, qualitative and quantitative, ethnographic study	academic policy makers and development practitioners, publication in Sweden	professors, researcher (author), a small survey team
Economic and Financial Analysis of Shell Company; Public Administration Analysis of the Royal Government of Cambodia	economic and financial analysis, public administration analysis	academic purpose, post graduation	students, researchers, others
Indigenous Adaptation to a Decline in Natural Resources: the Experience of Two Bunong Communes in Northeast Cambodia	survey, key informant interviews, participant observation, participatory learning, secondary sources, comparative study	baseline study for new CIDSE programme, policy research, needs assessment for action	CIDSE staff, Bunong field workers, Bunong villagers, peer reviewers, ARD staff
Various topics: ethnic group, election, land, politics, governance, health, education	ethnographic research, impact evaluation, public opinion poll, qualitative action research, socio-economic research	public debate, development purpose, public policy	international organisation, local NGOs, development agency
Qualitative Impacts Assessment of One Window Service Office	qualitative approach to measure in-depth perceptions of users as well as stakeholders	to find strengths and weaknesses in scaling up pilot projects in the future	users, non-users, and service providers

Example topic of research experience	Types of research approaches used	What were the research results used for?	Who were involved in the research?
State of Coastal Environment and Socio-economic Assessment	qualitative and quantitative, mixed approaches	policy reflection/action, community development	community people, line government officials, external experts
Building Community Capacity in Tonle Sap—Water Resource Management Research Capacity Development Programme (WRMRCDRP)	participatory research, qualitative approach, focus group discussion	to guide donor for further intervention	research team, commune councillors
Tropical Forest for Poverty Reduction	quantitative (household survey) and qualitative (FGD)	national and global policy making	newly graduated students, research assistant, intern
The Effects of Ministry of Foreign Affairs Phase-out on Productivity of Cambodia's Garment Industry	quantitative and qualitative	policy formulation to sustain or enhance the competitiveness of Cambodia's garment industry	Garment Manufacturers' Association of Cambodia, government officials and representatives
Good Things Don't Always Go Together: Peace Building Vs. Democratisation	academic study, qualitative approach	contribute to theoretical debate, inform policy, compare with 4 other cases	team, 1 internal adviser, 1 external adviser
Knowledge, Attitudes, and Practice Baseline Study	quantitative, focus group discussion, baseline study	baseline information, to improve the shortcomings of service provided	Parents, village chief, health centre staff, teachers, community representative, research team
The Expansion of Mining Activity and Indigenous People's Rights in Mondolkiri	conventional research, in-depth interview and survey, case study research	programming, policy discussion, advocacy	NGOs, authorities, local community, mining company
Migration and Older Age Parents	conventional policy research, quantitative, qualitative research	older people and stakeholders (NGOs involved in migration, ministry)	ADI team, University of Utah (2 professors)
Land Tenure Conflict of Indigenous People in Ratanakkiri Province	participatory action research, in-depth/group interviews, village meetings	land issue, NGO programme, policy discussion on improving indigenous rights, government policy	NGO fieldworkers, villagers, local authorities
Baseline Study on Regional Fisheries Livelihoods Programme	baseline study, quantitative, qualitative	identify needs, evaluate impacts of the project	multi-disciplinary research team, national stakeholders, provincial staff, local staff
2008 Community Mapping and Tenure Security of Indigenous Community in Cambodia (World Bank-HBF-NGO Forum)	participatory action research, qualitative, case study	information and sharing with stakeholders and partners, to improve community mapping	NGO staff, communities, local authority, research adviser
CBA of Jatropha Small Plantation in Cambodia	quantitative approach, economic analysis, environmental economics	policy, development of bio-fuel in Cambodia	lecturers and students in university
Youth Integration into Smallholding Agriculture—Challenges and Perspectives from Cambodia	experimental research, academic research, qualitative (case study), survey and interview, FGD	academic thesis for graduation, NGOs, inform policy in Cambodia	supervisors, researcher, student assistant, interpreter, NGO staff
Rice Transformation	academic research/thesis	thesis requirement, input to other researchers and farmers	professor and lab members in university
Impact Assessment of Farmers' Organisations (FOs) on Food Security of the Rural Poor	qualitative (FGD, semi-structured observation), quantitative (survey), evaluation/assessment	policy makers, practitioners	supporting agencies GOs, international NGOs, local NGOs, FO members, FO non-members

b. Comparing the Management of Development Projects/Programmes and Research Projects/ Programmes

Research managers may be overseeing either a project or a programme, which differ in scope and scale, key elements, strengths and challenges. Since several research projects may fall under one programme, research programmes are broader in scope and may pose more challenges.

Managing a research project/programme has some similarity with the management of development projects/programmes. A development project refers to a group of activities to produce a development objective in a fixed time frame, while a development programme refers to a series of projects whose objectives together contribute to a common overall sectoral, country or multi-country purpose (EC/EuropeAid 2002).

Similarly in the context of research, a *research project* consists of a group of activities to produce a research objective and generate results in a fixed time frame. A *research programme* consists of a series or combination of research projects whose objectives together contribute to an overall sectoral, country or multi-country research purpose.

c. What Is Research Project Management About? Tasks and Responsibilities of the Project Manager

Managing a research project is both about managing knowledge workers and about managing the generation of new knowledge and the sharing and dissemination of existing knowledge within a joint project. Thus, a research manager has the task of overseeing both the complexities stemming from the culture of researchers/research work and the uncertainties associated with generating research results (Erno-Kjolhede 2000).

Examples of management issues and dilemmas associated with managing the culture of the researchers/research work:

- Developing research to address social issues and impact on development
- Dealing with donor-driven programmes (both long-term funding and short-term funding or commissioned research)
- Balancing interests between research institution, donors and local community (e.g., who is the research for and who should benefit from it?)
- Cross-functional cooperation, negotiation and conflict resolution skills
- Dealing with the bureaucracy of donor and governmental institutions
- Designing policy research that deals with sensitive political issues (e.g. research on decentralisation, governance)
- Intervening with government policy, sending messages and getting policy makers involved
- Anticipating potential threats, risk management and resilience
- Dealing with internal and external pressures, including long working hours and a stressful environment
- Handling research team dynamics, including technical advising and people management skills
- Capacity building of self and team in various phases of the research (design, methodology, data gathering and analysis, report writing)
- Striking a balance between academic, policy and applied research
- Bringing together differences in culture, management styles and development orientations among research partners

- Dealing with budget and time constraints and maintaining the quality of research outputs despite these constraints
- Reconciling personal and professional motives in undertaking research (e.g., those who do not have a natural inclination to research may find the research tasks tedious and frustrating)
- Dealing with the internal dynamics in one's institution (sometimes dealing with one's own institute is more difficult and complicated than dealing with external agencies)

Examples of issues and dilemmas associated with research managers' task of generating research results:

- Selecting research types and approaches appropriate to the research objectives of the project/programme
- Decisions on methodological approaches (e.g., hypotheses, research methods); finding the right members of the team with the technical expertise for the type of research being conducted
- Balancing emphasis between data gathering and data analysis, including handling of enormous amount of data, translations and recording
- Ethical dilemmas in dealing with respondents/research participants (e.g., confidentiality, privacy)
- Dealing with research team members' turnover to sustain project quality and continuity in handling research data (e.g., dealing with the issue of researchers who have been immersed in the data who suddenly leave)
- Ensuring that the results of individual research projects contribute to the overall purpose and outcomes of a research programme
- Reconciling research objectives with the results (e.g., some research aims to solve a problem, but sometimes research findings do not inform the decision on a problem)
- Ensuring a steady progress, collection of data and analysis of research results within time frame
- Getting the research results reported, disseminated and applied (e.g., some research gets stacked on the shelves and research findings are not utilised)
- Whether the purpose of research inquiry is to validate existing knowledge or generate new knowledge, or both

1.1.2. Key Elements, Strengths and Challenges of Research Approaches

a. Key Elements and Strengths of Some Research Approaches

The complexity of human experience has given rise to a complexity of research approaches for meeting different objectives.

- *Action research* is an approach that combines action and research to examine specific questions, issues or phenomena through observation and reflection, and deliberate intervention to improve practice. It seeks full collaborative inquiry by all participants, often to engage in sustained change in organisational, community or institutional contexts.
- *Evaluation/assessment research* is conducted to measure the effectiveness or performance of a programme, concept or campaign in achieving its objectives.
- *Qualitative research* is undertaken to gain insights concerning attitudes, beliefs, motivations and behaviours of individuals to explore a social or human problem, and includes methods such as focus groups, in-depth interviews, observation research and case studies.

- *Quantitative research* is concerned with the numerical measurement of attitudes, behaviours and perceptions and includes interviewing methods as well as self-completion methods such as questionnaires and surveys.
- *Academic research* is a social scientific study whose intended audiences are university groups (although the results may in practice also interest non-academic audiences). It is usually intended to finish a degree or to comply with research requirements in a university.
- *Policy research* is social scientific study that attempts to apply social scientific findings to the solution of problems identified by a client. Policy research may be descriptive, analytical, or dealing with causal processes and explanations; it may evaluate a new or existing policy programme, describe examples of best practice, measure social change, develop projections on the basis of large-scale modelling exercises or consist of large-scale experimental research in real-life settings running for years and even decades. Most policy research espouses a multi-disciplinary approach and avoids narrow discipline-specific jargon. In principle, policy research will focus on actionable or malleable social factors to a greater extent than theoretical research. For example, while the family may be the most important source of sex-roles or racial stereotypes, policy research would focus on the role of the public educational system in changing children's perceptions in directions considered desirable.
- *Participatory action research (PAR)* can be viewed as a way to conduct scientific inquiry while at the same time working to solve practical problems or produce positive social change. The approach has emerged from concerns that traditional research designs have often helped maintain power relations of inequality. It assumes that sustainable empowerment and development must begin from the concerns of the marginalised. It entails a cycle of research, reflection and action.
- *Narrative analysis* seeks to describe the meaning of experience for individuals, frequently those who are socially marginalised or oppressed, as they construct stories (narratives) about their lives.
- *Feminist research* puts women at the centre of the study and identifies patriarchy as central to understanding their experience.
- *Ethnographic studies* look at the totality of society, although an ethnographic study using participant observation may focus on only one aspect (e.g. migration, livelihood strategies). It is a systematic collection of data derived from direct observation of the everyday life of a particular society, group or subculture. This methodology requires the researcher's immersion in the culture/subculture under study and is an interactive and iterative process of data collection and analysis.
- *Environmental economics research* studies the value of environmental damages and relates these to costs of reducing pollution/environmental degradation.

b. Management Challenges of Selected Research Approaches

Each research approach has its own management challenges; the key for research managers is to understand the challenges of each approach and learn how to manage them. Some examples are as follows:

- *Policy Research*
  - The challenge of policy research is how to get policy makers to accept and use the research results and recommendations for the formulation of policy. Effective presentation and dissemination strategies of research findings are needed to inform policy makers and encourage government to use those findings in policy formulation and implementation.

- The long-term process of policy change in government affects the way research can inform policy. The challenge to research organisations is to plan the best way to influence government decision making by using dissemination means such as public media, television and print policy briefs. It may also be critical to seek the support of advocacy groups or knowledge brokers to communicate research findings for different types of organisations and different groups of people.

- *Participatory Action Research*
  - Participants in PAR continuously reflect on their learning from the actions and proceed to initiate new actions in the field. Outcomes are very difficult to predict from the outset, and achievements depend to a very large extent on researchers' commitment, creativity and imagination.
  - A growing number of critics point to the low quality and lack of rigour in the design of PAR to support findings and calls for action. There is also sometimes a lack of data in the presentation to allow evaluation of assertions, and perhaps most significantly, evidence in research reports of a lack of participation of local people. These challenges lie not in the approach itself but in the researchers' limitations/lack of skills in this approach.
  - Another challenge to PAR researchers is not to hide behind emotional appeals, but rather to allow scrutiny of their sampling, data collection and interpretation methods.
  - There is a need to bring in local sensitivity and empower local people to analyse their own situation rather than only the researchers gathering the information and taking it with them when they leave the village. The challenge is how to use these findings on a local issue and local sensitivity to influence policy over time. It is also sometimes difficult to find funding for this kind of research.

- *Academic Research/Thesis*
  - Despite being academic, academic theses have value; i.e., they have relevance to policy. The challenge of an academic thesis is how to use it for policy. Within academe, people may come from different backgrounds and not be interested in influencing policy decisions.
  - The reason for academic papers is to finish a degree, and often funds or connections to use it for development are limited. Despite the notion of research for knowledge's sake, the challenge to academic research is how to use its findings for practical application.
  - Social academic research deals with development issues, but sometimes there is no direct relationship. The more we understand about human experience, the more we can use research in development work; e.g. Khmer studies can be immensely valuable as cultural studies and a very rich source of information for understanding local culture (e.g., water usage), but sometimes we do not know how to use the findings in development.

- *Ethnographic Studies*
  - Critical ethnographic studies are grounded in critical theories that assume that society is structured by class and status, as well as by race, ethnicity, gender and sexual orientation, to maintain the oppression of marginalised groups.
  - Contemporary ethnography is based almost entirely on fieldwork. But staying in the field is not an indication that we are doing ethnography. The ethnographer lives among the people who are the subject of study for a year or more, learning the local language and participating in everyday life while striving to maintain a degree of objective detachment. S/he usually cultivates close relationships with "informants"

who can provide specific information on aspects of cultural life. Information from ethnographic studies can be used to plan development programmes as well as to influence policy, but research teams/organisations need a clear strategy to achieve this.

- *Environmental Economics Research*
  - This type of research offers a far-reaching and realistic approach to designing policies in natural resource management and climate change challenges. The main challenge for the environmental economics researcher is to find out what activities are creating damage to the environment, what the costs are and what can be done to maintain a balance between economic growth and environmental protection and how to make an informed judgment.
  - The challenge to environmental economics research is to take an extra step beyond publication to influence decision making in support of an environmental national policy or a local environmental regulation or actions needed to protect the environment or simply to provide information on the value of endangered species and critical ecosystems.

c. Management Challenges of Individual and Joint/Collaborative Research

Research is carried out at individual, team or inter-institutional levels. Individual research has more flexibility, but the researcher has to contend with all activities related to the design, implementation and closure of the research. There are research advisers and technical experts, however, to provide technical support during the research activity.

Joint/collaborative and inter-institutional research may be more complex to manage, since it involves bringing together people or institutions with different perspectives, motives or interests. However, collaborative research has the advantage of providing a pool of expertise and resources that enriches the process and results. Research organisations and government departments benefit from joint/collaborative research, especially for utilising results and sharing ownership.

Some approaches to collaborative research are:

- *Inter-disciplinary research:* research team is composed of researchers from different disciplines, same organisation
- *Team research:* researchers from the same discipline, same organisation
- *Joint research:* among different departments, same organisation
- *Research partnership:* different organisations, sectors or multi-country partners come together for a comprehensive research project or programme

Following are some of the management challenges to joint/collaborative research:

- Joint research is complicated because of individual differences among team members. It will be important to build the team to reconcile different individuals' perspectives, ego and personalities.
- In research involving one or more partners (partnership research), researchers may come from different NGOs or organisations with varied backgrounds, and will need to reconcile their different agendas. Due to limitations and scope of study, negotiation skills are very important. There is also the challenge of bringing together social scientists from different disciplines (e.g., anthropologists, sociologists, environmentalists, economists) since each has different perspectives in doing research.
- In team research, members also have varying perspectives, knowledge and experience in different types of research. The challenge is how to manage relationships and

expectations, how to build understanding and level off expectations among team members and partners.

- Ideas are more diverse, and the approach is more multi-disciplinary in team or multi-disciplinary research. It is also more time-consuming than individual research.
- In joint research, partners need to agree on the terms of reference, come together for the research design and have a lead person to coordinate the team. The strength of this approach is in the sharing of expertise from different units or departments. The challenge usually lies in fostering collaboration between units. Sometimes, there is a need to apply bureaucratic processes to get things done.
- Managers of institutions often underestimate the difficulty of bringing people with varied motives, egos and interests to work together as teams. It is important to manage different expectations and spend the first phase of the research design addressing issues about time, human resources and capacity building among team members.

1.1.3. Summary of Key Points

- The way a research project/programme is managed is similar to how a development project/programme is managed. A *research project* consists of a group of activities to produce a research objective and generate research results in a fixed time frame. A *research programme* consists of a series or combination of research projects whose objectives together contribute to an overall sectoral, country or multi-country purpose.
- Research managers may oversee either a research project or a research programme, which differ in scope and scale, key elements, strengths and challenges.
- Managing a research project is about both managing the generation of new knowledge and knowledge workers and the sharing and dissemination of existing knowledge within a joint project.
- The first step in understanding research project management is to assess the common management issues and dilemmas and how good research managers have handled them. Certain issues and dilemmas in research project development such as purpose and use of the research, tasks, staffing and coordination, pose different management challenges. The key is to understand those issues and dilemmas and manage them in accordance with the institution's policies and culture.
- Different researches have different purposes, types and approaches, depending on who the research is for and what it is to be used for. To understand the complexity of human experience, a range of research approaches and collaboration among experts from different disciplines are needed. Research managers have to understand the challenges of each approach and learn how to manage these challenges.
- Managing individual research is less complex than a multi-disciplinary/team approach. In individual research, the individual researcher has to contend with all activities related to the design, implementation and closure of the research. In a multi-disciplinary/team approach, a research manager needs to be prepared to bring researchers with different experiences together in conceptualising the project and build the team to reconcile different individuals' perspectives, egos and personalities.

1.2. Developing and Managing a Research Project/Programme

1.2.1. General Project Management Principles, Phases and Tools and the Project Life Cycle

a. General Project Management Principles in the Context of Research

Project management generally consists of two elements/activities:

- The "hard" or technical side, such as scheduling, financing, planning and controlling
- The "soft" or human side, such as coordination, cooperation and inter-personal relations and communication

Research project management is the application of skills, knowledge, tools and techniques in these two areas of project management to meet the needs and expectations of stakeholders in a research project.

In creating the technical structure of the project, the research project manager is expected to have in place effective and efficient policies and procedures that deal with the following areas:

- *Scope management*: The research manager ensures that the project includes all the work required, and only the work required, for successful completion.
- *Issues management:* Issues are constraints on accomplishing the deliverables of the research project. The manager identifies issues throughout the project life cycle and logs and tracks them through resolution.
- *Budget management*: The manager ensures that the project is completed within the approved budget. This includes resource planning and what quantities are necessary for the project, and budgeting.
- *Quality management*: The research manager ensures that the project will meet the needs via quality planning, quality assurance and quality control.
- *Communications management*: The research manager ensures timely and appropriate generation, collection, dissemination and storage of research project information using communications planning, information distribution and performance reporting.
- *Risk management*: The manager ensures the identifying of risks, both internal and external, to the project and the continuous updating, tracking and mitigating of risks.
- *Change control management*: The research manager defines how changes to the project (scope, schedule, technical specifications, training) will be executed, with prior approval and collaboration with the project's sponsor/donor.

In managing human dynamics, the research manager is concerned with:

- Inspiring, motivating, and building trust and commitment of the project team
- Communication, reflection and feedback between project team members and project donors, clients and partners to ensure that 'pathways of impact and influence' are built into the project design and life cycle
- Coordination, direction, leadership, decision making
- Cross-functional cooperation, negotiation and conflict resolution skills
- Balancing between organisational goals, research team dynamics and client satisfaction

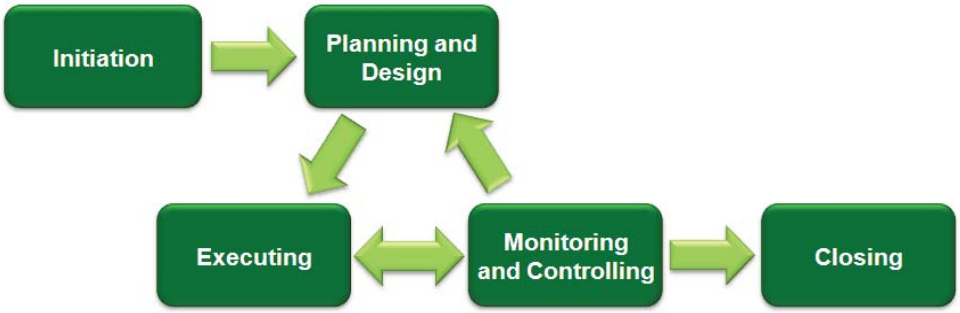
b. Project Management Phases and the Project Life Cycle

Projects generally go through four different phases, termed the **project life cycle**:

Phase 1 - Conceptualisation or initiation
Phase 2 - Planning or design
Phase 3 - Execution or implementation
Phase 4 - Closing or completion

The traditional approach (Figure 1) identifies the phases to be completed and distinguishes five components (four stages plus control) in the development of a project.

Figure 1.Traditional Approach to Project Management Phases



Source: http://en.wikipedia.org/wiki/Project_management#cite_note-Chat-0

The monitoring and controlling component is a vital process of project management (Figure 2). Research managers should need to know how the project is meeting its goals and how to measure where the project is and make adjustments in design, staffing, resources and budgets in order to bring the project to a successful completion.

Figure 2. Monitoring and Controlling the Execution of a Project

Source: http://en.wikipedia.org/wiki/Project_management#cite_note-Chat-0

c. Project Management Phases in Research

The various activities or elements that are carried out in each phase of the project cycle are shown in Table 2, using the experience of CDRI. Possible actors in each of the phases are also identified. This provides an overview of what the research manager is expected to accomplish in the life of a research project.

Table 2. The Project Management Cycle in the Context of Research

Conceptualising the Research Project	*Planning the Research Project Effectively*	*Executing/Implementing the Research Project*	*Closing/Completion Phases*
Elements/Activities			
- Reviewing guidelines/ terms of reference for the research project - Examining alignment of research project to overall research priorities and programme of CDRI [and the government] - Assessing the availability of competencies/ capacities in research team members to undertake the project - Consultations with stakeholders to clarify their agenda and CDRI's	- Firming up research objectives; spelling out variables to be examined and analytical approach - Preliminary review of related literature to focus the project - Identifying the research team members - Preparing the sampling design, including gaining access to sampling framework [for either qualitative or quantitative data collection] - Preparation of work plan and defining research project milestones within the planned time frame - Preparation of research project budget - Writing the proposal - Consultations with project stakeholders for additional information/ confirmation of study design and schedule	- Mobilisation of study team - Additional collection and review of the literature - Sample selection [study sites, respondents/group discussion participants] - Preparation of data collection instruments [formulation, pre-testing (as appropriate), finalisation, translation into Khmer language and editing]; soliciting feedback from stakeholders - Training of enumerators/ interviewers - Data collection [survey, group interviews, KIIs, etc] - Firming up analytical framework; preparation of dummy databases, training of encoders - Data processing: editing, encoding, cleaning, data analysis, preparation of data summaries - Drafting the report	- Presentation of findings to stakeholders/holding of dissemination workshops [for validation or sharing) - Project team reflection on lessons from research project phases (monitoring/evaluation) - Finalisation of report, including incorporating comments/feedback from presentation/ dissemination workshop - Submission of final report, including quantitative and qualitative databases, hard copies of completed data collection instruments - Peer review, editing for publication; publication for dissemination
Who Is Involved?			
- programme coordinator - senior researchers (research fellow/ associate) - representatives of donor/partner organisation(s) or agencies commissioning the research - (director of research, director of operations, research adviser)	- programme coordinator - programme researchers (fellows/ associates) - programme assistant - (director of operations, research adviser)	- research team leader/ programme coordinator - programme researchers (fellows/associates/ assistants/enumerators/ encoders/data analyst) - field coordinator - programme assistant - representatives of donor/ partner organisation(s) or agencies commissioning the research - (director of operations, research adviser)	- research team leader/ programme coordinator - programme researchers (fellows/associate/ assistants) - programme assistant - representatives of donor/ partner organisation(s) or agencies commissioning the research, including local partners - (director of operations, research adviser)

Source: R.F. Catalla, 2010, prepared for the RPDM training course, based on her personal experiences at CDRI and in her former capacity as a research consultant.

d. Project Management Tools and Their Applications to Research Project Development and Management

Although they may vary as to format, substance, focus and information required by project sponsors or donors, management tools contribute immensely to the effective and efficient management of each phase of the project cycle and to deliver the results expected.

The kinds of tools required for project management include:

- Tools for conceptualising and designing the project.
- Tools to keep track of project implementation/execution, i.e., how the project is meeting its goals and timelines, how to get on track again and how to measure where the project is, monitoring and evaluation mechanisms to assess how the project is contributing to the research objectives and the interests of the stakeholders at every step.
- Tools for project closure. Final evaluation should provide for an assessment of lessons from the implementation of the project at various stages, as well the impact of the research on the intended audience at completion.

Table 3 provides an overview of some commonly used project management tools. They are discussed in detail in subsequent sections.

Table 3. Project Management Tools, by Project Phases/Elements

PROJECT PHASES/ELEMENTS	MANAGEMENT TOOLS
CONCEPTUALISATION/INITIATION	- Research project terms of reference - Formats: concept notes, expression of interest (EOI), research proposal
PLANNING/DESIGN - Firming up the research design - Determining goals, results, scope, work to be done, milestones and deliverables - Allocating the financial resources to the project - Assigning responsibilities to team members	- Conceptual frameworks, research data collection and analysis tools - Log-frame, RBM, project management triangle, work plan, work breakdown schedule, Gantt chart, PERT-CPM, - Budgets and spreadsheets - Terms of reference (ToR)
EXECUTION/IMPLEMENTATION	- Monitoring tools (log-frame, RBM, defined milestones, work plan) - Style guide for periodic reports - Research data gathering and analysis tools, including technology and software
CLOSING/COMPLETION	- Evaluation/assessment instrument - Style guide for completion reports - Budget reports (actual)

1.2.2. The Research Project Life Cycle: Steps to Developing the Project

a. Step 1—Building the Conceptual Framework

A conceptual framework is a schematic or narrative presentation of the topic or major issues and sub-issues (i.e., the identified variables) being examined at defined levels and/or units of analysis. It describes or maps the assumed relationships or interactions among the study variables and can imply the research questions of the study as well as the information that will be collected and analysed (Miles and Huberman 1994: 18-22). Often underpinning the supposed relationships are theoretical perspectives derived from a review of the literature. Berg (2009: 42) notes that the conceptual framework, when presented graphically, is "quite literally your *drawing board* for working through the research and theoretical plans".

Developing the research project's conceptual framework proceeds iteratively as the researchers' topic, knowledge of a theory (or theories) and related research experiences, research questions, study sites and strategies for gathering data emerge and influence each other. Building the conceptual framework also includes defining or refining the research purpose, significance, literature to be reviewed and the research questions to be addressed. In preparing the conceptual framework, you are making a case as to why you think your research should proceed in a particular way and why it is the best way to do it given your research objectives.

b. Step 2—Building the Research Design

The research design includes the particular methods, sample, data analysis techniques and reporting format. The methods should be linked to the focus of the study and the research questions. Researchers should design the study according to the questions they seek to answer. Choosing the setting, population or phenomenon of interest is also fundamental to the design of the study and serves as a guide for the researcher.

Part of the research design is identifying the data to be collected and how to sift through them. Often the difficulty lies in failing to identify the variables in relation to the research question. Once you have determined the variables of the research, you can determine what types of data to collect in order to avoid voluminous data that may not be used at all.

c. Step 3—Determining the Methods to Use for Data Collection

Many studies combine quantitative and qualitative collection methods, depending on the questions to be answered. Sometimes, limitations in one method can be compensated for by the strengths of a complementary one. Researchers typically rely on four methods for gathering information: (a) participation in the setting, (b) direct observation, (c) in-depth interviewing and (d) analysing documents and material culture.

Generating categories of data to collect can be an important focusing device. A balance must be struck between efficiency and design flexibility. Difficulty in formulating a team perspective on the design and data collection methods must be addressed; most of the time, team members have different perspectives and differ as to which way to frame questions. There is a need to harmonise different perspectives and provide the necessary training and capacity building.

Researchers should be clear about the reasons they will be collecting quantitative or qualitative data to enable them to gather their data systematically and with rigour. The design of instruments for quantitative and qualitative methods (questionnaires, FGD guides, KII interview guides) should be part of the planning for this step. The team needs to ensure that only those data answering the research questions are asked. Also, the team has to establish the trustworthiness of the data they will collect.

d. Step 4—Determining the Methods to Use for Recording, Managing and Analysing Data

Researchers have to be clear at the outset what method is to be used in recording and analysing data. The lack of methods or inadequate competency to analyse data from the field leads to researchers having a lot of data but not being able to use them.

Collecting and recording data sometimes involves complicated administrative procedures in seeking approval from the technical committee in the research organisation and from the

local government councils in the study sites. Thus the research team needs to prepare in advance and prepare timelines/Gantt charts or other monitoring tools to stay on track.

Collecting and recording data also involves language and translation issues, as the meanings in the Khmer translations are sometimes different. Developing a plan to hire good and reliable interpreters is part of this step.

Language problems go beyond translation and require researchers' understanding of themselves as researchers. Speaking the same language as the local or indigenous people does not mean researchers have the same perceptions and understanding as the local people. In the same way, local people and indigenous groups do not have the same experience as researchers do, especially if the latter come from urban areas and have a different educational background. This issue concerns the researchers' and the people's ability to see things differently. Researchers who have developed an awareness of themselves as researchers coming from a different context would immerse themselves in the local culture and gain a better understanding of the rural people as part of the data collection and management plan.

Data analysis procedures vary for quantitative and qualitative approaches. Researchers taking on qualitative studies especially should include in their plan six phases of data analysis: (a) organising the data; (b) generating categories, themes and patterns; (c) coding the data; (d) testing the emergent understandings; (e) searching for alternative explanations; and (f) writing the report.

e. Step 5—Planning Time and Resources

The resources most critical to the successful completion of a research project are time, personnel and financial support. General resource considerations and design decisions proceed in parallel and are major criteria for the do-ability of the study. Some resource decisions, however, cannot be made until fundamental design decisions have been resolved. In some cases, the researcher has to consider resources as s/he struggles with the conceptual framework and design issues of the study.

The number of days allocated to fieldwork/data gathering is an important measure for estimating the time required for other tasks, such as data management, analysis and report writing. The amount of data gathered dictates the amount of time needed to manage and analyse those data.

Once the projected time for fieldwork has been decided, a management plan can be developed. A time management chart, calendar of research events, description of research phases or some other concrete plan shows a funding agency that the researcher has thought through the specific people, settings, events and data involved in conducting the research. However, consider the plan as a guide, a tentative road map that will likely undergo some modification as data are collected and analysed.

The allocation of time to tasks also shapes decisions about personnel needs. As the scope of the study is developed, personnel decisions have to be made. The need for researchers to give quality time so as to produce quality research outputs is essential in the planning stage. Researchers need to deal with the contradictions and different pressures from donors, partners and other clients to produce quality work on time. In fact, stakeholders' time should be factored in. For example, time should be allowed for a technical review committee and donors to review the research proposal and provide additional technical inputs to the design,

to read and review the inception, interim, draft and final reports and to provide feedback or comments for clarification and improvements before disseminating findings to clients and project partners.

Determination of the financial resources necessary for the study must often wait until fundamental design decisions have been made. However, the design choices must be made with some knowledge about the finances available.

1.2.3. Who is the Research Project For? Identifying the Stakeholders: Owner, Manager, Policy Makers, Other Key Players

a. Research Project Stakeholders and Their Roles

Stakeholders are individuals or groups of people who have particular interest in the research project of an organisation. In Khmer, the word "stakeholder" refers to those people who are "involved" and those who stand to "benefit" from the research. They can be the project staff, the research institution itself, donors and those who are involved as partners in a research undertaking, such as community organisations, local indigenous people, government and non-government organisations, universities and research consortia and, sometimes, policy makers and policy influencers.

Understanding the stakeholders in different types of research is important because this has implications for project management in terms of conceptualisation, design, implementation, dissemination and impact, as well as for contract and relationship management. Research managers need to consider and review the meaning of "stakeholders" during the course of the research and stop at key points during the project to reflect on this and make adjustments.

Different stakeholders have different interests and impacts which they would like to create, and these have implications for the types of research projects, methods and products that research organisations need to match.

b. Management Challenges to Identifying and Working with Research Project Stakeholders

Research managers are faced with the challenge of choosing the right stakeholders for a project. To get good results, managers should be very clear on who should be involved as stakeholders. For example, the project on CARD-CDRI-IFPRI Stock-taking on Food Security, Nutrition and Agricultural Policy in Cambodia became a very good model for analysing the adequacy of Cambodian policy on agriculture and nutrition. The right stakeholders were chosen, such as agencies from agriculture, food security and nutrition ministries.

The research manager may also encounter a dilemma with regard to unclear roles and involvement of the stakeholders. To address this, their roles should be clearly spelled out in all phases of the project, from design to identifying the resources needed, time expected for completion, monitoring, implementation, evaluation, dissemination and utilisation of the research.

The collaboration between research institutions and stakeholders is sometimes at risk due to a lack of strategy for partnership. It is important to analyse what pathways for influence and partnership should be developed during the life of the research project and build these into

the project formulation. These pathways, which can take the forms of building networks, sharing and disseminating information and getting stakeholders together, are as important as the product of the research.

Research managers cannot avoid and need to deal with the politics involved in partnering with any stakeholder, whether government ministries, NGOs or donors. If more stakeholders are involved, more competition exists to further one's interest or agenda. Research institutions need to find stakeholders whose interests and agenda do not conflict with theirs. Researchers must not forget that they are stakeholders too. In Cambodia, for instance, research organisations have a major concern and mission for capacity building to ensure that in the future Cambodian researchers can take the lead in research for and with Cambodians. If this is a main concern, Cambodian research institutions need to find donors that match this vision.

If project sponsors and donors do not share the same interest as the research institutions they are funding, this will have implications for contract and relationship management. Managers should find donors whose needs and goals match those of the research project.

1.2.4. Summary of Key Points

- Research project management is the application of project management skills, knowledge, tools and techniques involving the "hard" or technical side of management such as scheduling, financing, planning and controlling, and the "soft" or human side, such as coordination, cooperation and inter-personal relations and communication.
- In creating the technical structure and the human dynamics needed for effective and efficient management, the research manager is expected to have effective and efficient policies and procedures in place.
- Research managers should find stakeholders whose needs and goals match their organisational mission and goals as well as their research interests and needs.
- The research project life cycle, just like a development project/programme, goes through four phases: (1) conceptualisation or initiation, (2) planning or design, (3) execution or implementation and (4) closing or completion. In each phase, a research manager applies management principles and tools that facilitate the effective and efficient implementation of the project.
- Conceptualising the research project involves the following steps: (1) building the conceptual framework, (2) building the research design, (3) determining the methods to use in data collection, (4) determining the methods to use in recording, managing and analysing data and (5) planning time and resources.
- Research managers need to deal creatively with choosing the right stakeholders for a research project. Different stakeholders have different interests and impacts they would like to create, and these have implications for the types of research projects, methods and products that research organisations need to match.

1.3. Research as a Knowledge Generation and Business Endeavour

1.3.1. Key Aspects of Research as a Knowledge Generation Activity and as a Business Endeavour

a. Why the Knowledge Generation and Business Sides to Research?

Research studies are growing in quantity, quality and complexity as they become important and useful to development. With the range of development issues needing understanding and with changing funding thrusts, there is increased competition for research project funding. This situation creates pressure for both operational efficiency and innovative and high quality research.

In this light, research has both a knowledge generation side and a business side. Integrating the business element with knowledge generation is important to garner and maintain the resources necessary for innovative and quality research.

b. Key Aspects of Research as a Knowledge Generation Activity

Typifying research as a knowledge generation activity are:

- Acquiring new data to contribute to the literature and science of research
- Clarifying research questions/objectives, data needs and methodological approach and designing the research [at institutional level, this suggests defining/establishing strategic direction of research programmes]
- Implementing the research: collection and review of secondary materials; preparing the data collection instruments; primary data collection and data processing; data analysis; report writing (draft and final versions); dissemination of research findings in different forums (local, national, regional) and through different avenues (e.g., knowledge brokers)
- Standardising the documentation of methodologies and demonstrated best practices related to research
- Ensuring high quality outputs for all research programmes/projects
- Preparing the work plan (including project start-up, key project milestones), establishing project's special technical areas and project outputs and formulating the budget.
- Strategic and day-to-day implementation of research project/programmes based on ethical conduct, quality of outputs, timely delivery.
- Defining/instituting ethical and service delivery standards and ensuring high quality and timely outputs for all research programmes
- Coordinating logistical/administrative support to research team members, including the provision of information needed for implementation, e.g., budgets
- Coordinating with the business side of the research to ensure that appropriate systems, infrastructure and support are assessed, procured and available for research implementation (e.g., resource scheduling, management).

c. Key Aspects of Research as a Business Endeavour

On the other hand, areas that characterise research as a business endeavour are:

- Active search for/review and identification of research opportunities (in newspapers, donors' websites, through contacts) for the development/implementation of strategic initiatives; at the institutional level, spearheading the conduct of strategic planning of research programmes and finalising master annual plans
- Preparation of expressions of interest and, once short-listed:
  - Coordinating the preparation of concept notes/research proposals

- Detailing all budgetary requirements for the research project
- Helping identify the appropriate research team members to market research concept notes/proposals

- Negotiation with partner or commissioning organisations/donors on contractual and financial matters; client reporting and updates in coordination with research project team leader/programme coordinator; readying programme update documents; provision of procedures, templates and internal audits in support of maintaining contractual compliance
- Familiarisation with the market (including key research players, consultants) and sensitivity to new/emerging development issues that donors lean towards in order to help shape research programme directions
- Marketing of research team/organisation through attendance/participation in local, regional and international meetings with key stakeholders and clients, drawing on research team members for support as necessary
- Oversight of monthly financial budgets and resource use; ensuring programmes are on track in terms of output commitments to the donor/partner or commissioning organisation:
  - Leading the strategic business aspects of research including cost management, cost and budget allocations and making the most efficient and effective use of resources; initiatives identified are discussed with relevant management prior to implementation
  - Assisting in cost aspects of new programmes and giving early notifications to teams about over/under-spending
  - Re-allocating financial resources in discussion with management and programme coordinators impacted (perhaps up to a certain limit)
  - Assuming overall financial and operational planning, profit and loss and earmarking risk for the organisation
  - Ensuring that key research team members are aware of programme budgets and adhere to them
  - Managing resource movements to ensure that staff development plans are met
  - Undertaking other fund-raising activities
- Overall efficient management of deployed human resources and use of financial resources
- Decision making on the business issues of research—including management—ensuring involvement of key individuals and minimal impacts on the research teams/ organisation.

1.3.2. Distinguishing Between EOIs, Concept Notes and Research Proposals

As suggested above, the business side of research has to do with answering calls for competition on a research project/programme or for requests for proposals from a donor. It entails the preparation of expressions of interest and, once shortlisted, involves coordinating the preparation of concept notes/research proposals, detailing all budgetary requirements for the research project, and identifying the appropriate research team members as detailed in the terms of reference. Research managers should pay close attention to the quality and substance of these documents as well as their early submission.

a. Expressions of Interest

As its name suggests, an EOI is a document expressing interest to tender or bid for a project in response to an announcement or a call posted by an institution/agency.

The EOI describes the institutional capacity and the relevant experiences of the research institution to meet the advertised terms of reference (ToR) and its track record in the subject of reference. It can contain as well the human resources to be committed to the research and how their expertise matches the ToR. It may also describe the institutional linkages of the interested institution to support its claim of expertise in the area of the requested research. Annex 5 provides the EoI format of the Asian Development Bank (ADB) that research institutions or consulting groups employ when expressing their interest in a research project.

b. Concept Note

The concept note is a short document that may be requested in lieu of an EOI, and can contain the following:

- An introduction highlighting the issues and the variables in the study being requested (the ToR are good for this purpose), with references cited at the end of the paper
- Concise description of the aims, questions to be addressed, broad methodological approach and the time frame of the study
- The capacity of the institution in terms of availability of staff and track record, but not details about the staff or their CVs

The concept note does not necessarily include a budget estimate. If successful, the group or organisation submitting the concept note may be required to present a detailed research proposal that contains the details of the concept note, including a budget.

Concept notes may also be written and submitted even when there are no calls for it from funding groups. They may arise from meetings or discussions with international organisations that can support small studies because such studies can complement or deepen their own research work on a specific issue. Annex 6 has a sample CDRI concept note that emerged out of a discussion with an international organisation.

c. The Research Proposal

The research proposal has many parts and offers more details on the study than the EOI or the concept note. This document is often in two parts: the technical proposal and the financial proposal.

The technical part of a proposal includes:

- Introduction: issues being addressed and significance of the research (some proposals integrate a brief literature review) rationale, objectives of the research
- Methodological considerations: information/data needs, data sources, study site and site selection, sample and sampling procedures, methods of data collection, recording and analysis
- Work plan (often depicted in a Gantt chart) or a log frame identifying the anticipated results/outcomes and indicators within the life of the project
- Expected outputs or deliverable and milestones
- Staffing: number and expertise (team composition— team leader, researchers, translators, enumerators etc.)
- Appendices: ToR, references

The financial part of the proposal includes:

- A detailed budget covering all financial aspects of the research such as personnel, logistics, materials, training, fieldwork, transportation costs, per diem, transcription

and translation costs on audio recordings of qualitative interviews, management fees, communications cost, miscellaneous expenses
- Terms of payment

Where a research group or institution is participating in a bid or tender, the technical proposal may have to be submitted in a separate envelope from the financial proposal, both of which are forwarded to the requesting institution/agency.

Assessment and review of the technical and financial proposal are often done by experts or a panel of assessors who look for consistency in the proposal's substance, methodology and budgetary and human resource requirements.

1.3.3. Management Challenges on the Knowledge Generation and Business Sides of Research

a. Investing in Knowledge Generation and Business Sides to Produce Quality Research

When researchers do quality knowledge generation work, they build a good reputation for themselves and their organisation, which generates more opportunities for future research. The business side creates opportunities to find finance for research even if the financial demands are high. The challenge for research institutions is to invest in the research to produce high quality results so that there is a good return on investment.

To have a competitive edge, researchers should build a track record for themselves and their organisation. The research manager may accept a project with smaller funding in the beginning and look at the non-monetary benefits, such as learning and building the team's capacity for a new approach. They then can slowly build their capability to do bigger projects using the lessons from their smaller projects.

Managers should see to it that the results of research are fed into a capacity building strategy that will support the development of Cambodian researchers over a long period. Managers should invest in human resources development that provides quality return on investment for the research organisation.

Research managers/institutions may face contradictions between doing good research work and losing money. To address this, ensure that the funds allotted for the research (including possible additional data processing), administrative requirements and personnel are adequate. This affects both the completion of the research and the reputation of the research team and the institution. Research managers also need to think of expanding or building a client base to keep their organisations "alive".

When the knowledge generation of a research project suffers, the business side also suffers and vice versa. If a research organisation aims to be an expert in the field by generating new knowledge, it also needs to be realistic to take care of the business side. To have competitive advantage in competing for projects, research organisations should build a track record of their research expertise and maintain a good reputation for conducting effective and efficient research.

The business side of research also has to do with investing in competent researchers who will do well on the knowledge generation side. This calls for a strategy for team building as well as capacity building.

b. Management Challenges When Competing for Projects

Lack of familiarity and clarity about a research project's ToR often leads to weak EOIs, concept notes or research proposals. Research managers should ensure a good understanding of the ToR of projects they are applying for.

Early submission and meeting deadlines is a common problem that research managers face. To facilitate preparation and early response and submission to calls for EOIs, concept notes or research proposals, research managers should make available templates covering the different components of a response to such calls, e.g., cover letter, attachments, summary of related experiences, consultants' CVs. Watch out for guidelines on how to submit.

In responding to proposals, donors apply the principles of transparency and accountability, and research managers need to comply with complicated tedious administrative requirements. They should also exercise professionalism in complying with donor requirements.

1.3.4. Summary of Key Points

- Research has both a knowledge generation side and a business side. Integrating the business element with knowledge generation is important to garner and maintain the resources necessary for innovative and quality research.
- The knowledge generation side of research involves acquiring new data through research development and implementation and contributing to the literature and science of research.
- The business side of research has to do with finding funding for projects, competing for projects, cost management, cost and budget allocations and the overall efficient use and management of human and financial resources for the project/programme.
- An important part of the business side is to learn the best ways to obtain projects. One way to get a project is to respond to bidding or proposal calls. For this purpose, research managers need to have skills in preparing expressions of interest, concept notes and/or project proposals in response to client/donor terms of reference.
- When the knowledge generation side of research is weak, the business side also suffers and vice versa. Hence, research managers need to be realistic and nurture both aspects.

1.4. Relating to Donors and Other Research Partners

1.4.1. Understanding the Donors

a. Rationale

The "business side" to research involves an efficient and effective resource mobilisation strategy, specifically of expanding the research organisation's donor base and building good relationships with prospective donors. Donor relations are an important element to project management, especially in incorporating their perspectives and agenda, in facilitating the smooth conduct of the research and in ensuring that adequate resources are available throughout a research project.

The first step to positive donor relations is to understand the donors, their background and interests. This will help the research manager deal with possible donor restrictions and requirements in a positive light and develop a fruitful relationship with them.

b. Types of Donors

Donors differ based on their sources of funds and their country strategies.

Bilateral funding agencies: DfID, Canadian International Development Agency, United States Agency for International Development, Danida and other have their own specific country strategies, and funds are given to meet government policy objectives.

Multilateral funding agencies: The European Commission, World Bank, Asian Development Bank ad UN agencies provide funds to meet policy objectives. Payment may be delayed, and there is often very little flexibility.

Trusts and foundations: The McKnight Foundation, Toyota Foundation, Ford Foundation are more flexible, and personal relationships are sometimes easier and more important.

Corporate donors: Accenture and ANZ are often linked to "corporate social responsibility". Their priorities can change, and they are often looking for a return on their investment such as publicity, a feel-good factor among employees or concerned about their image.

Others: Embassies and NGOs such as CORE UK and Plan International may be linked to national (political) policies and are subject to their own organisational objectives, which might change.

Private companies: Corporate responsibility among private companies has potential to contribute to more funding from the private sector. Donations coming from private companies will more likely have the flexibility to finance specific types of projects.

1.4.2. Matching Donor Information Needs and Reconciling Institutional Interests and Differences

a. Matching Donor Information Needs and the Research Organisation's Interests

A perfect match or the right fit between donor and grantee is a key to the longevity and success of projects. Matching or finding the right fit involves taking into account what donor information needs are being sought by the research project (e.g., is it for policy development, capacity building or both?) and whether the research organisation has the capacity to deliver those without compromising their own research interests and values. Moreover, research institutions need to consider different angles of the relationship: do they share organisational culture, methodological approaches, development philosophy and organisational goals with the donor?

Before responding to donors' calls for proposals, research organisations should ask themselves the following questions to examine whether the project they are aiming at falls within their research programme priorities and mission statement:

- What are our organisational goals?
- What is our mission?
- How would this project fit in with the rest of our organisational programme?

Similarly, the research organisation should find out first about the donor, and ask the questions below to see if the donors' organisational values and structures match their own:

- What is the donor's organisational mission?
- What projects has it previously funded? Where? Who? How much?
- What do other grantees say about it?

b. Experiences in Finding a Fit Between the Research Organisation and the Donor

Two case studies (Box 1 and Box 2) illustrate the presence or absence of a good fit between the research organisation and the donor funding the research. Lessons and the management issues and challenges in relating with donors are identified.

c. Lessons, Issues and Management Challenges in Relating with Donors

There is no single strategy to deal with donors, but mutual respect and understanding are very important to sustain institutional relationships and the financing of research projects.

A donor representative's understanding of the research project is very important. It is crucial to level off expectations from each stakeholder as early as the inception of the project.

Building relationships with prospective donors is important to expand an organisation's donor base. Organisations must seek donors that are the best match for their institutional and programme/project objectives. If a mismatch is detected as the project begins or proceeds, research managers must be firm and prepared to compromise or reconcile institutional interests with those of the donor.

As the project gets underway, differences in expectations must be sorted out with the donor and negotiations settled as to what is do-able and acceptable to both sides.

When donors impose sudden changes or make demands in the projects they are funding, flexibility and good negotiation skills on the part of the research manager/institution will be required. There are times when unexpected changes or demands may come from the research organisation's side (e.g., delays in timetable, requests for additional funds) and the donor will also need to exercise some flexibility, so the relationship should be mutually beneficial.

1.4.3. Summary of Key Points

- ❑ Donor relations are an important element to project management, especially in facilitating the smooth conduct of the research and in ensuring that adequate resources are available.
- ❑ Matching or finding the right fit between a research organisation and its donor involves taking into account what donor information needs are being sought by the research project and whether the organisation has the capacity to deliver those without compromising its own research interests and values.
- ❑ Building relationships with prospective donors is important to expand an organisation's donor base. Organisations must seek donors that are the best match for their organisational and project objectives; that is, they share the same development values, organisational vision and goals, and have common expectations.
- ❑ Research managers need to create a relationship of equal partnership with the donor, not only to ensure that the project runs smoothly, but also so that the donor will be more inclined to support other projects for which the organisation might seek funding.

Box 1. Donor Relations in the ADB and CDRI Participatory Poverty Assessment of the Tonle Sap

The Tonle Sap Participatory Poverty Assessment (PPA) was an ADB technical assistance project in collaboration with the CDRI and National Institute of Statistics that was implemented from October 2004 to November 2006, with an original planned duration of September 2004 to February 2006. The study sought to incorporate the poor's perceptions of and experiences with poverty to inform policy makers, donors and civil society on the relationship between poor people's livelihood strategies and their use and management of natural resources, the gender dimensions of poverty and the role of local governance in poverty reduction in the Tonle Sap region.

CDRI was selected by the ADB as the independent executing agency due to its previous work with the World Bank on a related poverty assessment project. Funds for the project were sourced from the Department for International Development, UK, and were provided directly by ADB to CDRI. In the beginning, ADB and CDRI appeared to be a perfect match: ADB had earlier conducted a nationwide PPA while CDRI had been involved in the World Bank-funded study *Moving Out of Poverty Study*.

There seemed to be a good fit as well between CDRI and ADB in terms of their organisational goals and mission. As an independent Cambodian development policy research institute, CDRI's mission is "to contribute to Cambodia's sustainable development and the well-being of its people through the generation of high quality policy-relevant development research, knowledge dissemination and capacity building". On the other hand, ADB's mission is "to help its developing member countries reduce poverty and improve the quality of life of their people". In addition, policy research is rightly within the key thrusts of CDRI, which matched ADB's need for information that could inform national policy making in Cambodia.

However, mismatches between CDRI and ADB in relation to this project began to surface as the project proceeded, among which were:

(1) The donor placed additional demands on the project outside of what was originally planned in the conceptual framework and overall project design and terms of reference, thus causing delays, staff turnover and repeated negotiations and contract variations to adjust budgets and schedules.
(2) CDRI maintained its integrity and agenda for capacity building in research, which ADB seemed to have little regard for. Partly, these involved unclear expectations, with ADB focused more on the outputs of the research than capacity building of Cambodian researchers, which to CDRI was of strategic importance.
(3) Rigidity, inflexibility and bureaucracy in procurement and disbursement of funds within ADB appeared, requiring CDRI to disburse its own funds due to delays just to complete the project.
(4) Communications from the donor side was slow, compounded by the difficulty of coming together to meet and iron out differences.

For a research undertaking of this scope and importance, it would have been helpful if the donor agency had improved the quality, consistency and continuity of its technical advice and support, genuinely involved local agencies in the early design stages of the project and taken local capacity building seriously and provided training to its personnel and consultants with adequate resources built into project budgets to achieve it.

Box 2. Donor Relations in the McKnight Foundation and the Learning Institute Co-Management Learning Network for Indigenous People

The Co-Management Learning Network for Indigenous People and Protected Areas in South-East Asia has been ongoing since 2006 in Laos, Vietnam and Cambodia. It is a collaborative effort between Global Association for People and Environment, Fauna and Flora International and the Learning Institute (LI). The overall goal of the project has been to strengthen collaborative management practices that enhance biodiversity conservation and livelihood support for local resource users. It has been fortunate to secure funding support from the McKnight Foundation in Asia.

In Cambodia (as well as in Laos and Vietnam), the match between organisational goals and mission has proven to be perfect between LI and McKnight Foundation. LI's mission is "to alleviate poverty and enhance the well-being of people living in rural areas and to be a centre of learning, working with others to generate and share knowledge and practices that contribute to sustainable management of natural resources". McKnight Foundation South-East Asia has the following mission: "Through community building and empowerment, we use our resources to strengthen local institutions and initiatives that sustain and improve the livelihoods of the most vulnerable people in Cambodia, Laos and Vietnam" . Furthermore, it puts an emphasis on indigenous people and supports efforts to increase their self-determination.

This perfect match between the goals of the donor, project and participating organisations has been one of the keys to its longevity. Often, the donor goal differs from that of the grantee, so there is a constant struggle: the donor wishes projects to be adjusted to meet its aims, while grantees try not to stray too far from their own goals and strategic objectives. It is easy in such circumstances for grantees to become increasingly donor-led, ultimately losing sight of their own identity. This has not been the case in this project. Furthermore, as a private Foundation, McKnight has been flexible and willing to listen to grantees if adjustments have had to be made to project activities, outputs or budget lines. This, too, is not always the case, particularly with large national or international donors that are tied to their own political policies, or that are obliged to adhere to a one-size-fits-all approach to funding. Thus, although McKnight has made requests of the project grantees to meet its own needs, these have been negotiated with sensitivity and willingness from the donor to listen to the grantees and to respect their local knowledge.

This fit between the goals of the donor, project and participating organisations was made even more perfect by the relationship forged by the McKnight Foundation with its partners despite the fact that it is supporting several countries in this project:

(1) As a private Foundation, McKnight has been flexible and willing to listen to grantees for adjustments that needed to be made to the project activities, outputs or budget lines, with sensitivity and respect of their local knowledge.
(2) A positive relationship has been built with the McKnight SE Asia representative and other staff, so that proposals could be written with precision to meet their needs, and to be fully understood by them.
(3) McKnight has acted more as a project partner than merely the donor of funding, and has provided invaluable technical support, while also being willing to learn from project staff in a spirit of mutual respect.
(4) The donor has established a relationship of equal partnership with the Learning Institute and the learning network partners supported by regularly communicating and interacting with its grantees.

CHAPTER TWO: PLANNING THE RESEARCH PROJECT EFFECTIVELY

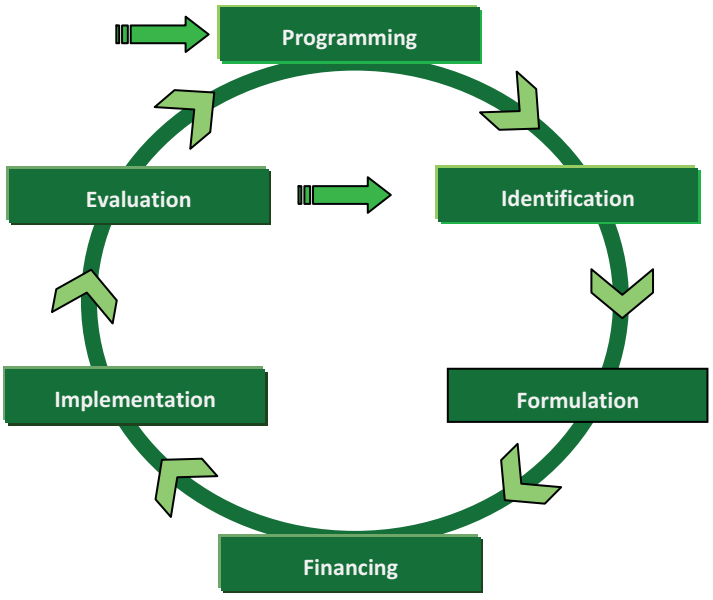
This chapter focuses on planning and mobilising resources with the aid of project management tools, firming up the research design, including the review of the literature and methodological considerations, preparing the work plan and budget and putting the research proposal together.

2.1. Planning Tools and the Importance of Efficiency and Effectiveness in Research Projects; Soliciting the Participation and Ownership of Stakeholders

2.1.1. Planning in the Project Cycle

Efficient and effective planning is the key to the success of projects. For this reason, the research project is planned in the context of the project cycle used in development and aid programming (Figure 3). Six phases of project cycle management provide the minimum basis for effective project preparation, implementation and evaluation. Four of these phases—programming, identification, formulation and financing—are integral elements of planning.

Figure 3. The Generic Project Cycle



Source: European Commission 1999

- During phase, the national and sectoral situations are analysed to identify issues and opportunities that a research project could address in line with the programme thrusts/strategy and objectives of the research institution.
- In *identification*, ideas for research and related studies are identified.
- During *formulation*, project ideas are developed into a research proposal with a detailed research design and implementation plan, including a monitoring and evaluation framework.
- During *financing*, research proposals are submitted for funding and examined by the funding agency. Once a decision is taken to fund the project, the funding agency and the

research team agree on the strategies for implementation and formalise these in a legal document describing how the project will be funded and implemented.

2.1.2. Project Development and Management Planning Tools

The efficiency and effectiveness of planning a research project are supported by the use of project management principles and analytical tools.

Project Elements	*Management Tools*
▪ Firming up project purpose, objectives, results, impact, scope, inclusivity	- Logical framework analysis, results-based management, project management triangle, gender analysis frameworks
▪ Firming up the research design	- Conceptual framework, research data collection and analysis tools
▪ Determining work to be done, deliverables and milestones, project documentation	- Work plan, work breakdown schedule, PERT-CPM
▪ Allocating the human and financial resources	- Budgets, spreadsheets
▪ Assigning staff responsibilities	- Terms of reference, job descriptions, matrix of responsibilities

2.1.3. The Logical Framework Analysis (LFA)

The LFA, or log frame is an analytical tool used to plan, implement, monitor and evaluate projects. It derives its name from the logical linkages set out by planners to connect project means with ends. The goal of the log frame is to show the flow of resources and technical inputs that are a useful reference for donors.

In the generic log frame matrix, the first row states the *goal* of the project, or the aim that the project anticipates reaching, which must be related to a specific national development priority (Table 4). The second row lists the objectives or purpose of the project. The third row encompasses its outputs, or the anticipated results. Finally, the fourth row is a list of project activities that relate to each of output. Activities refer to the strategies used to achieve the objectives of the research.

As a planning tool, the generic log frame represents the merging of two complementary programming concepts in a matrix—the "horizontal logic" that underpins programme performance monitoring and the "vertical logic" that tests the soundness of the results.

In project planning, a log frame is typically shaped by working "top down" through the matrix. First, the ultimate goal is defined, followed by the purpose of the project, then the outputs needed to achieve the goal and, finally, the activities and inputs needed to achieve the outputs. Reading the log frame from the "bottom up" to test if its logic still holds true given the realities of project implementation is an essential step in project management.

Table 4. The Generic Log Frame

	Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Goal (Development Objective)				
Purpose (Immediate Objective)				
Outputs (Components)				
Activities (Sub-components)				

A key step in applying the logical framework approach to research project planning is understanding the definitions of the different levels of objectives in a log frame's intervention logic:

- The *goal* explains why the research project/programme is important in terms of the usefulness of the results and longer term benefits to the research beneficiaries and the wider benefits to other groups/stakeholders. It should also show how the research fits into the policies of the government, NGOs or research organisations concerned.
- The *purpose* defines the research project's central objective in terms of sustainable benefits to be experienced by beneficiaries. It defines the project's success and should relate directly to the core problem(s) of the beneficiaries that the research seeks to address.
- *Results (outputs)* describe the usefulness or impact provided by the research to a target group, and should address the main causes of the problems the group faces. Research project managers can be held directly accountable for delivering outputs.
- The *results-to-purpose* linkage is key in the research project's intervention logic as it describes the relationship between what the research project will deliver (results), and the benefits to be experienced by the target group (research project purpose).

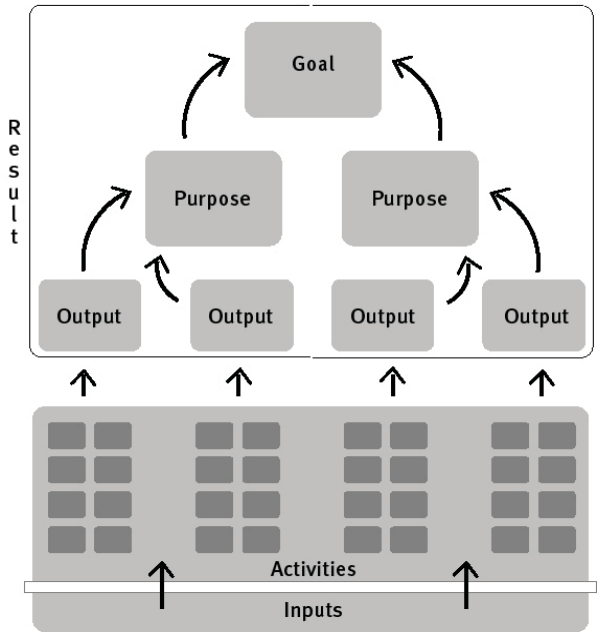
2.1.4. Results-Based Management (RBM)

RBM is a participatory and team-based approach to management designed to improve programme and management effectiveness, efficiency and accountability that focuses on defined results. As a management planning tool, it focuses on analysing the problems to be addressed and determining their causes and effects, identifying measurable or describable changes (results) to be achieved based on appropriate problem analyses, and designing strategies that would achieve results in a research project/programme.

As a performance management tool that brings the research team to the results, RBM takes account of other information such as human and technical resources and helps identify the enabling environment to get things done, using time frames and amount of resources for the project to be effective.

The central element of RBM planning is the Results Chain (Figure 4), which focuses on cause and effect. It shows the logical links between activities and the results that may be expected over a period of time, provided that assumptions are valid and risks do not materialise.

Figure 4. The Results Chain in the RBM Framework



Source: Velasco 2011a

A *result* is a describable or measurable change derived from a cause and effect relationship. This means that a result is a change that can be observed, described and measured in some way, and for which the cause can be identified. In RBM, goals, purposes and outputs indicate different levels of results and are defined as follows:

- A *goal* reflects the long-term results expected from a research project/programme. It is the highest level of result to which the programme contributes, together with the efforts of all research partners.
- The *purpose* is a result between output and goal in the hierarchy of aims in the log-frame matrix. It reflects the short- to medium-term results that can reasonably be expected, provided planned outputs are delivered, the assumptions remain valid and the risks have not materialised.
- The *outputs* are the time-bound and describable or measurable changes that are produced by programme or management activities. The term "deliverables" is also used for outputs.

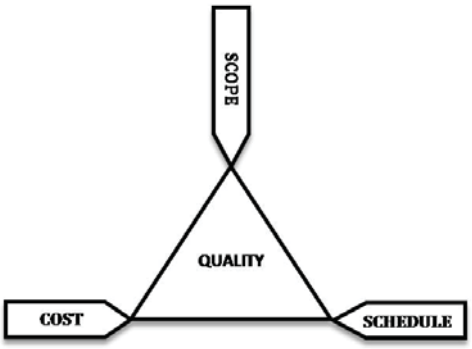
2.1.5. The Project Management Triangle

This analytical tool assumes that projects need to be performed and delivered under triple constraints. Traditionally, these constraints have been listed as scope, time and cost, or what is frequently termed the "project management triangle" (Figure 5). One side of the triangle cannot be changed without affecting the others.

The time constraint is the amount of time available to complete a project. The cost constraint refers to the budgeted amount available for the project. The scope constraint refers to what must be done to produce the project's end result. These three are often competing: increased

scope typically means increased time or an extended schedule and increased cost; tight time for a project could mean increased cost and reduced scope; and a tight budget suggests increased time/extended schedule and reduced scope. In Figure 6, schedule refers traditionally to the time constraint of the project.

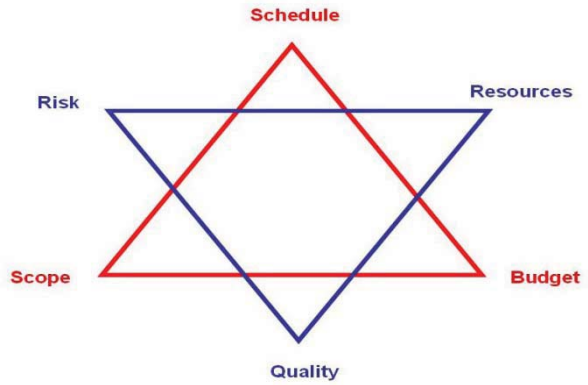
Figure 5. Project Management Triangle 1



Source: http://en.wikipedia.org/wiki/Project_management#cite_note-Chat-0

The triple constraints in project management can also be compared against risk, resources, and quality (Figure 6). Changing the scope of the project will have an effect on budget, resources, schedule, risks and quality of outputs.

Figure 6. Project Management Triangle 2 – "Triple Constraints" in Project Management



2.1.6. Gender Planning and Methodological Tools

a. Why Gender in Planning Research?

Part of project planning is ensuring that the research project is gender sensitive. Gendered research ensures that in every step of the research development and implementation, the research team understands and takes into account the differences in the roles of and social relations between men and women. Carrying a gender perspective in research means advancing a gender analytical framework and disaggregating data by sex to detect and portray the differences between women and men, and articulating such differences to influence gender policy.

The main issues in gendered research include:

- Gender equality—Are the same rights and potential made available to men and women, such as fair share or access to resources or to opportunities (e.g., in education)?
- Gender equity—Are both women and men provided with what is fair and just for them? Inequity exists when the distribution of opportunities and resources is unfair and unjust.
- Status—Do women and men share the same status in the family and in society? Unequal status leads to inequality and inequity.

b. Methodological Tools/ Frameworks in Gender Analysis

Gender analysis is the systematic identifying of differences in the conditions, needs, participation rates, access to resources and development and control of assets and decision making between women and men. It identifies key issues of gender inequality and inequity so that they can be properly addressed. It provides the basis for, and is the first step in, gender mainstreaming in research.

The use and application of a specific gender analysis framework can be determined depending upon the research project's gender objectives. The gender analysis framework used guides the kind of data to be collected and who should be involved.

- *Gender Roles Framework (GRF)*

The GRF framework provides important data on the distribution of roles and resources within the household. The systematic inquiry into women's and men's activities attempts to overcome the ideologies and stereotypes that render invisible women's work. In this framework, gender analysis is described as a diagnostic tool for planners to overcome inefficient resource allocation. In each phase, planners are encouraged to look at the implications of the gender differences for project design. For example, what new economic demands are placed on women? How will these impact on their productive, reproductive and leisure time, and on the responsibilities of other household members?

- *DPU (Department of Planning Unit, London University) Framework, also known as the Triple Roles Model*

The DPU Framework highlights the multiple demands on women's time in low-income households. Distinctions are made among women's productive, reproductive and community-managing roles—hence triple roles. Analyses of these triple roles include consideration of its two other components: practical gender needs (PGN) and strategic gender needs (SGN). This framework has a policy message: the need to use development interventions to transform unequal gender relations. The triple roles schema draws planners' attention to the way in which the gender division of labour places a range of demands on women's time and impacts their ability to participate in planned interventions. By distinguishing between PGN and SGN, it is possible to identify the planning needs of women in various sectors from an economic point of view.

- *Social Relations Framework (SRF)*

In SRF, gender analysis is embedded within broader social relations such as class, ethnicity, age, religion, caste that cut across one another. Rather than downplaying the "political" dimension of gender, the SRF brings it to the core of gender relations, framing the relationship as one of male domination and female subordination. In this framework, ending women's subordination is more than a matter of reallocating economic resources; it involves

redistributing power. Men will have to relinquish some of their economic, political and social power for women to gain power. Development interventions need to be designed in ways that have transformatory potential—that of helping build the enabling environment for the process of women's self-empowerment.

- *Women's Empowerment Framework (WEF)*

The WEF views women's equality and women's empowerment as central development objectives in their own right. Women's advancement to equality and empowerment is measured on the hierarchy of ascending levels of equality: from welfare to access, conscientisation, participation and control. Thus the main contribution of the empowerment framework lies in its efforts to promote women's empowerment as an intrinsic part of the development process.

2.1.7. Other Research Project Development and Management Principles and Tools[1]

a. Checklist of Research Project Management Principles

When developing and managing research projects, the following principles should be observed in both the research proposal and in the final report:

- ☑ Purpose, demonstrated via:
  - significance to current societal issues
  - contributions to current knowledge base or policy
  - production of a set of outcomes (e.g. report, recommendations, dialogues)
  - research questions
- ☑ Relevance, demonstrated via:
  - literature review
  - significance of the problem itself
  - need for management of a development issue
  - government/donor request
  - necessity for programme development
- ☑ Feasibility, demonstrated via:
  - availability of resources, including time, financial and human
  - list of activities to carry out research method(s)
  - acknowledgements of any limitations
- ☑ Accuracy, demonstrated via:
  - congruence with theoretical predictions, available statistical data and scores of similar studies achieved in different countries (localisations)
  - identifying accurate indicators
  - reference to experts
  - triangulation
  - verification of all data
- ☑ Accountability, demonstrated via:
  - detailed account of actions and decisions
  - justifications for any departure from original research design
  - acknowledgements of limitations of the activities

[1] Material used in sections a and b was accessed on 23 August 2010 from http://www.iom.int/jahia/webdav/site/myjahiasite/shared/shared/mainsite/published_docs/brochures_and_info_sheets/Training_Research_Checklist.pdf

b. Checklist of Research Project Development and Management Tools to Ensure Project Success

Good project planning ensures the success of a project. The following actions should be undertaken according to the relevant project management tools.

- ☑ Resources
  - budgeting and monitoring costs of research
  - creating a timetable to plan dates and order of research activities
  - establishing/maintaining relationship with key persons or "gatekeepers"
- ☑ Project document
  - understanding the project development flowchart
  - understanding the purpose and objective for each component of the project document
- ☑ Terms of reference
  - describing objectives, expected roles and responsibilities of the researcher
  - identifying formal and informal qualifications
  - distinguishing between required and desirable qualifications
  - prioritising qualifications
  - considering effect of researchers' demographic characteristics in relation to target group
- ☑ Contract
  - outlining rights and obligations of the researcher
  - specifying deliverables based on project document, including work plan
  - including contractual clauses to avoid problematic ambiguities (e.g. need for additional services after date of expiry)
- ☑ Training of researchers
  - the research context
  - the research objective
  - population of interest
  - methods of survey distribution, completion, processing
  - interviewing and note-taking skills

2.1.8. Summary of Key Points

- ❑ In planning research projects, managers need tools to be effective and efficient in developing and managing the research.
- ❑ Planning is done within the context of the project management cycle used in development and aid programming.
- ❑ Effective and efficient planning of research programmes/projects relies heavily on project management principles, tools and techniques to meet the needs and expectations for a project.
- ❑ Project management tools may vary in format, substance, focus, and information required. Relevant methodological and planning tools include LFA, RBM, project management triangle, gender analysis and other tools such as work plans and breakdown schedules.

- Part of project planning is ensuring that the research is gender sensitive. The use and application of a specific gender analysis framework can be determined depending upon the project's gender objectives.

2.2. Writing the Research Proposal

The quality of writing is a critical element of the quality of the research. Research is only as good as it is written. When poorly written, good research does not come across as good research.

The quality of a research proposal depends not only on the quality of the proposed project but also on the quality of the proposal writing. A good research project may risk rejection simply because the proposal is poorly written. To ensure that the proposal is developed and written in a coherent, clear, and compelling manner, certain principles need to be observed in the various steps of writing.

2.2.1. Firming Up Research Objectives, Detailing Variables and Setting Analytical Approach

a. Firming Up Research Objectives

Research should not be just theoretical, but should extend knowledge. Research is concerned with "critical and creative investigations undertaken on a systematic and rigorous basis, with the aim of extending knowledge or solving particular practical or theoretical problems" (Harman 2006). Therefore, how to think beyond description and how to extend knowledge are the main concerns of research.

The research problem comes from certain kinds of research questions that come from different sources:

- Commissioned research: based on a client's/donor's research need or interest
- Not commissioned research: based on a problem identified by the researchers themselves or by their organisation
- Interactions with colleagues or participation in round-table discussions: a broad research problem or topics identified and narrowed down to specific issues
- Observations: a phenomenon is observed and then developed or explored
- Theory: reading about a theory sparks research ideas

To turn an idea into a research topic, researchers should ask: why is it a problem, for whom is it a problem and what are the "stakes" in the problem? Researchers should want to find out what is happening and who are affected. Researchers should always ask "if": for example, if land grabbing is not a problem, then what is the problem? If Cambodian universities do not have research capacity and a lot of research is donor driven, so what and then what?

To firm up the research objectives, researchers should use a "funnel" approach: from the broad ideas, they should define a research objective that addresses a specific research problem. Scoping and sizing research questions also involve "casting a wide net", then narrowing the focus of the research to a size that is realistic and manageable.

b. Detailing Variables to Be Examined

Variables are aspects of the reality that express concepts which are the subjects of research. Concepts are abstract categories through which human beings think about their experiences and organise their world. For example, the concept of crime is a behaviour that is against social norms and that elicits a response from the community. Variables can be crime rate, kinds of criminal acts and effects on the community. Some concepts are implied, e.g., public goods, but social scientists have a real concept of them. In Cambodia, because of visible NGO activities, ordinary people are getting to know more of the concepts that are being translated into everyday life, e.g., social deprivation, transparency, accountability, gender.

In research, concepts need to be translated into observable and measurable variables. A researcher's view of a concept may not be similar to others' views. Consider the concept of migration. One view of migration relates to its impact on family members back home. Another view is that migration helps improve the quality of life of a family by moving to another country. Third, migration is viewed as good because it leads to closer family ties as a result of better income. But some studies prove that only working age people from the middle income group, not from the low income group, are able to migrate and provide financial support to their families. Another view is that the parents of those who migrate are often left behind and not taken care of; hence, migration does not necessarily provide positive impact. By questioning the relationship between concepts and variables, a hypothesis emerges.

The research problem should therefore describe the relationships between the variables that are being addressed. In so doing, the researcher hypothesises the relationship(s) between concepts or variables. Very often researchers focus on a single variable and on whether the causality is linear or bi-directional. For a research proposal, variables can be focused on, but other things may be going on. Factor *a* causes *b*, but *a* and *b* may exist in a certain relationship; e.g., urban-rural migration is not necessarily caused by a push or pull factor; the two factors may co-exist.

c. Setting the Analytical Approach

Some kind of theory is almost always involved in research. Theorising is from the ground up, while theory is from the top down. Theory is the lens used to understand a certain phenomenon.

A theoretical framework expresses a relationship between two concepts, or a hypothesis. For example, in dealing with the concepts of "crime" and "society", one theory may be: "If people have nothing better to do and there are no parks available for leisure, they will engage in criminal activity". A theory can be proven or not proven according to how the variables are related.

Like the theoretical framework, a theoretical perspective expresses a hypothesis. For example, a theoretical perspective or hypothesis may be expressed as: "There are social factors related to crime. If people have no resources, they resort to crime." Or: "If young students have discipline, they will have better academic performance; they will have higher grades in school, then they will have better jobs in the future".

The research framework is guided by the theoretical framework. For example, social development theories (e.g., modernisation theory, Marxist/conflict theory, functionalist approach, evolution theory, feminist theory) can be applied to understand the link or

relationships between variables in social development. A theory maybe confirmed after the research or can be questioned or challenged. Awareness of this kind of process is called "reflexivity".

Researchers may come across all kinds of theory, and some may be very narrowly replicated in Cambodia. The concern should be making the theory strong or testing its validity. Researchers should ask if the theory can give them all that they want to do in the research proposal. The approach is to challenge the theory and strengthen or disprove it.

2.2.2. Defining the Methodological Approach

Methodology, or how to tackle the research problem, is fundamental to all research.

The choice of a methodology depends on:

- research objectives
- conceptual framework and theoretical concerns
- literature review of related studies
- stage of research project
- demographic profile of target populations
- specificity of social settings

Some guiding principles in choosing the methodology are:

- There should be sufficient information from the literature that the methodology is sound.
- Choose the most appropriate and most valid way to address the research question; i.e., is a research question best answered by qualitative or quantitative research?
- The research design should dictate how the data should be collected and analysed.
- The methodology should reflect who the respondents will be and what kind of sampling procedure will be used.
- Specify and prepare the appropriate instruments or questionnaires.
- The methodology should specify the procedure: How do you plan to carry out the study? Where? What activities are involved? How long does it take?
- The limitation or boundaries of the proposed research should be defined in order to provide a clear focus.

Research methodologies usually fall under two main approaches: quantitative and qualitative research. They differ on the types of activities, beliefs, steps and rigour that the researcher plans to use (Table 5).

Table 5. Comparison of Quantitative and Quantitative Research In Terms of Activities, Beliefs, Steps and Rigour

QUANTITATIVE RESEARCH	QUALITATIVE RESEARCH
Activities	***Activities***
- Counts occurrences across a large population - Uses statistics and replicability to validate generalisation from survey samples and experiments - Attempts to reduce "contaminating" social variables	- Looks deep into the quality of social life - Locates the study within particular settings, which (1) provide opportunities for exploring all social variables and (2) set manageable boundaries - Initial foray into the social setting leads to further, more informed exploration as themes and focuses emerge

QUANTITATIVE RESEARCH	QUALITATIVE RESEARCH
Beliefs	***Beliefs***
- Conviction about what it is important to look for - Confidence in established instruments - Reality is not so problematic if the instruments are adequate; conclusive results are feasible	- Conviction that what it is important to look for will emerge - Confidence in an ability to devise research procedures to fit the situation and the nature of the people in it, as they are revealed - Reality contains mysteries to which the researcher must submit, and can do no more than interpret
Steps	***Steps***
- First decide the research focus (e.g., testing a specific hypothesis - Then devise and pilot research instruments (e.g., survey questionnaire or experiment). - Then go into the field	- Decide the subject is interesting (e.g., in its own right, or because it represents an area of interest) - Go into the field and see what is going on. - Let focus and themes emerge; devise research instruments during process (e.g., observation or interview)
Rigour	***Rigour***
- Disciplined application of established rules for statistics, experiment and survey design	- Principled development of research strategy to suit the scenario being studied as it is revealed

Source: Holliday 2007

The case study of the ADB-CDRI PPA demonstrates some of the dilemmas in the methodological aspects of the study (Box 3).

For many researchers, there is always the dilemma of whether to do research quantitatively or qualitatively, and what methodological approach to use—case study, longitudinal or comparative study, etc. Sometimes, qualitative research methods pose more challenges for collection and analysis of qualitative data.

As shown in Box 3, qualitative researchers are usually more open to new perceptions and ideas that may emerge as the study gets underway. On the other hand, quantitative researchers go to the field with a hypothesis and certainty as to what data to collect.

Validity and reliability are quantitative perspectives and do not apply to qualitative research. In sampling for quantitative research, generalisability is often the norm. In sampling for qualitative research, representativeness and generalisability are limited.

As also depicted in Box 3, qualitative and quantitative research may be necessary and need to be combined in different ways. It is often advisable to "qualify the quantitative and quantify the qualitative". In qualitative research, sampling is also needed. Researchers should not think that qualitative is not concerned with numbers. The researcher also asks how many people should be interviewed, or how many villages should be selected as study sites.

Almost all the time, a qualitative approach is needed before the quantitative part. For example, researchers must have a qualitative understanding of a social group, and why there is a need for focus groups or key informants.

Box 3. Case Study of Methodological Issues in the ADB and CDRI PPA of the Tonle Sap

Qualitative and participatory approaches to the study of poverty are a reaction to the perceived shortcomings and limitations of quantitative approaches. This study attempted to involve the poor in the research in ways that empower them to articulate their own standards of well-being, identify problems associated with meeting basic needs and achieving life ambitions and propose solutions to their problems.

Although the study was primarily qualitative, quantitative measures helped guide the site selection as well as support the qualitative analysis. Sources of quantitative data concerning the Tonle Sap region included the population census of 1998, the Cambodian Socio-Economic Survey of 1999, the Commune Database (SEILA, 1998-2001), the Tonle Sap Database (Oxfam-America, 2000), additional studies from WFP, UNICEF, the Ministry of Agriculture, Forestry, and Fisheries and other sources, including recent CDRI studies and data from NGOs working in the six provinces. The *Moving Out of Poverty Study* (MOPS) that CDRI had undertaken in collaboration with the World Bank also provided panel data for three villages in the study area and was a useful point of reference. It also informed the development of the qualitative components of the PPA.

Considerable effort was put into selecting sites representative of the Tonle Sap region. The provinces selected were Kompong Chhnang, Kompong Cham, Kompong Thom, Siem Reap, Battambang and Pursat. Site selection was done on a purposive sampling basis representing specific regional characteristics and circumstances such as commune poverty levels, household livelihood activities and geographical location. The selection also took into account factors including the percentage of female-headed households, ethnicity, governance issues and staff security. The field research was divided into two phases, with each phase covering three provinces. On average, the research team spent a total of 17 days in the field per village, with 10 days of actual fieldwork (e.g., FGDs, individual household interviews and key informant interviews) and daily documentation, as well as four days for village report writing and presentation, one day for the commune workshop and two days' travel.

Participatory rural assessment tools were used during FGD, including social mapping, well-being ranking and natural resources mapping. To ensure that the techniques were non-threatening and elicited participation among the villagers, PPA teams first used thematic maps to identify prospective communes according to poverty rates and geographical location. As well, three types of interaction were employed: FGDs, individual interviews and impromptu discussions with various people. The FGDs provided an important research technique that enabled the villagers to become active participants, and at the same time narrowed the gap between the researchers and the participants in the study. The structure, composition and implementation of the FGDs and individual household interviews were designed to ensure that women had ample opportunities to articulate their experiences and opinions.

The very idea of research purporting to enable the poor and the very poor to speak for themselves in a developing country like Cambodia raised complex and difficult methodological questions and issues. The relationship between urban-based researchers and rural participants also had a bearing on the integrity of the data and subsequent analysis. Documentation and reporting were an extremely important component of the PPA methodology, and, given the enormous volume of data generated, constituted a significant project management and resource challenge.

2.2.3. Managing the Review of the Literature and Keeping an Effective Focus

Literature review is the critical review of previous studies, existing literature or current status of researches that, in one way or another, are related to the research to be conducted. It is a necessary part of the research proposal because it provides the theoretical, conceptual and methodological foundations of the research. It convinces the reader that the proposed research will make a significant and substantial contribution to the literature by resolving an important theoretical issue or filling a major gap in the literature.

The following steps are important for a good literature review:

- Based on the research topic, develop the research questions, and then begin the literature review by gathering relevant materials.
- Develop a literature map or matrix to show you what has and has not been done on the topic under study (Table 6). The use of a matrix can help organise or synthesise the literature being reviewed. It also helps indicate what studies relate to which studies and to the proposed research. Concept mapping of literature can also be done through software called “mind map”.
- Read and then do an abstract of the literature. The researcher needs to know what to include in the abstract and not just to copy the original article. Online journals and data bases almost always begin with an abstract. If an abstract is relevant to the research proposal, it should be used to advantage. The researcher can search databases used in big universities and research institutions; use key words and search the various websites (academic journals, researches, Google).
- Understand the main argument of each item reviewed, then analyse those arguments that have some connection to the research proposal. For example, ask: What significance does the literature have to the research being proposed? What are the gaps and how will the proposed research fill those gaps? Is the theoretical model reviewed to be used or adapted for the proposed research?
- Make notes of the annotated bibliographies of the articles being reviewed. It will help in the analytical part and even in preparing annotations in the research proposal. Good researchers make their own annotations by summarising and using their own arguments, which is more useful because the researchers know what research questions are being addressed in the proposal.
- Follow correct citations and referencing. The standard practice is to cite the last name first, followed by the first name. To be consistent about the style, use a particular style or format, e.g., the Chicago Manual of Style or APA format.
- Although the literature review is in one section of the research proposal, make sure that the literature reviewed is used or referred to in the relevant sections of the research proposal as well as in the research report.

Table 6. Sample Matrix for a literature review on gender and migration issues

Themes/Patterns	Issues that Have Been Studied and Sources			
	Youth	*Agricultural workers*	*Landless labourers*	*Other groups of people*
Rural to urban				
North to west				
Cross-border migration				
(Other themes or patterns)				

2.2.4. Preparing the Sampling Design and Gaining Access to Sampling Frameworks in Qualitative and Quantitative Data Collection

a. Preparing the Sampling Design in Qualitative Research

Good researchers know that the key concerns in preparing the sampling design for qualitative research are: representativeness of sample, generalisability of the findings, sampling bias in relation to "the larger population". Sampling depends on the scope of the study, the objectives, the budget and cost estimates based on the kind of information to be collected. Before sampling is decided, researchers need to ask for whom they are doing the research.

The key concern in qualitative research is to understand more deeply the lives of people within a social context. Qualitative sampling design will depend on the study objectives and on the researchers themselves, i.e., whether their sample is enough to get the needed information, and whether they have covered enough of the objectives.

The way to judge whether information is enough is if the sampling has reached its saturation point, that is, within each target population, the researcher keeps hearing the same things, and the same patterns are repeating themselves. If an unexpected pattern begins to emerge, the researcher will have to interview another respondent to see if such a pattern recurs.

Sampling procedures used in qualitative research and their features are as follows:

- Random sampling has a greater assurance of representativeness.
- Non-random sampling is sometimes a weak basis for generalisation due to its lack of representativeness, but, if consciously planned, it can be a basis for further research. Some examples of non-random sampling are:
  - Accidental sampling: This has immediate availability.
  - Accidental quota sampling: This fills the quota for each relevant sub-category.
  - Snowball sampling: In this process, available respondents nominate new respondents; this can have some bias. Sometimes the researcher gets more respondents of the same background but who may not be typical of the larger population.
  - Systematic matching sampling: There is a conscious attempt to cover relevant factors (e.g. gender, ethnicity, age).
  - Purposive sampling: This is selective and attempts to select a sample that is "typical", but that meet some criterion (For example, in the CDRI-ADB Participatory Poverty Assessment of the Tonle Sap [see also Annex 3], purposive sampling consisted of 24 villages in six provinces around the Tonle Sap Lake, according to three priorities [commune poverty levels, household livelihood activities,

geographical location] and four types of household livelihood activities [agriculture, fishing, forest-related and mixed]. The criteria for site selection included percentage of female-headed households, ethnicity, size [number of households], governance issues [including conflicts], special features [e.g., migration/mobility], special areas/villages of interest and staff security.)

b. Preparing the Sampling Design in Quantitative Research

Sampling design in quantitative research consists of clearly defined goals and objectives, the scope and coverage of the survey and targeting of the research population. Deciding for a sample on quantitative needs should be done rigorously if accurate results are expected.

The main source of data in quantitative research is statistics. There are three main sources of statistical data in the world or individual countries considered as official:

- Statistical data derived from the general census, such as
  - the general population census
  - the general economics census
  - the general agricultural census
- Statistical data derived from sample surveys, such as
  - social welfare: Cambodia Demographic and Health Survey, CSES, Labour Force Survey, National Tobacco Prevalence Survey
  - economic sector: establishment listing, trade, prices
  - social opinion: poll opinion, international affairs
- Statistics derived from administrative records, such as
  - registration and vital statistics: births, deaths, marriages
  - other: taxation, land registration, etc.

c. Determining the Sampling Design

In determining the sampling design, the following must be clearly defined:

- Goals and objectives of the survey: what, where, when and why
- Scope and coverage of the survey: e.g., regional, sub-regional, national, provincial, urban, rural
- Targeting of the population: e.g., community, group of population, sub-group of population individual
- Resources: funded resources (single or multiple), human resources (can be both local and international), capacity building
- Working space: room and seat, place of storage, etc.
- Working environment: bureaucratic or non-bureaucratic, communications
- Laws or regulations: statistical law, ethics, letter requirements e.g., permission letter may be needed from the Ministry of Interior for field data collection
- Technical aspects and data users' needs: decided by both internal and external data users and stakeholders

d. Preparing the Population and Sampling Frame

While population is an abstract entity, the sampling frame is the actual list or the set of source materials from which the sample is selected. A good sampling frame is complete in coverage, is accurate, is up to date and provides good estimates for assessment results. Following are some examples of sampling frames:

- Sampling frames for household surveys:
  - Frame for selecting unit areas: can be list of villages or enumeration areas of census
  - List of households in the unit area: to be prepared at the preparation stage
  - Another frame of households: individuals or residents registered, if available (also in households of Cambodian society, there are several kinds, e.g., institutional households, homeless households, transient households)

- Sampling frames of business establishments/enterprise survey
  - Businesses constructed and updated by establishment/enterprise census and/or various registrations, containing name, address, telephone number, number of workers, size of capital, industry

For the master frame, if several surveys of similar type are anticipated, a sample of relatively large size may be selected at first and then the actual sample may be selected for each survey from the large sample, e.g., Comprehensive Survey of Living Conditions of the People on Health and Welfare.

Determination of sample size and cost should involve the following:

- Appropriate sample size calculation method – can include simple random sampling; stratified sampling with proportional allocation; stratified sampling with optimal allocation; cluster sampling from clusters of uniform size; or two-stage sampling (using clusters of uniform size as the primary unit); and will require determining the expected (or requested) accuracy in terms of the standard error
- Sample allocation – employing proportional or non-proportional allocation
- Frame distribution – showing the table of population sampling frame by region or sub region or urban and rural and so on, with the total and subtotal number of variable value
- Sample selection procedure – choosing the appropriate method of sample selection by using the simple random sampling selection, or the LSS-PPS[2] or CSS-PPS sample selection.
- Sample distribution – to show the cross-cutting table of sample selection
- Cost function and sample size determination –will require starting from an optimum sample size, and considering a margin of error at 1 percent, 5 percent or 10 percent, the confidence Interval at 68 percent, 95 percent and 99 percent and the variance or standard of error
- Cost limitations – determine the amount of funds available and ask: Can the sample size be obtained through these amounts? If the answer to this question is no, either the number of respondents from optimum sample size is reduced or the cost is increased.

2.2.5. Establishing the Research Team

Establishing the research team is one of the critical components of research design. Team composition, especially a multi-disciplinary team, is important in the research project design and should be clearly reflected in a management plan.

The roles of the researchers, project team leader and other members of the team should be determined during the planning phase so that the research team, the research organisation, its management and the donor are aware of who will be involved in the implementation,

[2] This stands for Linear Systematic Sampling with Probability of inclusion of village Proportional to its Size; CSS-PPS, on the other hand, stands for Circular Systematic Sampling with Probability of inclusion of village Proportional to its size.

coordination and monitoring of the project. Human resource contributions, if managed very well, will be reflected in the quality of project outputs.

The nature of a research project will guide the manager on what should be the composition of the team of researchers, i.e., what kinds of expertise/specialisations the team should possess. To form an effective team, the manager should:

- Understand the institutional culture (both for the team already assigned and the team to be recruited) and the nature of work required for effective planning, building team spirit, commitment, effort and collaboration.
- Understand the research objectives, expected final outputs and milestones and the specialisations or expertise needed to match these elements.
- Prepare a profile of the project team, harmonising individual abilities, commitment and contributions within the institutional culture through consultation or project orientation.
- Define clear roles and responsibilities of the team members, at the same time ensuring their accountability by assigning tasks to each through a responsibility matrix (Table 7).

Table 7. Sample Responsibility Matrix for a Decentralisation Research Project

Name of Staff	Area of Expertise	Position Assigned	Tasks Assigned
X	Economic development, economic governance, development policy	Team leader	Provide overall supervision and guiding support to the team.
X	Economic development Political economy D&D Civil society	Team member	i. Overall project management; main contact point and liaison with external stakeholders ii. Manage consultation and fieldwork iii. Conduct literature review iv. Draft reports
X	D&D reform (local leadership) Political economy Civil society	Team member	i. Support the team leader in project management and coordination ii. Do fieldwork and data collection iii. Conduct literature review iv. Assist the team leaders in data analysis and report writing
X	Economic development Political economy D&D Agriculture	Team member	i. Assist team leader in developing fieldwork methodology ii. Conduct fieldwork iii. Conduct literature review iv. Assist team leader in data analysis and report writing

Source: CDRI Form Tech 5

- Build in mechanisms for maximising and sustaining team momentum and spirit throughout the planning, implementation and monitoring of the project.
- Fill in the human resources for the project by carefully considering the project's financial resources. The team composition should match the budget line items in the project plan. Some specific things to consider in this regard are:
  - Team size: Are the team members to be recruited adequate for the nature of the research and the deliverables required? Provision should also be made for unexpected turnover; e.g., in case some researchers leave in the middle of the project, will there be enough team members to carry on the work?
  - Hierarchy of the composition and experts required: The research project will not only need fieldworkers/interviewers but should have a management and support unit

within it. The project director, project manager, team leaders, coordinators and experts need to be identified and lines of accountability established.

- Research and subject experts and accompanying costs: Bring in experts from the research areas to complement each other (e.g., if you need to design a survey, you will need a sampling specialist). How much does an expert cost? Is his/her CV credible? If an expert is the right person for the job, will you pay him/her even if the rate is high?
- Gender balance: Is there a gender balance in the team composition? Are there more male members in the team? The issue may not be gender balance per se but what the study is about. For example, if the research is about reproductive health, it will be difficult to have men interviewing women on related issues as they can be sensitive topics. Keep in mind that it is not just having the right number of men and women in the team, but the kinds of questions the research is asking and having women participants' voices heard.

2.2.6. Preparing the Work Plan and Identifying the Research Project Milestones

Once the research team has firmed up its research objectives, methodology and team composition, a work plan is prepared. The work plan specifies all the tasks and activities, expected outputs or deliverables, the necessary inputs to achieve the objectives and the expected milestones from start to finish.

Ensuring that the project work plan includes all the work required is called "project scope management". The scope of the project's work plan will depend on the research proposal. If the work plan is not aligned with the narrative, either the narrative or the work plan may have to be changed.

a. Preparing the Work Plan

The tasks and activities to be accomplished will depend on the objectives and complexity of the research design and the type of information required. A comprehensive research programme of five years' duration that includes several projects will have greater scope than an individual project, which is usually of a shorter time frame. Considerations in the preparation of a work plan include the following:

- Build on the project ToR and research design, as these contain the information necessary to delineate the scope of the work plan. Hence research managers should begin planning by clarifying the work to be done based on these documents.
- Identify key tasks and expected outputs and all the necessary inputs to achieve the outputs. The LFA or RBM frameworks can be applied.
- Reflect in the work plan all the activities required to get the research done, the time frames, deliverables and milestones. It should include activities related to data collection and analysis, including review of literature, collection of primary and secondary data, training of enumerators, field work/data gathering, translation tasks, writing of the report and the training and capacity building of the research team. The team should determine when the activities will start and finish.
- Indicate also the time that will be allocated for the literature review. Even if some donors may not fund it in isolation, literature review is important because, by keeping track of recent findings, the research team can build its track record of being able to identify new findings and their implications for the research being undertaken. This can be factored into the time for data collection, analysis and report writing. Annex 8, Time

Lines for Phase 1 and Phase 2 of the CDRI Proposal for Poverty Dynamics Study 2008-09, illustrates time allocations for the literature review in the proposal.

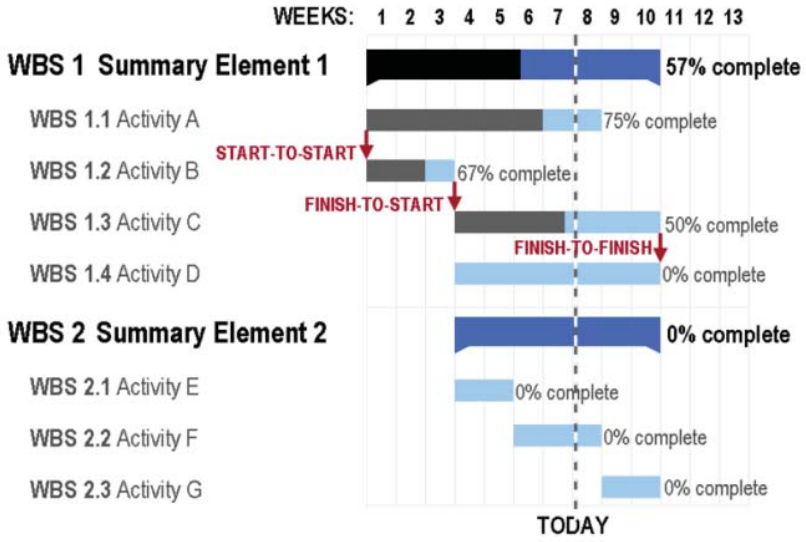
- Identify the start and closing time for the project, including the signing of the memorandum or contract of services and the closing phase/submission of the final report.
- Establish all the information that must be collected to achieve the research objectives, including how long it will take and how much it will cost. This will entail deciding on whether the information gathered will consist of primary data, secondary data or both, and identifying the sources and methods for gathering them.
- Identify all the stages involved in completing each activity and factor in the staff time and all personnel activities (i.e., how many persons to do each activity and for how many days). For this purpose, the research team can build up its schedule and identify how many days are needed for each phase of the research (preparation of questionnaires from designing to peer review and field testing, site selection, data collection/field work, data analysis, report writing) Projections can be done per day, week, month or quarter. The more detailed the schedule, the clearer the activities and the better the results that can be provided to the donor.
- Indicate the interactions, communications with the donor/partner or commissioning organisation, the preparation of reporting documents and time frame for submission to donors and other stakeholders. The time it will take the donor to read the proposal/report and the donor's time for reviewing and returning the report should all be factored in. The time needed to respond to donor's comments and to address them in the final report should also be taken into account.
- Define the project's strategy for communicating/disseminating findings to different stakeholders. All activities pertaining to the dissemination strategy, the time frame and the documents required should also be planned during the design phase and indicated in the work plan.
- Spell out the activities related to monitoring and evaluation of the project. The various types of reports to be prepared (e.g., inception, quarterly reports, final report) and when and to whom these reports will be submitted should be specified.
- While planning activities, the project manager must find ways to determine and, if possible, compress the time it will take to accomplish various tasks and to reduce the cost. For this, the tools in Project Management Triangles 1 and 2 can be used (see again Figures 5 and 6). If the scope of the project is large, it will have implications for planning the budget, schedule and quality of the research outputs.
- Using software for planning will depend on individual capacity, but basic Excel is recommended for its simplicity. It is also advisable to use Microsoft Word, but it may not be able to map out a macro plan indicating several projects in one programme. If the purpose is to integrate all work plans of some 40 projects of a big programme, it is best to use Excel.
- Work plan formats vary from institution to institution, as well as from donor to donor. Annexes 7-10 provide some examples of those that have been used at CDRI.

b. Identifying Project Milestones

Project milestones are major outputs or deliverables completed at a specified time. They are drawn from each activity or set of activities in the work plan.

The Gantt chart and work breakdown schedule are useful for plotting the activities and the projected times for starting and finishing project activities, as well as project milestones (Figure 7). These tools are also helpful to donors in monitoring how many of the activities have been completed and how much still needs to be done.

Figure 7. Sample Gantt Chart Showing Work Breakdown Schedule and Milestones

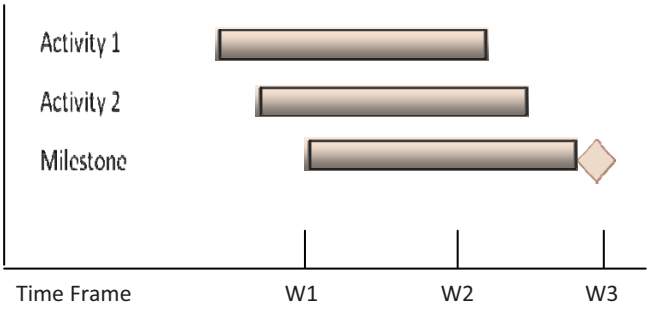


Determining milestones is also called outcomes mapping and is based on the RBM approach. A diamond figure is plotted on the day a milestone is scheduled to be completed (Figure 8). Examples of milestones/deliverables are presented in Table 8, based on those spelled out in the terms of reference for a CDRI study, *The Cambodia Poverty Dynamics Study: Round 3 Data Collection and Initial Analysis*. As shown, setting dates for the delivery of interim outputs can help to keep the work on track, with the deliverables coinciding with payments for the work to help manage the cash flow over the course of the project.

Table 8. Sample Summary of a Project's Milestones or Deliverables, as Coincided with Work Payments

Date	Deliverables	Payment
30 July 2008	1. Cleaned dry season survey data	$
30 November 2008	2. "Top-line report" on implementation and key emerging findings 3. Cleaned quantitative data sets, do files and user notes (Stata) 4. Cleaned qualitative data files and user notes (NVivo)	$
31 January 2009	5. Policy note on impact of rising prices on living standards and agricultural production	$
31 May 2009	6. PDS technical paper on poverty trends and dynamics 2001-08 (summary of community and household socio-economic patterns and dynamics)	$

Figure 8. Sample Gantt Chart Showing a Milestone



If milestones are not complied with or are of poor quality, funds from the donor may be delayed. Therefore, the research manager should plan for fixed items and non-fixed milestones. This is quite important because, even if all things have been considered, issues may arise unexpectedly that can affect the milestones.

2.2.7. Preparing and Establishing the Research Programme's/Project's Financial Requirements at Zero and Fixed Resource Level

a. The Budgeting Process

Once the set of tasks to be delivered by the research project has been delineated, the next step in preparing the proposal is to cost the human and material resources. This is part of project cost management, which is an important role of the research manager.

Project cost management includes the processes required to ensure that the project is completed within an approved budget. It involves:

- Cost estimating: developing an approximation or estimate of the costs of the resources needed to complete a project
- Cost budgeting: allocating the overall cost estimate to individual work items to establish a baseline for measuring performance
- Cost control: controlling changes to the project budget.

In the planning phase, the project manager is expected to perform cost estimating and cost budgeting in order to come up with the budget for the project. The budget is a critical component of the research proposal. Project managers should take cost estimates seriously if they want to complete projects within budget constraints. The budget should indicate clear and reasonable estimates of all the financial requirements of the project.

A budget is a formal financial projection. In proposing a budget, managers are looking ahead and planning their needs, specifying the expected capital expenditures and expenses to carry out the project. In a research proposal, the budget states an organisation's planned activities for a period of time in quantitative terms of resources, such as dollars, hours or number of activities and outputs. The work plan is a required input for cost estimating and budgeting. It defines the work items for which the budget will be required.

If the research project is big (e.g., investment by a donor of US$5 million for HIV-AIDS for five years) a macro-budget is prepared. This entails preparing a yearly budget for five years. A budget is prepared for every phase or flow of the annual plan and preferably broken down into quarterly or monthly plans. If, during project implementation, the budget allocation is

not used as planned for a particular month or quarter, the activities should be adjusted so that the unspent funds during that month or quarter can be expended during the next month or quarter. If funds disbursed by the donor are not spent as planned, future funds may be withheld until the project implementer is able to demonstrate its ability to expend funds for the purpose for which they are allotted. The budget allocations month by month or quarter by quarter may differ, but everything should tally in the end as budgeted in the annual plan. Such a macro-budget will not only take into account the staff and personnel costs but all costs particular to the study: personnel, equipment, fieldwork, transcription and translation of audio recorded qualitative interviews, advocacy, transportation, per diems, materials, inflation, taxes.

Within the macro-budget is a set of standard forms for the micro-budget. For example, if research team training is to be conducted and two sessions are required, including need assessment, implementation and evaluation of the training, there would be a need to indicate how much would be the cost for each component; hence a micro-budget is prepared for that item.

Regardless of the scope of the project (whether it is small or big), the following should be included in the macro and micro budgets:

- Direct costs and indirect costs: Direct costs can be directly related to producing the products and services of the project. Indirect costs are not directly related to the products or services, but are indirectly related to performing the project.
- Personnel costs are salaries of personnel and professional fees for the research team and consultants. They are estimated according to the numbers of days to be rendered.
- Operational costs are associated with running the project and its day-to-day operations, such as fieldwork, research, conferences, workshops, seminars, dissemination and management fees, if allowed by the donor.

The project manager/team leader should be aware of how to prepare the macro and micro budgets. If there is a perceived weakness in this area, the technical support of the finance unit of the research organisation should be sought.

Important considerations in preparing the budget are to:

- Standardise budget formats and summary tables: These are important for identifying operational costs, personnel costs, etc. Donors may require their own formats or templates. Some items for additional budget requirements that are not included in the templates can be added, but these should be explained through budget notes. When there is no cost to an activity, items should be left blank. If there is no required activity, then there is no spending and no budget is needed.
- Align and code the activity plan and the budget plan: The budget should be aligned with the activities in the work plan. Comments or budget notes should be included to justify the budget in relation to your work plan or management plan. The work plan or management plan should be developed before the budget template is completed. Items in the budget template should be aligned with the items in the work plan (e.g., activity component 3 should be the same as budget component 3) so that the manager can keep track if the appropriate funding has been allotted for all the activities. Failure to allot a budget for some activities will lead to budget deficits later on.
- Comply with budgeting guidelines: Budgeting guidelines, which may vary with donors, have to be complied with. The bidder has to know what is acceptable or not for the

donor and discuss with the donor any variations in the budget or provide budget notes as may be required. Important considerations are:

- When bidding for a project, the amount that can be charged for administrative costs (management fees and overhead costs) will depend on the donor and may range from 15 percent to 30 percent of the total project cost. If the donor does not allow management fees to be specified in the budget, overhead expenses can be added into consultants' or personnel fees. If the donor does not allow a management fee, this cost can be imbedded somewhere in budget items, e.g., it can be allocated within consultants' professional fees or personnel salaries or to other items in the operations cost.
- A balance between personnel costs and operations costs should be observed. For example, the proposal should ensure that the personnel cost is in accordance with the scale of the fieldwork and the samples that are needed to produce quality results. A quantitative method may require more time in the field than in a qualitative approach; however, in a qualitative approach, more expertise may be required in data gathering and analysis since new data may emerge. Therefore personnel costs will vary as well.
- The proportions of personnel costs and operations costs should be reasonable. Personnel costs, including professional fees, should not be a lot bigger than the operating costs, and it would be preferable to estimate the direct costs because the project will produce an output. If the personnel cost is three times the operating cost, this has to be justified to the donor. Donors' guidelines on allowable personnel cost will vary. For example, if the research project is a baseline study, normally the allowable personnel cost is only 1/5 of the whole budget. If the sample size is 5000, more cost will be incurred for per diem and travel. If the sample size is only 300, the cost is lower. If a senior researcher is assigned to do the fieldwork, the personnel cost is bigger, but if the responsibility is assigned to a research assistant, the personnel cost is less. However, to ensure the quality of data collection and for monitoring and supervision purposes, a senior staff member is also needed in the field for a shorter time and this has to be budgeted for proportionately.
- Personnel costs, or the time the research team should be hired to produce quality work, should not be underestimated. The appropriate number of days should be specified according to the difficulty of tasks. Ten days should not be quoted when 15 days are actually needed to finish an activity.
- Social costs, as an indirect cost, can be imbedded in the personnel cost (professional fees or salaries of the team members). Social costs depend on the needs of the research organisation. For example, an institution will need to pay for evaluation of all the staff and institutional performance, as well as for external facilitators who will share expertise or provide capacity building. Insurance (accident, health) is another social cost that will need to have an allocation, especially for study team members who will travel to the provinces for data collection. The finance staff can help in identifying where to imbed all these costs in the budget proposal.
- Operational costs such as fieldwork and sampling designs should be broken down logically to their different components. The budget proposal should include all the expenses of preparing questionnaires, such as field testing, revising and validating. If the fieldwork is to be conducted in a nearby province, the field test may incur less cost than the actual fieldwork, and an explanation in the form of budget notes should be provided as to why field testing and fieldwork are different or why the field work would be required for so many days. Sampling design and the calculations of the cost of the sample should also be specified and included in the budget in line

with the work plan. The time frame and the budget for the sampling design in each province should be provided with as much detail as possible and with enough justification. Also, donors usually have policies for per diems or accommodation in the field and they will likely appreciate it if actual in-country costs are the ones included in the budget estimate (e.g., for transportation, donors are likely to measure the mileage for a trip to a province and how much petrol is needed; if by bus, they will provide only for the actual costs).

- Project management tools are important for budgeting. For example, it is helpful for the project manager to set up a template for the budget proposal in Excel format with a formula that will automatically compute the totals as entries are added or deleted. For efficiency, a format can be developed to show several teams doing different activities in a given time frame (e.g., half day or whole day). The format can be colour-coded and milestones highlighted. If there are nine activities in the work plan, these should be matched with nine corresponding activities in the budget.
- All direct cost items should be identified and budgeted, such as equipment and supplies, and line items such as workshops, resource persons, participants' accommodation, food, logistics, writing the report, publishing the report, presentation of report, including money for transportation and related expenses.
- Taxes and other obligations should be included. Individual consultants should be responsible for their own taxes, but since research organisations need to pay the appropriate tax in addition to the value added tax (VAT), this should be included in the budget (although it is sometimes not necessary to put in the VAT since research is not considered a business). The guidelines from the Ministry of Commerce should be followed. If the bidder is a non-profit organisation and wants to be exempted from paying taxes, it can seek exemption from the ministry.
- When preparing the budget, long-term and short-term perspectives should be considered. The research team should consider when to charge a lower rate and when to charge a higher one. For long-term projects, inflation should be included in the budget estimates. For example, if the expected donor commitment is for five years, there will be a need to make provision for as much as 30 percent on increment in salary. This will allow the research organisation to keep the best researchers and sustain its ability to manage time and resources effectively.

b. Zero and Fixed Resource Level Budgeting

In competitive bidding, knowledge of zero and fixed resource level budgeting is quite important. For both, procurement awards are given to the lowest bidder.

- Zero-based budgeting: In this, the bidder starts from any amount without having any knowledge of how much the requesting firm will offer, although the project activities are laid down in the ToR. Bidders start budgeting from zero, based on the ToR, and come up with a reasonable budget plan. When doing zero-based budgeting, research managers should be careful not to underestimate the costs, especially if the project is big, to avoid making budgetary adjustments and requesting for additional funds later on.

- Fixed resource level budgeting: In this, the client lets the bidder know the amount being offered for the project. The bidder then prepares the proposal and calculates the activities to be met from the funds being offered. The donor-allocated amount is the only funding to be invested in the project; therefore, the bidder should not go beyond what is quoted. There are cases, however, when the donor may come up with a small additional amount if the bidder's justification merits an adjustment of the fixed amount.

Such justification often covers activities (e.g., transcription and translation of audio records from qualitative interviews) that the donor overlooked in their internal budgeting for the project.

2.2.8. Putting Together the Parts of the Proposal

When all the necessary steps of research proposal preparation have been taken satisfactorily, it is time to put together the different parts of the proposal.

Quality writing is critical in all good research proposals. The proposal should be clear, coherent, credible and compelling in all aspects. In addition, it should be free of jargon; proposals laden with jargon do not provide a positive image of the bidder. If jargon cannot be avoided, use footnotes to explain it.

The following is a checklist of a good proposal:

- ☑ The *Title* should be concise and descriptive and should identify the functional relationship of the variables of the research.
- ☑ The *Introduction* should present the background or context of the research problem and the contemporary concerns against which the research question is asked, describe the purpose of the study and present the rationale or justification of the research.
- ☑ The *Statement of the Problem* should clearly and concisely state the objectives, research questions, hypothesis, and significance of the research to various stakeholders and institutions. The bidder should be clear about the significance of the research and who will benefit from it. The research should "zoom in" on a particular research problem that is of relevance to contemporary development to make the proposal compelling and credible. The writer should explain how the results will contribute to the existing body of knowledge or knowledge gaps and meet the requirements of funders, institutions and other stakeholders.
- ☑ The *Literature Review* should reflect the researcher's understanding of the literature and where the research fits into it. It should also convince the reader that the proposed research will resolve an important theoretical issue or fill a major gap in the literature. The section need not be lengthy, but it should be comprehensive and establish how variables being explored in the proposed study have been examined by earlier research. If the proposal reflects the researcher's understanding of relevant bodies of knowledge and where the study fits into the contemporary research context, the bidder will be one step ahead of other bidders. The literature review should also trace the central themes in the literature as they relate to the planned study, highlight major areas of disagreement and reflect a critical stance toward the materials reviewed.
- ☑ The *Conceptual Framework* should present clearly the theories or concepts that guide the study, the variables of the research and the relationships among these variables, the latter implicitly signifying how the data will be analysed. The conceptual framework is sometimes proposed in the ToR. Some donors may have their own conceptual framework, and researchers need to understand the donor/client perspectives on the framework they are proposing. The suggested hypothesis should clearly flow out of the framework being used. The limitations of the framework should also be explained.
- ☑ The *Hypothesis* or *Research Questions* should be clear, crisp statements of the relationships of the variables to be analysed or, in some qualitative studies, a concise description of the phenomena to be examined.

- ☑ The *Methodology* should describe the methods and instruments for collecting and analysing the data in order to answer the research questions. It should correspond to the research questions and provide sufficient detail on the instruments to be used based on the data to be collected for the identified variables. This section also clearly explains the sampling design, including the rationale for the selection of the study sites. Defining the analytical approach is also critical in this part of the proposal, a frequent challenge of which is using the most relevant and appropriate model (e.g., an econometric model for a socio-economic study). A useful step is to go back to the conceptual framework in thinking through a model, or to draw upon/modify existing ones from similar studies.

- ☑ The *Task Structure* or *Scope of Work* should describe clearly what will be done, the sequence of activities, the products or deliverables and the milestones, i.e., an estimate of the time in which the outputs are expected to be delivered. The bidder should include the appropriate planning and management tools to indicate its capability to manage the project efficiently and effectively.

- ☑ The *Management Plan*, which refers to the staff management structure and team composition, should identify who will be responsible for each part of the work, as well as for overall coordination and monitoring. This is very important to the donor, especially for purposes of accountability.

- ☑ The *Personnel and Institutional Qualifications* section should include a full discussion of the qualifications and experience of the proposed team, as well as complete information on the strengths, organisational profile and relevant studies or projects the bidding institution has undertaken. This information proves that the research organisation is a mature institution and is in a good position to do the research it is tendering for.

- ☑ The *Budget s*hould present clear and reasonable estimates of all the financial requirements for the project, including personnel and operational costs. It should be aligned with the work plan: each item in the work plan should appear in the budget. The budget should be reasonable and should not underestimate what is needed to produce quality results. It should be clear on the required number of days for the researcher, project leader and other personnel. Transparency and accountability should be reflected in the budget proposal.

Good material to practise on for developing a research proposal is that employed by the International Development Research Centre, which can be accessed at http://www.idrc.ca/EN/Funding/HowToApply/Pages/ResearchGrantProposal.aspx.

2.2.9. Summary of Key Points

- ❑ A good research proposal is coherent, clear, and compelling.

- ❑ Developing the proposal entails framing the research problem, reviewing the literature, firming up the objectives, detailing variables to be examined and the methodological approach and determining the human and financial resources required in implementation, monitoring and evaluation.

- ❑ The research design will determine the composition of the team of researchers and the kind of expertise/specialisation the team should have. Naming the right team members to accomplish the different project components will improve the quality of the proposal and the competitive advantage of the research institution.

- Budgeting is an important component of planning and designing the research project. It is also the most critical input in the proposal. The research's financial requirements can be established in two ways: at zero and fixed resource levels.
- The budget should indicate clear and reasonable estimates of all the financial requirements for the project. Honesty and transparency should be observed by following the standard regulations, legal aspects, institutional auditing procedures of the donor and the research institution and payments of obligations.
- The quality of a research proposal depends not only on the project but also on the quality of the proposal writing. A good research proposal is coherent, clear, compelling and credible in all aspects: from the preparation of the conceptual or research framework to the review of the literature, the methodology, the sampling design, the work plan, the human resources requirement (team composition) and the budgetary requirements.
- A good research proposal contains the following elements: title, introduction, statement of the problem, literature review, conceptual framework, hypothesis or research questions, methodology, task structure or work plan, management plan, personnel and institutional qualifications and the budget.

CHAPTER THREE: KEEPING THE FOCUS IN EXECUTING THE RESEARCH PROJECT

Once the research project's financial support has been secured, implementation starts. The agreed financial resources are used to ensure that the project implementation phases and tasks are managed properly, the purpose achieved and the outputs delivered. This chapter focuses on how to exercise rigour when managing research implementation, coordinating and keeping the research team together, maintaining project documents and records, completing/terminating the project and maintaining effective communication with team members, donors and other stakeholders.

3.1. Managing Research Implementation Phases and Tasks and Exercising Rigour

3.1.1. Mobilising the Study Team, Clarifying Roles and Responsibilities, Lines of Authority and Decision Making; Reviewing the Work Plan Collectively to Level Team Expectations

a. Step 1—Setting Clear Goals for the Team, Including Time Frames and Expectations

As much as possible, inputs from the management team should be included in specifying the goals of the team. The goals should be designed to be "SMART": *S*pecific, *M*easurable, *A*chievable, *R*elevant and *T*ime-bound. Once the goals are clear, the expertise needed to achieve them and how long it might take to recruit and organise the team are considered next. These goals should be documented for eventual communication to and discussion with all team members.

This step also includes determining time frames for starting and terminating the team and levelling expectations. The research manager should have a mechanism for levelling expectations and dividing roles and responsibility for the research team; e.g., there are different expectations from an enumerator, a field supervisor and the project team leader.

b. Step 2—Determining the Membership of the Team

It would be ideal to be able to select team members before the start of the project so that team members could participate in the design and planning, but in most cases, this is not possible. If the project is a big institutional undertaking, the prospective team members can do some brainstorming to plan the project; but if it is an individual researcher bidding for a project, someone may be recruited to develop the design. Either way, once the research proposal has been approved and funds have been secured, the research manager needs to consider the extent of expertise needed to achieve the goals, including areas of knowledge and skills, as spelled out in the research proposal.

The manager needs to ensure that sufficient diversity of values and perspectives is considered in the recruitment of team members to ensure robust ideas and discussion during project implementation. At least one person with skills in facilitation and meeting management should be recruited. Personnel availability throughout the life of the project is also critical. The research team members should indicate that they can commit their full time and energy to team meetings and in performing the required tasks.

There are two things to bear in mind in selecting team members. First, during the project design, senior management can help select the research staff to form the team. Secondly, the research manager must make sure that the team members understand the project design, their tasks and the level of commitment required of them. For a good gender balance in the team, a rule of thumb is to remember what the study is about and what information needs to be collected. As suggested in Chapter 2, there might be problems obtaining reliable information if men were to interview women on a reproductive health issue. The team should keep in mind that gender balance is not just about having the right number of men and women in the team, but about the kinds of questions the research is supposed to answer.

Recruitment procedures, distribution of the tasks among team members and coordination work will depend on the policy of the organisation conducting the research. However, special skills needed for the project also require special considerations. For example, if the research project requires cooperating or collaborating with other institutions, some members of the team should possess good human relations skills. Or, when doing quantitative research, it is always best to hire a statistician to advise on the technical aspects (e.g., sampling frames) in order to make decisions on the variables and other factors that will guide the data analysis.

c. Step 3—Developing Staffing Procedures (Recruiting, Training and Organising the Team)

Once the roles and expertise needed have been identified in relation to the research objectives and the team's goals and plans, recruitment of the appropriate personnel is undertaken. Existing staff within the research organisation should be considered as a priority, but if additional staff members are needed, a recruitment process should be set in place if none already exists. For this purpose, announcements should be disseminated through networking, or advertising the position widely if it is a big project.

In reality, it may not be easy to get the best researchers for a project. For example, based on their previous experience as indicated in their CVs, three people may appear to be perfect for the project but during the interview, some important traits like honesty, commitment and team spirit may be present in some but not in others. Interview techniques should be planned for assessing the right person for the right tasks. Project managers need to have skills in interviewing and in relating the applicants' CVs to other skills and qualifications needed for a strong research team. It may not be possible to recruit the "ideal" team member, but one who is closest to the ideal can be chosen.

After recruiting the team members, managers need to make sure that they explain the project requirements thoroughly to the team and motivate every member. Team members should understand the team's objectives, their roles in the team, their next steps and where to get help.

d. Step 4—Identifying Needs for Resources in Integrating with the Team (Training, Materials, Supplies)

Once the personnel requirements have been filled, the project manager identifies the necessary orientation and preparation activities for the team members. For example, members might benefit from training that provides a brief overview of the typical stages of team development. For this purpose, materials about the team's goals, structure and processes for making decisions need to be prepared. The costs of resources such as trainers, consultants, accommodation and office supplies should have been budgeted for and

submitted as part of the proposal. The project manager needs to ascertain how much could be utilised for this purpose and to use it as planned.

e. Step 5—Assigning Leadership Roles in the Team

Assigning a team leader for each project is important to ensure that management systems and procedures are followed. In a big research programme, several team leaders may be needed for each research project within the programme. Each project team leader should focus on the systems and practices in the team, as well as on dealing with the personalities of its members. The team leader needs to make sure that his/her team is successfully staffed, the members understand the purpose of the group and their role in it, the members are active toward meeting that purpose and their roles and that the proper procedures are used for communicating, making decisions and solving problems.

The role of a communicator should also be assigned. Communication is the life blood of teams and is the most important trait of a successful team. It cannot be left to chance. Someone should be designated to ensure that all members receive regular communications about purpose, membership, roles and status of the team. Communications should also be undertaken with people outside the team, especially those who make decisions, such as the donor or other project stakeholders.

In some cases, an assistant team leader is assigned to help the leader, but there are cases in which s/he ends up doing all the work on instruction from the team leader. Care should be taken to prevent this situation from arising and to ensure that the quality of the outputs of the assistant team leader will not suffer.

A team leader will benefit from following a personnel manual or institutional policy, especially with regard to setting up the goals, rules or procedures for conducting the research. In some situations, some adjustments may be made in situations involving low morale of team members. When this happens, members may need strong psychological support, and some compromise may be needed.

Research is a process of investigation, and in some cases a research manager may be called principal investigator (PI). Sometimes a PI needs two team leaders to carry out the project. Distinction should be made about tasks. Aside from being in charge of the whole study, the PI could be the main person in charge of communicating progress to the research institution's higher management staff and the donor. In the case of CDRI, the team leader is the principal investigator and the term PI is not used.

f. Step 6—Defining a Mechanism for Clear and Consistent Communications among Team Members, Including a Procedure for Decision Making and Problem Solving

New team leaders should not assume that all group members know what the team leaders know. For this reason, consistent communication is the most important trait of a successful group. Without a good communication strategy, none of the other traits can occur.

All members should regularly receive and understand similar information about the group, e.g., the team's purpose, status and accomplishments. As well, procedures whereby the group can make decisions together should be put in place, and the team leader must ensure that all members are aware of this procedure. For example, the procedure might specify that decisions are made by first aiming for consensus within a certain time; if consensus is not achieved, then the group resorts to a majority vote.

g. Step 7—Planning Team Building Activities Early

Team building activities are an important part of team mobilisation to develop trust and working relationships that are important for teamwork. Teamwork refers to how team members interact with one another. Each researcher has his/her own perception of different issues and his/her own way of doing things. Additionally, team members have different backgrounds, strengths and weaknesses. The project manager or team leader needs to be able to deal with those dynamics through appropriate team building activities early on in the project.

Researchers should be guided to understand that, to make the work progress, a certain amount of humility is needed. The team members are not only researchers but also diplomats; if personality differences are allowed to rule the team, the research cannot move forward. The members are not competing with each other, but competing as a team to produce the deliverables. Hence, if in the beginning, some members are acting as individuals doing their own research, the manager needs to bring the group together. There will be a need for different levels of teamwork, e.g., with administration, with data analysts, with government and other stakeholders.

Team building activities at the start of project implementation can include members introducing themselves, members helping each other solve a short problem or meet a specific and achievable goal or a reflection period in which members can voice their concerns about their new assignments.

Team building activities should also be planned to support initial team meetings and members' communication during those meetings. It is critical that supervisors of team members commit their availability to provide support and resources as needed. Team building processes also need to be designed early on to monitor and report the status of team members as the project gets deeper into implementation.

h. Step 8—Carefully Planning the First Team Meeting and Contacting Each Team Member

The first meeting of the team is critical to the project start-up, so careful planning is necessary. Before the first meeting, each potential team member should receive a formal invitation to be a part of the team and then met individually by the management staff or the research supervisor.

The first meeting should focus on the team members' review of the goals of the team, why each member was selected, the benefit of the project to the organisation, the time frame for the team effort, who will lead the team (at least initially), when and where the team will meet and any changes that have occurred since the individual meetings. The team members should discuss and understand the project's methodology, performance indicators, financial support and the required logistics support. The methodology should be very clear to the team before the fieldwork, and a systematic research monitoring framework should be designed and agreed upon.

All information discussed at the first meeting should be written down and handed out to each member. If an operations manual is available, this should be distributed to all members for reference. At the end of the meeting, each member may be asked to make a public commitment to the team effort.

3.1.2. Dealing with the Additional Collection and Review of the Literature and Remaining Focused

a. Purpose of the Literature Review

A critical literature review is not just a summary or chronological listing of relevant literature but a discussion of the researcher's understanding of a body of literature and how it relates to the project. It provides the focus for the study by providing ideas on how the research has been designed, identifying gaps and showing what is new in the research being conducted, enhancing the justification of the research topic and distinguishing what is being done in the study from what has already been done by others.

A review of related literature is needed to build the conceptual framework for the research and set this framework within a tradition of inquiry and a context of related studies. The literature review provides insights that the researcher may not have thought about and helps to avoid what has already been done. The research can also complement, challenge or critique seminal studies. Credit should always be given to pioneering efforts.

The literature review serves four main purposes (Marshall and Rossman 1999):

- It demonstrates the underlying assumptions behind the general research questions.
- It demonstrates that the researcher is knowledgeable about related research and the intellectual traditions that surround and support the study.
- It shows that the researcher has identified some gaps in previous research and that the proposed study will fill a demonstrated need.
- It refines and redefines the research questions by embedding those questions in larger empirical traditions.

Other purposes of the literature review include (Catalla 2006):

- To articulate the existing development knowledge on the research subject and frame the subject against such a body of knowledge
- To summarise and consolidate what is known about the research topic, including points of agreement and disagreement
- To learn from others and stimulate new ideas
- To identify gaps in knowledge
- To highlight procedures, techniques and research designs worth replicating

b. The Literature Review and How to Remain Focused

Remaining focused during the literature review may appear difficult when there is a lot of apparently diverse and conflicting data from the literature. However, if the research team is clear on the purpose and importance of the review, they can keep a focus on what to look for.

- The literature review provides the justification for the research methodology, and should support the research not only during the first stage of research design but also during the data collection and throughout the writing of the research.
- The literature review leads to new ideas and helps define the conceptual framework of the study. It is not the other way around, i.e., design the conceptual framework first and then search the literature. Developing the conceptual framework is an iterative process and not a mechanistic approach. The framework must be based on ideas of people who have knowledge of the issues relating to the topic and what would be appropriate to their own context. If there are competing frameworks in the literature, the research team

should decide what makes sense for their study and for Cambodia before they adapt a framework. The more studies are read, the more questions can be asked and the better the chances for refining the conceptual framework.

- Additional literature review can confirm or validate the findings arising during project implementation. It can also help refine the design of the study as the research progresses. However, all literature does not have the same value. The research team should find the literature that has value for their research. Literature that has little value can be dropped and other, more relevant, articles can be added. In a qualitative study, there could be more freedom to modify the literature review, but not in a quantitative method, which is a linear process. If a significant part of the literature included in the approved proposal is dropped, an explanation should be provided to the donor.
- The research being conducted could be overlapping with existing research undertaken by others or could be filling gaps identified in some studies. If not enough time is spent to do the literature review during the first part of the research or the findings are not consistent with what the team expects, related studies can be reviewed again to see if the findings arising from the research are similar to others' findings or are filling knowledge gaps.
- It is important for the research team to understand what the literature is telling them, i.e., whether the content of their research is related to previous studies, or whether it is lacking in perspective. By reading several articles, the research team can understand various viewpoints on an issue and how these differ based on the context of their research. A study on the impact of mining, for instance, will find studies looking at impact in different ways. One perspective could be that mining can contribute to the economic growth of Cambodia. Another view could be that it will impact on indigenous people, especially their rights. There are different sides to a story, and the research team can come up with a very strong argument based on the literature. Another example is a study in the Philippines which found that the informed consent of indigenous peoples is critical and needs to be sought if mining is to be viewed within the context of human development and not purely from an economic growth perspective. If the research team is not aware of the different views from related studies in other countries, it may not be able to enrich its own perspective for its study.
- As the study is implemented, the research team may find that the conceptual framework for its study is weak. This can be attributed to insufficient literature review. If the conceptual framework is weak, the research design is also weak, and so are the data collection instruments and the quality of the data. Sufficient literature review enables the researchers to enrich their conceptual framework and the quality of their data. In a qualitative study, there is more freedom to adjust the conceptual framework and the data to be collected based on additional literature, and the final results may be completely different from those that were hypothesised.
- Researchers should be learning from the literature and applying what has been learned to their own research. Conceptual frameworks are always in the process of being refined, thrown out and refined again as a result of paradigm shifts. The more literature is read about a given topic, the more it will stimulate researchers to come up with a different approach to their study. For example, Cambodians intuitively know how things work in the country; thus, their study of Cambodian farmers' organisations will be informed by the knowledge that such groups are shaped by the local context and differ from other farmers' organisations in other parts of the world. Hence, if some internationally published studies have been found to be relevant, Cambodian researchers have to acknowledge, check, or cross-check whether the results of such studies work for

Cambodian farmer organisations. They should ask: How do these findings work in the Cambodian context and how different are the variables used here from those used in other countries? The problem sometimes is that the hypothesis is simply adapted from other studies and answered with a yes or a no. Even if the hypothesis is true, there will be different reasons why it happens in a particular context, so it is important to contextualise (i.e., what conditions are true in Cambodia, what conditions are not true) and fine tune the conceptual framework based on the Cambodian context.

As the research progresses, the research team needs to check and reflect whether the data being collected match their objectives and expected outcomes. To confirm this, they need to find journal articles to back up their findings, and interestingly, many researchers find many articles that support their findings. If the research team comes up with findings that are different from what they are expecting, then they should try to seek justification by looking back at the literature to support and give credibility to the findings.

The research team can determine whether the literature reviewed is sufficient when a saturation point is reached. This means that the same information keeps coming out in the documents being reviewed, or several studies keep referring to the same references. For example, if researchers reviewing recent studies on agricultural productivity in Cambodia find that several consistently point to the same studies that are included in their literature review, they have reached a level of confidence that they have covered sufficient literature. In addition to reaching the saturation point, limitations on time, budget, scope and objective of the study dictate stopping at some point in the literature review.

3.1.3. Working on the Final Sample Collection

a. Managing the Final Sample Collection

Management work on the final sample selection refers to managing the field implementation challenges in an already designed and finalised sample plan. It includes a focus on dealing with problems.

In working on the final sample collection, the project manager seeks to obtain the final sample by meeting the planned project sample requirements. Specifically, the research project manager should aim to:

- Complete the interviews according to agreed quality standards
- Cover the agreed geographical areas in the sample plan
- Cover the types and quotas of respondents/groups in the sample plan
- Complete the field research sample on schedule
- Complete the field research sample on budget
- Manage the team to achieve the above tasks
- Communicate progress/problems to management and the study sponsor
- Solve problems together with the team, management and study sponsors

b. Common Problems in Sample Selection

Things can and often do go wrong, and managers often face a range of problems to achieve the sample. Managing well in relation to sampling is one of the big challenges of research project management.

Sample collection problems most commonly apply to large random sampling surveys but can also occur in other designs, including purposive sampling and panel studies. Some problems that can be anticipated and how the research managers can deal with them are as follows:

- When some respondents' responses are not useful, the team should decide the percentage of respondents that should be removed or replaced. For this purpose, the research design is reviewed. The research design usually indicates the allowable standard of error, interval estimates and standard deviation.
- If the desired sample is 100, the team should collect data from all 100 sample interviewees. If the sample is reduced from 100 to 95, the standard of error increases; if the sample is further reduced, the standard of error also increases further. The standard of error formula should be applied according to the sampling design. If the sample is big, 5 percent can be dropped, but if the sample is small, replacement can be an option. The decision of whether to reduce the sample size should be made in consultation with the donor or sponsor of the research.
- One tool to help reduce the number of interviews is the screening form. Although screening forms are often used for quantitative studies, they are also good for qualitative ones. The form asks two or three questions to determine whether the respondents are those the team is looking for.
- In random sampling, despite technical problems, respondents can be replaced. The research team can rely on available statistical procedures. Care should be taken to confirm the correct statistics because, if the statistics are wrong, the whole sampling will be affected.
- If probability sampling is used, it is best to have statisticians to consult from time to time. Probability sampling has a lot of assumptions.
- In purposive sampling, having more respondents is better than having fewer. Although t-test and analysis of variance are used, the relationship among variables applies only to a particular group and does not hold for all samples, although it indicates some trends. Purposive sampling uses non-replacement interviews; for example, if there are 10 samples chosen, 10 interviews should be completed.
- For proportional sampling, the researcher needs to ask what sample frame to use, what sample frame is available and what sample frame is best for the research design.

c. Types of Sample Identification Problems in the Field and Management Strategies and Solutions

The most common field problems associated with sample collection may include the following:

- The team cannot complete work in a planned geographical area for political reasons (e.g. safety risks, such as high crime rates or disputes) or lack of physical access (e.g. bad weather, road conditions, health issues).
- The team interviews incorrect types of respondents or cannot fulfil respondent quotas because respondents are not at home, are busy in the field, refuse to be interviewed or respond less frequently than expected**.** Respondents may not agree to be interviewed when the issues under study are too sensitive, personal or political.
- Interviews do not always proceed according to agreed quality standards.
- Field research runs behind schedule.
- Field research costs overrun the budget.

To address these problems and improve future management of sample fieldwork, research managers can do the following:

- Difficulties in managing study samples can often be related to a lack of risk management planning in the sample plan and research design. Project managers can learn from their experiences with problems in the past. If the personal security of the research team is at stake, potentially risky areas in the sample frame can be excluded. During the site selection, only areas that are relatively safe can be included in the sample. If access is an issue in certain places, the research team has to find out why. In a case study, the team may have more control over the site selection. In conducting a national study, the project manager has to be more cautious not to put researchers in harm's way.

- The research manager can incorporate risk management guidelines and procedures in the sample plan to address "what if" or likely situations in the field that may hinder or prevent achieving the sample. S/he should make sure, however, that field risk management strategies will not undermine the original study design, methods, representativeness or validity. For example, if the research is addressing risky issues (e.g., land titling, mines) and the sampling population is found in risky areas, the team should be provided with security, back-up, institutional support and sufficient funding to handle the problems and minimise risks. A letter of permission or a letter authorising the research team to conduct the study should be secured from the appropriate local authorities, and the head of the village to be visited should be informed well in advance so the authorities can provide the necessary security.

- The research manager should include proposed risk management strategies in the study methodology and transparently report procedures that needed to be implemented during fieldwork. S/he should make sure that prior approval is sought from the sponsor/donor for major risk management responses before implementing them. It is critical for a manager to allocate funds and time to handle those risks. For example, in selecting household frames for a study, one risk management strategy is to make preliminary visits, update lists and pre-assess the availability of respondents.

- The project manager should also include extra field days and extra funds for fieldwork in the research design and plan, to provide a reserve to manage sampling fieldwork problems. This will better enable him/her to manage the schedule and the budget impacts of problems. The resources to deal with unexpected problems should be readily available. The key is to include extra days and extra funds for contingency purposes to manage sampling-related problems as they arise.

- In order to deal with likely obstacles in field work, the research project manager should make provision for training the team well in lines of authority, procedures and communication. As well, the sampling collection plan should be communicated to the donors or sponsors of the study.

3.1.4. Handling the Preparation of Data Collection Instruments and Soliciting Feedback from Stakeholders

a. Thinking Through the Quantitative and Qualitative Data Collection Instruments

Different data collection instruments have different strengths and represent different perspectives. Generally, the choice of instruments will depend on the methods to be used in the research, which are usually categorised as either qualitative or quantitative.

- Quantitative methods take a sample population to make a generalisation about that population. Qualitative methods analyse data in-depth and allow understanding to emerge.

- Quantitative research uses numbers in a rigorous way. Numbers are created by standardised procedures.
- One cannot say that the quantitative method is objective and qualitative research subjective. Statistics are influenced by the way questionnaires are constructed, which could be very subjective.
- Qualitative and quantitative research need to be combined in different ways, such as "qualifying the quantitative and quantifying the qualitative". For example, before preparing a quantitative instrument on farmers' organisations, a researcher must have a qualitative understanding of a social group.

b. Qualitative Data Collection Instruments

Qualitative researchers typically rely on four methods for gathering information:

- participation in the setting
- direct observation
- in-depth interviewing
- analysing documents and material culture

Qualitative in-depth interviews are much more like conversations than formal events with predetermined response categories. The participant's perspective should unfold as the participant views it (Marshall and Rossman, 1999).

c. Preparing the Survey Instruments for Quantitative Data Collection

For quantitative methods, the survey is widely employed and the most commonly used instrument is the questionnaire. To help the research team develop appropriate questionnaires, certain steps are recommended (Sproull 2002: 191):

Step 1: List the variables, their operational definitions and how they will be measured.
Step 2: Consider including demographic variables, if relevant.
Step 3: Specify the types of respondents.
Step 4: Select the approach (mail, telephone or face to face) to be used for the survey.
Step 5: Determine how much structure there should be on the questionnaire or interview instrument.
Step 6: Determine the level of measurement desired and the type of response format for each item.
Step 7: Write the questionnaire items.
Step 8: Check the items for invalidating factors and appropriate levels of measurement.
Step 9: Determine the placement and sequencing of items.
Step 10: Write the introduction, directions and ending.
Step 11: Determine the degree of interviewer direction to respondent, if interviewing.
Step 12: Train the questionnaire administrator or interviewer.
Step 13: Compute the inter-rater reliability[3], if interviewing.
Step 14: Use techniques for increasing response, if using the mail.
Step 15: Conduct a pilot study.
Step 16: Check that questions elicit appropriate measure of the variables, desired levels of measurement, ease of response, ease of administration and that time of response for the instrument is appropriate.
Step 17: Revise the instrument, if necessary.

[3] Inter-rater reliability is a measure of the relative consistency of judgments among two or more raters (or judges) of something that is being assessed, for example the quality of research papers submitted for a research award. A more technical discussion of the term can be found in Lewis-Beck et al 2004.

d. Preparing Good Questions

The research project manager must ensure that the team prepares good and adequate survey questions. Selecting and preparing good questions is the single most important concern for survey researchers. In order to get a survey that works, the following should be considered:

Step 1: Decide on topics to be covered in the survey.

Step 2: Look at questionnaires of past or other studies (especially during the review of the literature).

Step 3: Begin to organise factual and conceptual information into topical sections.

Step 4: Write questions for each survey section.

Step 5: Put the survey together.

Step 6: Train and practise.

Step 7: Pre-test.

Step 8: Revise the questionnaire based on pre-test.

Other principles to observe in designing a questionnaire are:

- Maintain a consistent focus.
- Order the questions in a logical sequence.
- Add interpretative questions.
- Make the questionnaire attractive.
- Think about how you will analyse the data.
- Refine and test. (This means getting as much external feedback as possible on the survey instrument before it is used to collect data because the team may get only one shot at the instrument once the data collection starts. This can be done through focus groups, peer reviews, pilot study or a pre-test.)

3.1.5. Preparing for and Conducting the Training of Enumerators/Interviewers and Their Supervisors

The rigour and success of data collection and the handling of data lie in the hands of the enumerators or interviewers and their supervisors. To ensure that data are collected properly and handled well, the training of enumerators and interviewers and their supervisors should be well planned and implemented prior to data collection.

a. Checklists for the Training of Quantitative and Qualitative Enumerators

The focus of the training of enumerators and interviewers depends on whether the research will employ a quantitative or qualitative approach or both. Normally, the quantitative approach involves a bigger group of population, so several research teams should be trained. On the other hand, a qualitative approach deals generally with a smaller group, so training is prepared for a smaller group of researchers. There are also some skills in the qualitative approach that may be different from the skills required in quantitative data collection.

- Checklist for quantitative enumerators' training:

  ☑ Materials required for each enumerator:
  - 1 copy of the enumerators' manual

- 1 copy of the field editing manual
- 2 copies of the questionnaire (1 for the classroom exercise and 1 for the field exercise)
- Pencils, envelopes, writing pads

☑ Preparatory activities for the training:
- set a schedule of training for the municipalities
- identify the number of enumerators in each team
- prepare the venue and equipment for the training (computers and LCD)
- prepare provincial spot maps for the training

- Checklist for qualitative interviewers' training:

☑ Materials required for each interviewer:
- 1 copy of the interviewer/enumerators' manual
- 1 copy of the research guideline(s) for interviewing or for conducting focus group discussions
- tape recorder and/or video camera
- envelopes, writing pads, a notebook, pencils

☑ Preparatory activities for training:
- set a schedule of training for the municipalities
- identify the number of interviewers/FGD facilitators in each team
- prepare the venue and equipment for the training (computers and LCD)
- prepare provincial spot maps for the training

b. Contents of the Enumerators/ Interviewers' Training

- The training of enumerators/interviewers should focus on two aspects:
  - Developing the enumerators' personal qualities and traits such as competence, professionalism and commitment
  - Learning the technical aspects or content areas (subjects) that will develop enumerators' full understanding of the objectives of the research and familiarity with the data collection instruments

- A checklist of subjects the enumerators' training must include:

☑ Background information on:
- the research
- why the research is conducted; its importance and use

☑ General information:
- the job
- their responsibility
- their place in the research organisation/study team
- their relations with the respondents or research participants
- confidentiality of information collected

☑ Objectives and nature of the survey:
- information to be collected
- how the research is organised
- how the research is to be taken
- when sampling is being used, how the sample is selected
- imparting skills to be a good interviewer

☑ Skills of a good enumerator/ interviewer:

- understanding the subject matter of the survey
- understanding the tool and the research design
- how to conduct interviews and administer questionnaires
- the do's and don'ts of enumerators/interviewers (see Table 9)

☑ The prescribed questionnaires and listening schedules:
- concepts and definitions used
- making entries on questionnaires
- example of questionnaires already completed

☑ Procedures to be followed:
- making appointments
- from whom to obtain information
- techniques for conducting a good interview
- overcoming objections of interviewees to providing information
- objective measurements (if any)
- checking and editing questionnaires
- calling back to obtain missing information
- ensuring completion of coverage
- use of interpreters

☑ Examinations:
- quiz on the questionnaires
- quiz on procedures

☑ Administrative instructions for enumerators:
- hours of work; the need to conduct interviews outside normal office hours
- absenteeism
- allowances that will be paid and conditions attached to payment
- enumerator requirements on administrative matters
- required records on time and attendance
- forms to be filled out for the completion of work

Table 9. Do's and Don'ts of Enumerators/Interviewers

DO'S	***DON'TS***
☑ Read every question exactly as written. ☑ Read the questions slowly enough so that respondents can understand. ☑ Wait for the respondent to answer. ☑ If the respondent cannot answer, repeat the question. ☑ Remain absolutely neutral about the respondent's answers. ☑ Conduct the interview in private. ☑ Answer directly any questions the respondent may have about the purpose of the survey. ☑ Listen carefully to the respondent's answer.	☒ Do not improvise. ☒ Do not act embarrassed about a respondent's answers to sensitive questions. ☒ Never suggest an answer. ☒ Don't repeat the respondent's answers. ☒ Do not give advice to respondents on personal matters.

c. Supervisors' Training

Supervisors should likewise be trained on the personal qualities and technical skills for enumerators/interviewers. However, their training should have greater concentration on how to supervise fieldwork, quality control, technical matters, publicity, data processing and administrative instructions.

The checklist of additional training content for supervisors must include the following:

- ☑ The supervisors' work:
  - their responsibility
  - how to check maps of local areas and enumeration communes
  - contact with local authorities
- ☑ Dealing with enumerators:
  - how to select and recruit enumerators
  - how to conduct training sessions for enumerators
  - how to observe enumerators at work
  - how to review and edit questionnaires and other records prepared by enumerators
  - how to measure the performance of enumerators
  - how to handle cases of respondent refusal
  - how to handle special problems encountered by enumerators
  - how to replace enumerators
  - how to do a final review of enumerators' work
- ☑ Fieldwork procedures:
  - practical training in data collection and filling in questionnaires
  - organisation of field editing, aggregation of completed questionnaires
- ☑ Quality control, if assigned:
  - procedures
  - reporting
- ☑ Technical matters:
  - reading maps, identifying sampling locations
  - identifying important inputs to improving the field work
  - local units and their conversion to standard units of measure
- ☑ Other matters:
  - publicity
  - data processing
- ☑ Administrative instructions:
  - hours of work
  - absenteeism
  - administrative authority and responsibility
  - required attendance records
  - action to be taken when enumerators'/interviewers' work is not satisfactorily completed

3.1.6. Gathering the Information for the Survey, Group Interviews, KIIs and Ensuring the Safety of the Study Team

Once the instruments have been prepared and the enumerators have been trained in data gathering, the fieldwork can start.

Fieldwork is defined as any practical work carried out by staff or researchers of the research institution. It is conducted to gather information in places that are not under institutional control, but where the research institution is responsible for the safety of its staff or researcher and others exposed to their activities. Fieldwork thus includes diverse activities such as a survey or in-depth qualitative interviews. However, voluntary and leisure activities are excluded.

a. Information Gathering for the Survey, Group Interviews and KIIs

The first thing the team needs to do in the field is to find the interviewees or research participants. It is important to consider the following:

- In preparation for information gathering, the team should have clear criteria for the selection of the participants. They should be ready with a sampling list and should have knowledge of the locations of the sample.
- To save time and energy, the team should prepare a data collection plan. The team should ascertain the exact location of the interviewees, where they will be met and how much time will be needed for the survey, group interview or key informant interview (KII). If at all possible, telephone in advance to assess the research participants and find out if any other members of the household will be present during the interview. The team should also try to find out as much as possible about the characteristics of the people they will be interviewing and their housing and living environments.
- Aside from information on the location of the interviewees, the team should know where to get information about their availability, especially during the migration season. Spot maps will be helpful. Networking with local agencies and having the logistics available are also important. For example, if the team is doing random sampling and needs young villagers to interview about election issues, it may not be able to come up with the desired sample because many of the youth might have migrated to work. Questions to ask in this regard are: If 120 households in a village are targeted, will all the respondents be available? Is there a seasonal calendar to track if the respondents are busy on their farms? When are they busy with harvesting or transplanting? If many of the villagers have migrated, will the research team be able to gather the 120 respondents? Where are they? How can the research team fulfil the quota of respondents?
- Reconnaissance is another field approach to finding survey respondents. If the team is composed of four or five members, a few of them can be sent ahead to do an early screening. The snowball technique can be used since there is a lot of local knowledge and key informants know the people in their village. For example, in looking for people with physical disabilities or HIV/AIDS, a small team can be deployed ahead to seek key informants so that a reliable list of respondents can be prepared.
- If the team is doing KII, it is advisable to have the list prepared well in advance and to seek the assistance of the village chief and other local authorities in coming up with a list as well as in validating and finalising it. One of the tools that can help is a spot map. If a comparison between survey and focus group discussion will be made, the same procedures can be followed.

- Thorough preparations such as those described above can help minimise problems in the field and avoid waste of time and energy. For studies involving risks, responsibility for risk management lies with the research institution, which has a right to negotiate with the donor for including in the budget a preliminary research phase.
- The research team should be aware of the learning curve on how to get interviewees for the study. Once the team has learned the best techniques in one area or village, these can be applied to other areas. It is therefore necessary for the research team to keep notes of the lessons from every field experience.

Once the research participants have been located, some logistical and ethical considerations are necessary to ensure a smooth flow of data:

- For qualitative research such as participatory action research or focus group discussion, staying in the village during the data gathering phase is preferable. This will give the team better opportunities to interact with local people, understand the cultural differences and the dynamics of the villagers and generate trust from the interviewees and local people. The experience in staying with the villagers will carry over to other places and help the researchers to develop the consciousness that they have a different background and should therefore learn how to make people comfortable with them and not to impose their own culture. Staying in the village also minimises costs and travel time.
- For a simple survey, it may not be necessary for the team to stay in the village, especially if the survey can be completed in one day. But even in surveys, the team members need to build a good relationship with the respondents, interact with the local people properly and observe proper decorum.
- Informed consent is very important in gathering information. Research participants' consent should be solicited before they are asked questions or participate in group discussions. As well, their consent should be solicited when using tape or video recorders or other devices.
- The team should be sensitive to language issues and, for this reason, should hire good interpreters. For access to information on dependable interpreters, assistance from NGOs working in the research or in the area can be sought.
- For both qualitative and quantitative methods, the researchers should exercise restraint, politeness, friendliness and honesty every time they go to the field. Being the primary research instruments, they should earn the trust and respect of the interviewees and the local people.
- The team should not raise expectations among the villagers for help of any kind but instead explain honestly the purpose of the research. The villagers should understand that research is not linked to being a beneficiary of a project or receiving monetary benefits. Small gifts can be provided for the interviewees, but they should not be promised that they will be project beneficiaries.

b. Ensuring the Safety of the Study Team

In planning and implementing the fieldwork, the research manager must carefully consider the safety of the team before it is sent out. The safety of the team also minimises risks to the data collection and ensures that the study is completed within the agreed time frame. The following checklist can help the project manager ensure the safety of the team.

- Checklist for fieldwork planning:

- ☑ Legal background: ensure that safety standards are included in the contract of each team member.
- ☑ Insurance: Provide for first aid coverage, health and accident insurance and life insurance (if this is within the policy of the research institution).
- ☑ Risk assessment: provide for pre-assessment of geographical hazards as well as health hazards and have a plan for emergency action.
- ☑ Environmental considerations: plan for contingencies to protect the team in bad weather conditions and how to avoid potentially hazardous areas.
- ☑ Registration and authorisation: ensure proper documentation and authorisation of each team member for fieldwork, including contracts, waivers etc.

- Checklist for fieldwork implementation:
  - ☑ Expeditions on foot: ensure the team's safety, comfort, simplicity and modesty with regard to travelling on foot, clothing and personal grooming.
  - ☑ Transport: ensure reliability of public and company transport and drivers; and ensure safety precautions for team when travelling by boat, air or water.
  - ☑ Equipment: provide for pre-assessment of health situation to minimise accidents and health issues and prepare for emergency action.
  - ☑ Physical environment and safety: ensure that accommodation is appropriate and safe, including water, catering and sleeping and bathing quarters.
  - ☑ Security and human hazards: ensure that the research team is safe from dangerous substances, and consider the need for accompanied interviews instead of lone working, shadowing and pre-arranged pickups, notification and maintaining contact.

c. Risk Handling Strategies

The research project manager should have prepared team members to handle risks and threats in the field before they are deployed. S/he should ensure that researchers are trained in handling threats, abuse or compromising situations. Training should enable researchers to spot signs that the interviewee is becoming upset or angry, to make informed decisions to acknowledge and contain the situation or to end the discussion and leave after offering an appropriate reason. A decision to withdraw should be quick and decisive. Decisions to return should be made only after consultation with the supervisor. Refresher training is essential to keep the issues and skills fresh.

The team should be well informed on assessing fieldwork sites. It should first seek familiarity with the area, and if this is not possible, then it should study a map of the area to evaluate its character, plan car parking and plan routes for leaving dense housing areas to prevent getting lost. If researchers must "cold call" in risky areas, they should travel in pairs to set up interviews. If the security of the researcher is in doubt, then should be arranged alternative venues that have been assessed for safety.

Stray and household animals, especially dogs, may make some researchers uncomfortable and vulnerable. If this happens, the owner should be asked to put the dog in another room until the researcher has left. Remember that some researchers may have allergies to household pets, so this should also be taken into account when gathering data in rural areas.

Lone workers are at greater risk than group members in the field. Therefore, an effective method of communication should be arranged. Any system of work should have arrangements that allow supervisors or their nominees to ascertain the whereabouts of lone workers and to make regular checks with them. Supervisors should have details of the researchers' itineraries, appointment schedules and overnight accommodation.

3.1.7. Firming Up the Research's Analytical Framework; Preparing the Dummy Databases; Training the Encoders

a. Firming Up the Research's Analytical Framework

Firming up the research's analytical framework refers to preparing to generate the data for the research questions and objectives. Preparing for data analysis begins as the research team reflects on how it will generate the data for its questions and objectives, since it will also need to think about how it will assemble such knowledge and evidence (Catalla 2006; Mason 1996).

In quantitative research, this preparation can take three different forms: pre-coding the closed-end questions, preparing the dummy tables and preparing the "dummy" database.

In qualitative research, such a reflection begins and continues in the field as information is gathered, ordered, grouped, linked to other data and further pursued for greater depth or breadth. Qualitative studies in effect evolve their analytical framework as they proceed with field research, refining and processing their data and indicators/evaluation points. It should be noted, however, that these types of studies can also require post-hoc data processing and analysis.

In defining the procedures to transform raw data into variables and indicators, the study team utilises its research questions/hypothesis. Team management issues involve asking questions such as: What data analysis team will be needed? Who will do data analysis? Who will supervise it? What skills do they need? How many people will do it? How many days will it take? How much will data analysis cost? How will they work best with the data entry team and management?

b. Preparing the Dummy Databases and Training the Encoders

The specification of variables/indicator output and the preparation of the dummy database(s) follow these procedures:

- A database is a collection of data organised for rapid search and retrieval, usually by a computer, and is often a consolidation of many records previously stored separately (Vogt 1993: 59). It is typically presented in a matrix of rows and columns. Each row represents an individual record (i.e., all the data that relate to a single individual, case or interview) or one respondent, while the columns correspond to each question (also referred to as a variable) in the data collection instrument. It is this initial data matrix that the researcher can begin working on prior to data collection (Catalla 2006).
- Data entry will provide the team with an output file of raw data. This may not be the database for analysis yet, because some or most of the raw data entries may require some kind of transformation to provide the researchers with the variables and indicators needed for descriptive statistics and to explore the answers to the research questions. The researchers will need to specify these transformations, question by question, to the data analysis team. This needs careful consideration and takes time. This will generate new variables that will be new columns added to the raw data file. Only when this process is completed will the database for analysis be produced.
- For quantitative research, some typical examples of the transformation needed on raw data variables include:

- Categorisation: grouping responses into new variables (e.g., respondent age group), or filtering variables (e.g. only households raising pigs)
- Calculation: applying mathematical operations (e.g. unit price *x* number of units to produce a new variable of total rice income)
- Aggregation: summing raw data or new variables to produce totals (e.g. total value of assets) or a new and separate database

- For qualitative research, some examples of transformations of raw data include:
  - Interview transcription and possibly translation
  - Compilation of individual interview notes into one file for analysis
  - Selecting, labelling, collating and editing audio recordings
  - Coding text for qualitative analysis

- Assuming that the researchers have received their raw data and have specified how to transform it into a database to conduct their analysis, the next question they should ask and plan for is: what variable/indicator outputs do they need to explore the research questions?

- The team will need to specify each variable/indicator it wishes to have reported, together with the type of statistics it wants to generate for the variable, any cross-tabulation variables and the format of the output table. This needs careful consideration and time. One way to work through this process is to construct a set of dummy tables. Another is to write down the specifications for each variable output, so that the data analysis staff can construct the dummy tables.

c. Preparing the Dummy Tables

A dummy table is an empty or blank table that is prepared before data are collected and into which the data will be arranged once they are collected and processed (Vogt 1993). Dummy tables (see Tables 10, 11 and 12) simply present the labels of the variables for which frequency counts and percentages and other summary figures will be presented (Catalla 2006).

Table 10. Dummy Table Example 1: Reasons Why Prey Veng Garment Workers Migrated to Work in Phnom Penh, September-October 2004 (Based on Questionnaire for Individual Workers)

REASONS	Number (n)	Percent (%)
Reason1		
Reason 2		
Reason 3		
TOTAL		

Table 11. Dummy Table Example 2: Some Characteristics of Households with Garment Workers in Phnom Penh, September-October 2004

Characteristics	Mean ($\bar{x}$)
Average # of household members able to work & contribute to livelihood	
Average # of household workers now working as migrant workers	
Average # of migrant workers who are garment factory workers	

Table 12. Dummy Table Example 3: Household Ranking of Livelihood Sources in Two Prey Veng Communes, September-October 2004 (Based on Questionnaire for Garment Workers' Households

Livelihood Sources	Most Important		2nd Most Important		3rd Most Important		4th Most Important		5th Most Important	
	n	%	n	%	n	%	n	%	n	%
Livelihood source 1										
Livelihood source 2										
Livelihood source 3										
TOTAL										

Sources of Dummy Table Examples 9, 10, & 11: CCC-ADI 2005

The design of the dummy tables should be guided by the information that will enable the researcher to respond to the questions and objectives that s/he has specified. Unless these are kept in mind, numerous tables could be produced and subsequently not used when time constraints catch up with the researcher and prevent her/him from extracting the data (Catalla 2006).

There are also other important types of output from the database that may be important to explore and which needs to be specified. These may not necessarily relate to one individual variable, nor require a dummy table. Some examples are:

- Descriptive statistics of the same type for a number of different variables, e.g., frequency distributions for all categorical variables in the survey form, or means and standard deviations for all ratio variables.
- Number and percentage of responses that are valid or blank for all questions in the survey.

3.1.8. Gaining Control over Data Processing: Editing, Encoding, Cleaning

Data processing tasks are often referred to collectively as "data entry". The aim and end point of data entry is the production of a complete and clean raw data set. This involves setting up and managing the data entry team, as well as putting in place the processes and tools (mainly electronic) that the study team will use to capture accurately and completely raw data from field research.

Gaining control over data processing requires the following steps and their management, including differences in quantitative/qualitative data processing.

a. Step 1—Organising the Data Entry Team; Design and Setting Up the Data Entry System

The research manager needs to deal with the following management issues for organising the data entry team:

- Who will do data entry? Who will supervise it?
- What skills do they need? How many people?
- Who will train the data entry team and when and how?
- How will the team ensure complete and good quality data entry?
- How much will the data entry team cost?
- When should it start? How many days will it take?
- How can it work best with field teams, data analysis teams and management?

A critical decision in setting up the database is what computer software or programme to use, since different programmes call for different formatting conventions (Fowler 1993). Some software choices are Microsoft Excel, Microsoft Access, SPSS and CSPro (Open Source). Some similarities and differences among these programmes are:

- Using Microsoft Access or CSPro for encoding data enables the researcher to set a rule whereby the computer rejects a code when an erroneous entry has been made.
- Using SPSS, on the other hand, requires the researcher to "define the variable", or to specify in each column the name of the variable or the question number in the interview instrument, its level of measurement, how many characters will be entered into the column and what the code values are for each answer.

In preparing the database, the researcher should be aware that one data file can take on only one unit of analysis at a time. If two or more units of analysis are being used, two or more data files should be readied. Thus, if analysis is to be done at the individual and household levels, corresponding data files should be prepared.

Lastly, the team members need to test the data entry system prior to beginning data entry and data entry training:

- Check that all fields are covered.
- Check that all field formats are correct.
- Check that all skip patterns are correct.
- Check data encoding speed to help plan staffing and scheduling.

Data entry training is a useful backup to this checking process.

b. Step 2—Organising Pre-Data Entry Tasks, including Survey Form Hard Copy Batching, Dispatch and Security, Checking and Coding

This includes planning and implementing a system for getting survey forms from the field to the data entry team (batching and dispatch). The team members need to:

- Agree on who should be responsible (e.g. field work supervisor), how forms should be batched in the field, such as by type and by location, and how often complete batches should be sent to the data entry team.
- Consider whether it is necessary for completed survey forms to be photocopied before dispatch and to leave a copy in the field. Generally, this is done if the field teams have the time and budget allocated for it. Any copying, however, should always be done under the direct supervision of team members and copies returned for disposal to ensure information security and confidentiality.
- Agree on how forms should be dispatched securely from the field to the data entry team.

Pre-data entry tasks include:

- Form checking in head office: it is recommended that the head office organise a checking team consisting of fieldwork supervisors who have attended training on the research project. Forms will have been checked in the field by interviewers and supervisors. However, it is recommended that the forms be checked again in head office prior to data entry. Head office checkers can catch any undetected errors and can conduct checks that are likely be needed with field teams, rather than delaying data entry staff. These include (Anon undated):

- Consistency check: all fields are being encoded from each form.
- Logic check/skip pattern check: derive tests linking answers between questions e.g., ownership of rice land and rice production.
- Check for "don't know" or "other" answers: large numbers of the former can indicate difficulty understanding the questions, while high proportions of "other" indicate questionnaire did not account for common responses.

- Form coding: this relates primarily to the coding of open response questions or predetermined categories that may have been included in a survey form or predetermined categories to group responses. It is often better to include the latter in the survey form design.

  A list of codes will need to be developed by the analysis team to code open response questions. It is good practice to develop a post-hoc code frame for this purpose. This involves the following steps:
  - Constructing a blank Excel spreadsheet with an empty code column and empty response column
  - Entering open responses verbatim from the first 100 or so surveys that arrive for processing
  - Sorting and grouping the responses and allocating each a code number to be used to code incoming surveys
  - Recording verbatim those responses that cannot be coded using the existing frame, returning them to the researcher to update/allocate new codes and replacing the original one

c. Step 3—Managing Data Entry Progress, Quality and Schedule

The data entry team should provide regular reports on the progress of the data entry tasks. Reports should include:

- number of forms received from the field
- number of forms encoded
- number of forms rejected or requiring further checking
- any major issues affecting data encoding progress/schedule/quality
- forward estimate of data encoding for following period

To ensure quality, the team should carry out basic checks of data quality (non-sampling errors), including consistency, logic/skip pattern and large numbers of missing values. Any variable with 10 percent or more missing values should be used with caution; and a variable that has a very high missing value should not be used at all.

Incomplete forms or those with errors will need to be returned to the head office form checking team. For this purpose, the team should work out standard procedures on how to mark which variables in forms need checking, how to batch them, when to send them and to whom to send them. Procedures for the encoding of these corrected forms should also be developed.

d. Step 4—Cleaning the Raw Data

The end of the data entry is the production of a complete and cleaned raw data set. Cleaning the raw data means that the necessary consistency, logic/skip pattern and large numbers of missing values checks have been conducted thoroughly. To produce a clean and completed raw data set, the design of the dummy database and data tables must have been completed and an actual first draft data analysis and first draft set of completed tables prepared.

3.1.9. Data Analysis (Descriptive and Inferential) and Preparing the Data Summaries

The data analysis begins when the research team opens the new database and data tables to start exploring the results. It consists of an iterative process of checking, learning and further refining the research's analytical framework to answer the research questions and objectives. The aim is for the researchers to emerge with increased knowledge of their basic research findings and to produce a final set of data tables for the report.

a. Checking the Database

The researchers should be asking: Do we have a good database? Is it complete? Is it of good quality? The list of analysis quality checks shown on Section 3.1.8b (on pre-data entry survey form checking in head office) can be used. The checks below can also be done by researchers eyeballing the database, by researchers running their own tests and reports or by the data analysis team, who would present their results as part of the data table output:

- Check response rates to questions. Rates lower than 90 percent suggests results may be biased; include response rates in any report.
- Check for expected patterns in the data. Unexpected patterns may result from faulty sample design, improper implementation, interviewer errors or respondents' inaccurate answers, including unanticipated responses due to team's false expectations about the data.
- Check and decide on independent variables and basic background (or classifying) variables and their groupings. Include geographic areas, level of education, urban/rural residence, male/ female, wealth quintiles etc.
- Decide on minimum sample sizes for displaying results. Cells based on very small numbers are not reliable and should not be shown.
- Check for unexpected demographics results.
- Check for high standard deviations around the mean, as these suggest outliers.
- Check for unexpected frequency distributions.

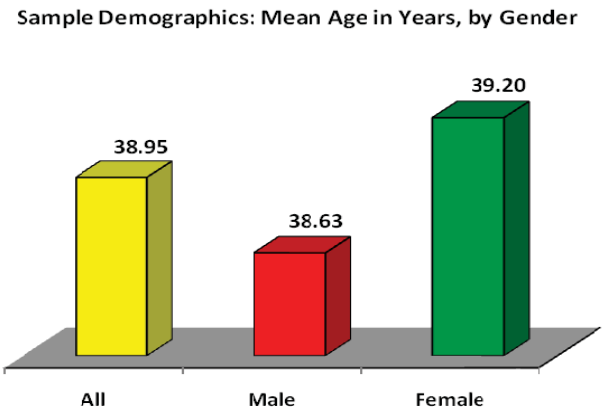
b. Checking the Data Tables

In this phase, the research team should be asking: Do we have a good set of data tables, i.e., are they complete? Are they of good quality? Are they in the format and order we need? In addition, the project manager should ensure that:

- All important data are summarised in the way the team wants to present them.
- The tables they wish to have corrected/changed are identified and highlighted.
- Additional tables they want and their specifications have been written in and highlighted in the location where they are needed.
- Tables containing key results or other interesting findings are highlighted for further consideration.

- The team has designed or produced figures/graphics based on some data tables to be used in the report (for an example, see Figure 9).
- The team has paused and reflected for some time to get the "feel" of the data and consider what all the numbers in the tables mean for the research questions: what story do these numbers tell? This pause is very important, and allowing time for it is often overlooked.

Figure 9. Example of a Figure from a Data Table



Source: Cambodian Tables, *2010 National Tobacco Prevalence Survey,* National Institute of Statistics

c. Further Analysis

In further pursuit of the research questions/objectives, the research team should ask: Do we need to add more independent or dependent variables? Do we need to add more or different statistical tests?

d. Iteration or Analytical Feedback

Iteration or analytical feedback following initial database and data table review is important. Feedback should be given to the data analysis team. This should consist of a checklist of issues arising from the team's initial immersion in the data, which require further analysis.

Initial feedback to the data analysis team is the first of possibly several processes that might be needed for the team to emerge satisfied that it can answer the research questions and can produce the final set of data tables for the research report. The steps in these repeat cycles will be those set out in 3.1.9.b above, as well as the following:

- Database responses/ entries:
  - Check variables for low response rates, large numbers of missing values, a large proportion of "don't know"/other responses.
  - Inquire into observed unsuspected patterns in the data, including unexpected demographics, variables with high standard deviation and unexpected frequency distributions.
  - Set specifications to add more independent or dependent variables.
  - Set specifications for more or different statistical tests.

- Data tables responses/ entries:
  - List of tables the team wishes to have corrected or changed.
  - List tables the team wishes to have added.

- List specifications for figures/graphics for the report.

3.1.10. Drafting the Report

a. Managing the Process of Writing the Report

The most challenging phase is when the research team puts the design, findings and materials together in a coherent document—the report (Catalla 2006). In social research, a report is an objective and professional account of the design of the study and its findings, the conclusions that can be drawn and the implications and recommendations that stem from them (Tarling 2006).

The team should plan to begin writing the report at the earliest opportunity and to write additional sections as the project progresses. Writing should not be left to the last minute. The earlier the team starts preparing the final report, the better. A research manager can immediately draw up an outline of the final report once his/her proposal has been accepted. A first draft will never be good enough, so sufficient time should be allowed to produce subsequent drafts (Tarling 2006).

Sections of the report can be written well in advance of the project completion date. A plan needs to be prepared to identify when each section needs to be written, who will write it, who will comment on it (and perhaps redraft it) and who will check its quality. The report plan can then be integrated with the project plan and linked with other project activities and milestones (Tarling 2006).

The report should be quality-assured. The best method is to engage someone who is familiar with social research and has experience in writing research reports, but who is independent of the project, to read the report. Time must be made available for this. Formal checks are needed to ensure internal consistent and the highest quality (Tarling 2006).

b. Developing a Research Report Outline

An outline helps researchers to organise their ideas (Catalla 2006). Before outlining, the researchers must be clear what kind of report they should prepare and what layout and style are required.

The team should ask who the intended audiences of the report are, their levels of understanding, what they already know and what they need to know and how they will use the report. On the other hand, the layout/format and style of the report will depend on the research institution's house style or the sponsor's/donor's rules. This has to be clarified with the research management team and the donor/sponsor. Some research organisations and donors have their own style guides, which could help the research team enrich their report's format and style. CDRI, for example, has its own *Writers' Guide*, as does the Learning Institute titled *Style Guide for Writing Abstracts* and a *Style Guide to Writing in English*.

Once answers have been formulated regarding the kind of report and its layout and style of the report, the report outline can follow. Having a report outline allows the research team to write preliminary impressions or thoughts on the patterns being observed in the data in appropriate sections of the report (Neuman 2000). It helps to put ideas in sequence, group related ideas together and separate the more general ideas from more specific ideas, and specific ideas from very specific details.

The basic outline contains hierarchical numbers for section headings In a more detailed outline, the researcher may add a column showing links of each section heading to the research design and implementation phases, and another column showing the outline level (Table 13).

There are different stages of outline development:

- Initial outline, developed at the end of the design phase
- Basic report outline, formulated at the draft report stage
- Full report outline, created at the final report stage

The initial outline can be sketchy and may be expanded as the team examines the data. It should be remembered that the outline simply serves as the researcher's guide. The researcher could deviate from it slightly in writing the report as ideas develop or become clearer.

Table 13.Example of a Detailed Outline (Drug Use)

ACTUAL PARTS OF THE REPORT	RESEARCH DESIGN & IMPLEMENTATION PHASES	OUTLINE LEVELS
I. Problem Statement	Problem statement/ research topic	One of the most important
II. Research Objectives	Broad research objectives	One of the most important
III. Key Questions	Specific research questions and information needs	One of the most important
IV. Research Methods	Research methods identified	One of the most important
V. Findings and Analysis	Data collected and summarised	One of the most important
A. Trends in Drug Use	Answers to specific research questions on research objective 1	Second level of importance
1. Drug user profiles		Third level of importance
2. Drug use behaviour		"
B. Causes and Consequences of Drug Use	Answers to specific research questions on research objective 2	Second level of importance
1. Reasons for taking drugs		Third level of importance
2. Effects of drug use on drug users		"
C. Effects on Family Life	Answers to specific research questions on research objective 3	Second level of importance
D. Impacts on Community Life	Answers to specific research questions on research objective 4	"
VI. Conclusions	Final statements in relation to the research questions and objectives	One of the most important
VII. Implications		One of the most important
A. Policy issues	Relevance of research/ what the findings mean in relation to policy making and to development practice	Second level of importance
B. Rehabilitation and education issues		"
C. Community development issues		"

Source: Catalla 2006

c. Writing Summaries and Abstracts

An abstract is a very important selling document for funding and for stimulating the interest of stakeholders and other audiences. It is the last thing to be written, covering only things that are included in the report. Abstracts are complete in themselves when well written.

An abstract contains a very brief summary of the study: the problem statement, the motivation of the study team in choosing the topic, how the research was conducted, the main findings and the implications of the study. It should be written in brief, concise English and is generally limited to 150-300 words. It should include the key words used in the research, but should avoid jargon, technical terms, abbreviations and acronyms that may be difficult to understand. It should be interesting enough to grab the reader's attention quickly and to cause sponsors to decide whether to invite the researcher for a presentation in a forum or for publication.

An abstract is shorter than an executive summary, the latter containing more detailed findings and more detail of the methodology. An abstract should be written as a "teaser", giving only a broad idea of the problem being addressed and the findings.

3.1.11. Summary of Key Points

- The rigour of research implementation begins with mobilising the study team and reviewing the work plan collectively to level team expectations. During this stage, the research manager should clarify roles and responsibilities, lines of authority, communication and decision making.
- Additional literature review during the research can confirm the findings. It can also help refine the study design. Remaining focused means that the research team should find the literature that has value to its ongoing research; articles that have little value can be dropped and replaced by more relevant articles.
- The research team should aim to achieve the final sample by meeting the project sample requirements for geographical areas and the types and quotas of interviewees/groups. The final sample selection should be on schedule, within budget and up to quality standards. The sampling collection plan should be communicated to the donors or sponsors.
- The rigour and success of data collection and handling lie in the hands of the enumerators or interviewers and their supervisors. For this reason, the training of enumerators, interviewers and supervisors should be well planned and implemented prior to data collection.
- The research manager must take careful consideration of the safety of his/her team before it is sent out to the field. Ensuring the safety of the team also minimises risks to the data collection and ensures that the study is completed on time.
- Different data collection instruments have different strengths and perspectives. The project manager needs to develop the capability of the research team to develop appropriate questionnaires and interview or discussion guides, depending on whether the research method is quantitative or qualitative.
- As data is collected, the research team begins refining the investigation's analytical framework and preparing the database to generate the data to answer the research questions. In quantitative research, this preparation includes pre-coding the closed-end questions, preparing the dummy tables and preparing the dummy database. In qualitative research, such reflection takes place in the field as information is gathered, ordered, grouped and linked, although these types of studies can also require post-hoc data processing and analysis.
- The research manager needs to control data processing in order to produce a complete and cleaned raw data set, including the first draft of the database and the first draft of

completed data tables. This requires managing the data entry team, editing, encoding and cleaning data and setting up the processes and tools (mainly electronic) to capture raw data accurately and completely.

- Data analysis consists of an iterative process of checking, learning and refining the analytical framework to produce the needed results. A final set of data tables is produced for the research report.
- The team should begin writing the report at the earliest opportunity and write additional sections as the project progresses. Drawing up an outline of the final report once the proposal has been accepted is recommended to ensure that the report is written on time. Formal checks need to be made to ensure that the report is internally consistent and of the highest quality.

3.2. Coordinating Activities and Tasks and Keeping the Team Together; Study Team Challenges and Issues

3.2.1. Research Project Coordination Tasks and Issues

Ultimately, the responsibility for delivering the research project rests with the manager. This requires vision and an appreciation of the wider context of the work. The project manager needs to be enthusiastic and committed to the project and the team while analysing and solving problems, making decisions, organising, coordinating, delegating, negotiating, influencing, leading, motivating and communicating.

A big part of the research project manager's day-to-day tasks is coordination, or the organisation of the different elements of a complex body or activity so as to enable the participants to work together effectively (Oxford English Dictionary). The research project requires bringing together its different elements into a harmonious or efficient relationship. These elements include people and the activities and tasks, which are equally important in bringing the project to a successful completion.

Coordination also requires understanding the milestones that could be affected when internal or external conflicts arise, and the strategies that may be needed to address them. Figures 10 and 11 show the coordination that may exist in quantitative and qualitative project reviews.

The key people, teams and stakeholders in research projects who require coordinating are:

- Research institution and management
- sponsors
- in-research partner agencies
- project manager
- design/reporting team
- data analysis team (quantitative)
- data processing team (quantitative)
- field research team
- finance administration team
- Cambodian communities
- Local authorities/NGOs/CBOs

Figure 10. Research Project Coordination Tasks—Quantitative Project View

(Source: Helmers, Kent. PPT on Research Project Coordination, RPDM Training 2011)

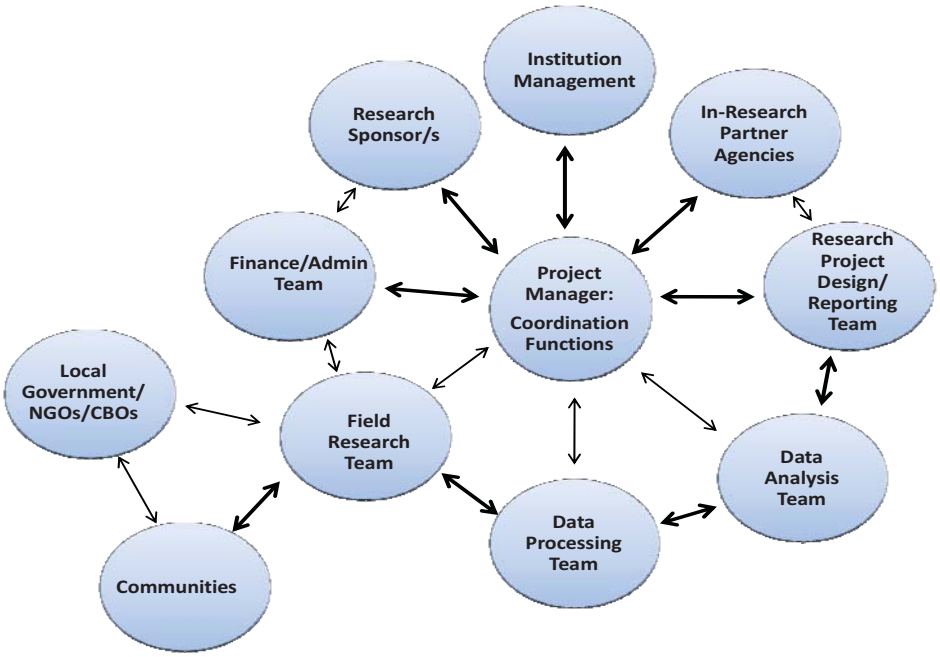
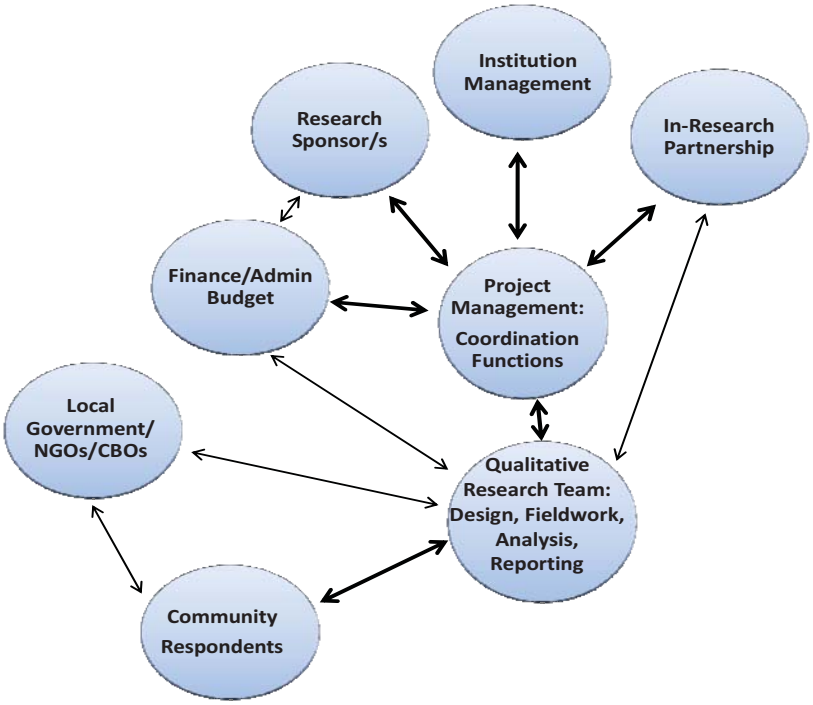


Figure 11. Research Project Coordination Tasks—Qualitative Project View

(Source: Helmers, Kent. PPT on Research Project Coordination, RPDM Training 2011)



Key activities or process elements that need to be coordinated are:

- funding and budgeting
- team management
- research design and planning
- scheduling
- fieldwork
- data processing and analysis
- research reporting
- research quality assurance
- dissemination and relations with civil society

There are some differences between managing and coordinating. Managing refers to controlling procedures' schedules and activities, while coordination creates an environment of harmonious working relationships. Coordination is also different from control, since there is more flexibility, participation and mutual relationships associated with coordination. The Khmer word for coordination is *somral somroul*, which literally means to "make or keep things smooth, a process of facilitation or maintaining harmony and avoiding conflict". Coordinating a research project vs. a research programme is one where the latter may be more difficult to coordinate because of the scope and complexity of the research undertaking.

In the implementation of a research project, research managers may often encounter the following coordination issues:

- Balancing the demands for achieving results and maintaining good relationships
- Different perceptions of the work and different expectations from the team and the stakeholders
- Maintaining quality relationships amid tight project schedules and tasks
- Conflicts—internal (within the research team and management) and external (with donors and other stakeholders)

Solving such issues would require levelling expectations between all concerned, scheduling team reflections to solve conflicts as they arise and maintaining open channels of communication, problem solving and decision making.

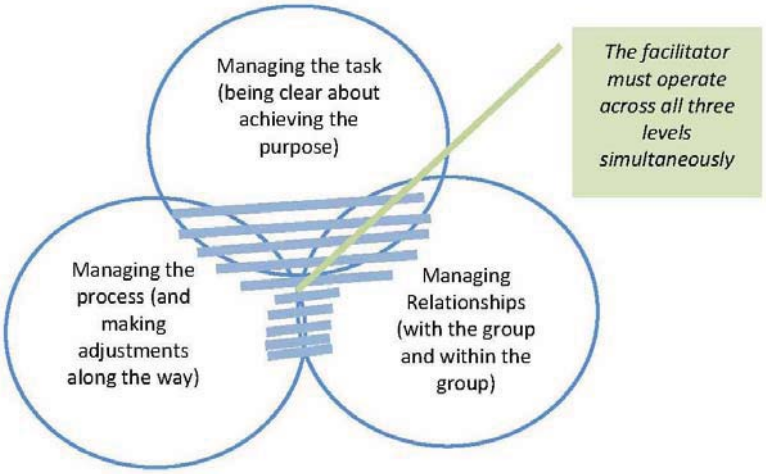
3.2.2. Building the Research Team

a. The Research Project Manager as a Facilitator

The project manager often possesses the technical expertise to do good research, but there is another side of coordination that needs expertise: building the research team.

The manager not only manages but *facilitates* three key elements of coordination: managing the tasks, managing the process and managing relationships (Figure 12). Flexibility is required for this, and the research manager should be able to step out and see what needs to be balanced among these three sets of equally important tasks.

Figure 12. The Art of Facilitation



Source: Storer 2011

As shown in the figure, the art of facilitation requires the research manager to be able to operate across all these three levels simultaneously:

- Task facilitation: The manager focuses on outcomes and on the steps necessary to complete tasks. This role is to assist the research team to complete their tasks.
- Process facilitation: This is about designing and managing the process by which tasks are achieved. The manager assists the team to develop as a group by introducing approaches to help them achieve their objectives. The outcome is an effective self-managing group.
- Relationship facilitation: This role is about managing the relationship with the team (establishing trust between the manager/team leader and the team members) and among the team members. It is here that the manager encourages the team's inner work, the process of reflection, and learning to learn collaboratively and individually. It may also require working with conflict within the team.

The central functions of the research manager as a facilitator can be summarised as:

- laying out clear goals (purpose)
- identifying a process to achieve the purpose and clearly communicating how it addresses the purpose
- establishing norms and modelling behaviour
- assisting in the flow of information and ensuring full and equal participation, by creating the safe space that allows team members to speak out
- practising powerful listening
- balancing individual needs with the group task
- drawing out opinions and issues that are important to team members and helping the team synthesise and prioritise
- encouraging shared responsibility for and ownership of what happens

b. Managing Group Development

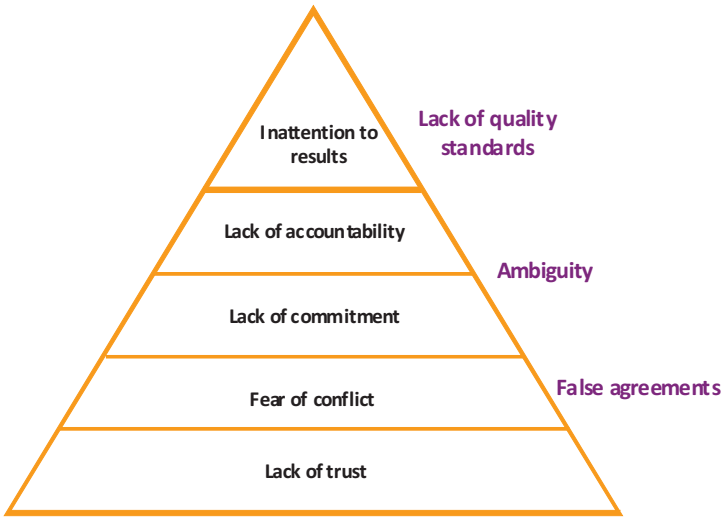
Each member of a research team has a different expertise, research perspective and expectations. Some very big teams go through a stage of conflict because of different research backgrounds and perspectives. Teams are not necessarily well-knit from the beginning, and if differences are not managed well, the team is bound to fail. As Figure 13 shows, the base of the problem as to why teams fail is lack of trust, which gives way to fear of conflict, lack of commitment, lack of accountability, and inattention to results.

In the beginning, differences among team members may be glaring. A big part of the role of the manager is to manage these differences so that mutual understanding and teamwork are developed and the responsibility and accountability for the project become mutual.

Getting the research team to work together productively is not always a seamless job, however. Five stages of group development that may apply to research team development are: orienting, conflict, cohesion, task performance and transformation (Tuckman 1978). The model points to possible tensions within the different stages.

- Orienting (forming)**:** The period when the team first comes together may be marked by minor tensions. Members are often cautious and guarded and reluctant to discuss anything in depth; cohesion remains superficial.

Figure 13. Why Teams Fail



Source: Storer 2011

- Conflict (storming): Typically members of a group pass through a conflict stage. Conflict may result from incompatible goals, different world views and/or unequal access to resources. Individual members may feel that their world view is about to be overlooked. Others may feel uncertain about the process or even challenged by a new way of working and learning. Disagreement is a natural outcome of joining a group. However, such conflict (when managed) can help to clarify issues and aid group decision making as well as promote group unity. Conflict becomes destructive only if it escalates beyond the control of its members and is prolonged.
- Cohesion (norming[4]): This is where the team develops ground rules, which in turn lead to values and beliefs that belong to the team. Members begin to fit into the group and become more comfortable with each other. They develop a sense of belonging and begin

[4] The term is derived from the word norm which refers to the "common standards within a social group regarding socially acceptable or appropriate behaviour in particular social situations, the breach of which has social consequences; its strength varies from loose expectations to unwritten rules" (Chandler and Munday 2011). In the context of group development, norming is that phase when group members begin to establish their own social rules and to identify themselves with the group given their contributions in developing such norms.

to establish a group identity, making reference to their membership. As they become more trusting, they develop greater commitment.

- Task performance: This stage is marked by increased cohesiveness (members have positive relationships and share common goals) and leads to enhanced performance. The team has a clear sense of direction, and participation of all members is high. Communication is effective, information is readily shared, and feedback is freely given and received with an awareness of how the team is functioning.
- Transforming: the team is nearing completion of its objectives and begins to articulate how the learning will be transferred to future research activities and projects.

In situations in which there are diverse viewpoints or conflict, the research manager's role is very much like a mediator who must act as a neutral third party but be committed to helping bring about consensual negotiation. S/he must accomplish this in the face of various learning styles, each of which serves as a technique to meet a particular team member's needs, and which may impact on other members in different ways at any time. Among these conflict behaviours are competing, accommodating, avoiding, compromising and collaborating:

- Competing: This exists where personal needs are advocated over the needs of others; it relies on aggressive communication, low regard for future relations and the exercise of power. Team members using a competitive style tend to seek control over a discussion, in both substance and ground rules. This behaviour escalates conflict.
- Accommodating or "smoothing": Team members using this style yield their needs to those of others, characterised by submissive communication and an emphasis on preserving relationships and the needs of the team.
- Avoiding: This is a common response to the perceived negative impact of conflict. However, because needs and concerns remain unexpressed, the conflict can rankle, escalate and flare up down the line.
- Compromising: Team members gain and give in a series of trade-offs. Compromise is usually premised on a lack of trust and distaste for risk taking. While compromise may be satisfactory, there is a tendency to focus on initial positions and concerns rather than to understand the range of potential solutions and resources.
- Collaborating (win-win problem solving): The team pools individual needs and goals towards a common goal. Collaboration is achieved through a combination of assertive communication and cooperation and offers the chance for consensus.

3.2.3. Summary of Key Points

- ❑ Research is a team effort; hence, the research project manager should be concerned with managing not only the research tasks but also the processes and relationships to bring the team together. As a coordinator, the research manager acts as a facilitator, simultaneously balancing tasks, process and relationships.
- ❑ The central function of the manager as a facilitator is to focus on how well the research team work together and to ensure that each member shares responsibility for the outcomes.
- ❑ Coordinating the activities and tasks requires dealing not only with internal coordination issues among team members and the administrative and management units within the research institution but also with those with external stakeholders, government units, project beneficiaries/partners and donors.

- A big part of the role of the research manager/team leader is to manage the differences among team members so that mutual understanding and teamwork are developed and the responsibility and accountability for the project become mutual.
- Trust is the foundation of a cohesive, highly performing team.
- Building and keeping the team together require bringing the team to cohesion, high task performance and collaborating, which is characterised by assertive communication and consensus seeking.

3.3. Completing and Terminating the Research Project

3.3.1. Preparing for and Holding Dissemination Workshops (for Validation/Sharing) and Developing Policy Messages

a. Preparing and Holding Dissemination Workshops

Disseminating findings is part of the closing phase of research. While the donor is the main user of the findings, the research should also be presented to others for whom the findings could be useful. Since the purpose of social research is to locate answers to social problems or questions, it remains "worthless" until it has been presented to others who can use the findings (Berg 2009).

For maximum impact on the audience, dissemination should be planned in advance. The importance of having a dissemination strategy built into the project design and work plan, with funds allocated to it in the budget, is emphasised in Chapter 1.

Research dissemination strategies and activities can include:

- workshops, research forums, conferences, roundtable discussions with stakeholders/ donors/ sponsors, GOs, NGOs, local partners, project beneficiaries
- pre-meeting or informal meetings with key policy makers to discuss findings
- publication of the research report in journals, newsletters and non-academic publications in the form of a policy brief, working paper or power point presentation
- submitting research articles for academic publications or conferences
- publishing in media such newspapers, TV, radio, magazines or the web
- academic lecturing and teaching
- sharing with research networks and associations

The purposes of dissemination can include: validating the findings; sharing the findings with beneficiaries and stakeholders; contributing to theory building; creating an impact on policy and legislation; and providing situational analysis to local, national, or international development efforts.

In planning dissemination, the research manager should consider the following:

- In validating findings with local stakeholders, the research team aims to cross-check and verify whether the information it has collected and the situation in the locality or commune correspond. Researchers learn from the people, so the findings should be brought to them. In planning this type of dissemination workshop, the team should make sure that all those who were involved are invited.

- The language used in workshops and conferences with local people should be different from language used with "Excellencies" or in policy making. For example, when households are targeted for dissemination, the language should be simplified and the materials translated into Khmer.
- In disseminating results of policy research studies, the most significant participants should be policy makers such as ministry secretaries, because they make policy decisions. It can be difficult to have these officials directly involved, so in their place, invitees should be the unit directors and technical experts whose main roles are to recommend policies and monitor implementation in their sector.
- It will be advisable for the research team to select the most important policy information and recommendations to share with policy makers. For example, concepts in decentralisation are difficult to understand, but the issue of accountability would be quite interesting and easy to operationalise.
- If a study deals with sensitive social and political issues, it may be difficult to release the team's findings to the general public. Consider instead holding informal and small group meetings and do not insist on discussing issues that government advises not be discussed openly.
- For research to create the most impact on policy, it would be advisable to engage the appropriate stakeholders as early as in the design stage of the project and then during its implementation. For example, if the research topic has something to do with government policy on sustainable development and environment, the Ministry of Agriculture could be involved; in the same manner, NGOs and advocacy groups can be engaged when the research topic has to do with issues related to civil society. A case in point is the CDRI, WorldFish Centre and Fisheries Administration CAPRI [Collective Action and Property Rights] Policy Research on Conflict and Collective Action in Tonle Sap Fisheries (Box 4).

b. Developing and Disseminating Policy Messages

Policy is defined as a course or method of action that defines the conduct of a particular group of individuals. A policy may be defined further as:

- prudence or wisdom in management of affairs
- set of rules or common procedures
- a high-level overall plan with specific outputs and goals including agents, milestones, deliverables, budget and risks

The findings of policy research may shape the overall discourse on an issue and contribute to defining the action that needs to be taken to influence government policies, laws, ordinances and the change process, as Box 4 demonstrates. This can happen if policy impact is included in the research objectives and developing policy messages is a part of the overall research plan.

One of the means for disseminating policy messages is a policy brief. This is a short, objective summary of particular research addressing a policy concern and identifying policy response options, of no more than three pages and simple enough to be understood by various audiences. Audiences can include the community, industry, government and legislators who generally know little or nothing about the topic. A good example is presented in CDRI's forthcoming policy brief on "Conflict and Collective Action in Tonle Sap Fisheries: Strategic Priorities to Improve Governance and Support Community Livelihoods".

Box 4. Case Study of CDRI, the WorldFish Centre and Fisheries Administration (FiA) CAPRI Policy Research on Conflict and Collective Action in Tonle Sap Fisheries—Lessons

Design: Policy outcome was included in the research design with specific focus on institutional collaboration, cooperation and ownership. Policy makers were engaged throughout the research process through the following:

1. In the research design, consultation was conducted to verify research objectives, approach and methodology, and select research sites and key stakeholders for consultation.
2. In data collection, the senior FiA officials provided leadership and coordination and chaired the provincial and consultative workshops with key stakeholders.
3. FiA senior officials provided critical comments on the draft report and policy brief.

Utilisation: The FiA used the results of the research to:

1. review the commercial fishing lot area and redefine small, medium and large scale fishing tools;
2. commit to provide follow-up meetings with community fisheries and other stakeholders to clarify the roles and responsibilities of each organisation;
3. bring up key policy findings to the Technical Working Group on Fisheries (TWGF) for effective participatory and sustainable fisheries management.

Process: The influencing process for this project had the following elements:

1. Policy objectives: sustainable natural resource management, equitable rural development and poverty reduction
2. Policy instruments:
   - Reliable available and alternate routes to influence; promotion of options
   - fisheries laws and regulation, community fisheries
   - fisheries, administrative and environment maps
3. Policy formulation
   - analysis and assessment of courses of action
   - economics, equitable access, food security and poverty reduction, policy dialogue with TWGF
4. Policy implementation
   - putting the policy into effect/carrying out through appropriate lead agency, FiA administrative structure (Department of Community Fisheries)
   - law enforcement by more than 10 organisations
   - FiA and NGO training and awareness raising of fisheries law and regulation
   - Demarcation of fisheries domains: commercial fishing lot, public domain, community fisheries area, fish sanctuary and environmental core zone

Lessons: Policy formulation is a complex process, requiring the intersection of institutions (raising awareness of fisheries law and enforcement), socio-economic concerns, community and individual (livelihoods and poverty). The research questions were narrowed down based on what policy makers want answered. Good networking and relationships with policy makers and the key ministry worked well to encourage policy makers to consider the policy messages. Policy makers were also willing to chair the research project. Effective communication with policy makers requires:

1. objective, credible, and quality research
2. involvement of the people and government bodies that make policy decisions
3. good interpersonal relationships, appropriate communication channels and the right team composition
4. adequate communication materials and policy briefs
5. national workshops to disseminate policy messages

3.3.2. Project Team Reflections on Lessons from Research

Research managers need to develop a research culture and the team's confidence and ownership of the research process. Holding team reflections is an important part of research management and capacity building throughout the life cycle of the research to analyse the research practices and their strengths, identify areas of conflict and clarify and solve problems.

There are two aspects to project team reflections: (a) team reflection on doing the research, and (b) team reflection on learning from the research experience. The former is a task-oriented team reflection while the latter is a process-oriented team reflection.

Part of the rigour in research implementation is ensuring that both team reflections take place. The team can be guided by the following focus questions:

a. Focus Questions for Task-Oriented Team Reflections (Learning How to Do Research)

- Are we carrying out the steps in the research as planned (e.g. conceptual framework, literature review, research methods and instruments, sampling, site selection, field work, data gathering and analysis, report writing, dissemination of results) ?
- How far are we from accomplishing our milestones? What are the problems with our data and how are these to be addressed? What are the deviations and how do we explain/justify them?
- What aspects of the research implementation are our members and team leaders required to do? Who is doing what and how far are our expectations or responsibilities being met? What areas need improvement and how do we address the gaps?
- How are we collecting, interpreting, analysing and managing our data? As we interact with the villagers, how do we refine the data collected or gather more data that we need?
- Are we doing our research methods correctly, that is, are we following the right methods and instruments for either quantitative or qualitative approach?
- What help does our team need from technical experts in doing quantitative or qualitative research?
- How do we do on-the-spot analysis and what do we do next? How do we address grey areas arising as the research progresses? How do we get back on track again if we are delayed or the data are not enough?
- Are we following our conceptual framework? What adjustments are needed and how do we communicate these to our donors?
- How do we put our ideas together in a coherent research report? Is our report of high quality, and, if not, what can we do to improve it?

b. Focus Questions for Process-Oriented Team Reflections (Learning from Research Experience)

- Does our organisational culture support a nurturing relationship? How do we work in such a way that what we learn as researchers is shared with many people?
- How can we build the team's confidence in the proposed research topic?
- Is our team leader making decisions or giving assignments to each member based on our background and experiences, familiarity with the project, expertise, familiarity with the subject and individual preferences?

- What are our learning experiences from conducting this kind of research, in terms of group processes, coordination, communicating with team members, administrative staff, stakeholders, donors?
- Are we able to nurture our relationships? Are we learning from each other? Are we really helping each other to grow as researchers or are we just contributing to our product?
- What processes work best in doing our tasks? When we do our tasks, are we just after the product rather than our relationships as researchers? Do we grow from doing it?
- Does our team relationship build our internal and organisational capacity? What do we need to improve in this regard? How do we communicate the changes we want with our supervisors?
- How and what can we learn from each other? How do our personal relationships impact on our work? What needs to be done to nurture our relationships and produce good results? (Note that peer learning is useful for producing quality product and capacity building, but horizontal learning is equally important, i.e., learning from other members of the organisation and stakeholders.)
- What challenges to working together harmoniously are arising, and how can we deal with different pressures?

Members of the research team should be made aware that the process of research is just as important as the product. Hence it is advisable to reflect on how they work together to improve confidence and build up the quality of their ongoing work and the quality of outputs.

Team reflection is needed not only for the team members to learn from each other but also to develop a sense of ownership of the research project. The team is helped to move the work forward by addressing issues that will strengthen the spirit of the team and inspire and motivate it toward completion of their project.

In recruiting researchers, it is important for the research manager not only to get those who are highly qualified and with very good academic background but also to consider the ability of the researchers to work together. This horizontal learning strategy is an important element of capacity development in research.

Periodic team reflections need to be built into the planning and the team's workload and schedules. The schedule of reflection sessions will depend on the agreements set by the team at the start of the research implementation.

Forms of reflection include unit retreats, country retreats (unit retreat usually happens before the country retreat) or institutional retreats.

3.3.3. Finalising the Research Report and Incorporating Comments and Feedback from Presentation/Dissemination Workshops

a. Documents Required for Finalising the Report

To facilitate the writing and finalisation of the report, the following documentation should be available and in good order:

- project documents that specify the goal, objectives, activities, deliverables and milestones of the project

- a copy of the contract, which confirms what is in the project documents (objective, time frame, results and milestones, team members and their responsibilities, team leader and who the team is accountable to)
- milestones, which consist of outputs and reports (e.g., first milestone is the inception report; second is draft report; third is the final report)
- various formats of primary and secondary data and the treatment required for them to be useful to others
- data sets that guide the formulation of research findings, conclusions and recommendations

b. Incorporating Comments and Feedback

The research report goes through several draft stages before it is finally submitted to the donor. Comments from experts, peers, donors and supervisors and feedback from dissemination workshops are solicited and incorporated into the final draft to strengthen it and ensure quality.

The manner in which the team addresses comments will depend on the kinds of comments:

- Some comments ask for clarifications only, or ask the writer to add information that the reviewers fail to see in the report.
- Some comments ask the writer to rephrase some statements or organise the ideas better.
- Some comments may ask the researchers to change the whole structure of the report.
- Some comments may just ask the writer to double check or cross-check information in order to improve the accuracy of the report.

Dealing with comments requires diligence and patience on the part of the research team, since it can take one or two weeks to study and respond to reviewers' comments. Sometimes the reviewer is not an expert in the field, and even if his/her comment has already been dealt with, the same comment may appear two or three times and a lot of time may be spent addressing the same issue. Sometimes also, even when the team is ready for the next phase of the project, it is delayed because it still needs to respond to comments because the reviewer is not satisfied with the explanation or corrections. The donors sometimes criticise not only the substance or results of the research, but also the grammar or sentence structure or comprehensibility of the report, which the team should not ignore.

To incorporate feedback and comments in the final report, the research manager can provide the following guidance to the team:

- When the team members look at the comments, they have to look at the logic behind them. Some comments may not make logical sense.
- Generally, comments can improve the report, both in content (integrity of the data, methodology, analysis, conclusions) and in structure (grammar, mechanics, writing style), so they have to be listened to and time should be devoted to address them.
- Once the team has seen all the comments, it needs to revisit the conceptual framework, methodology and the premises or requirements of the donor. The team may also need to review the ToR and the contract to make sure that the changes being required by the reviewer are in line with the agreed upon research framework and contract.
- Some comments require the team to consider inserting/adapting ideas that may not be part of the original research design. If this happens, the team should review and cross-check the literature, make another quick literature review and cross-check the data and

the information gathered before deciding whether the team should make the required changes or stick to the original framework.

- The team needs to know where the reviewers are coming from. The reviewers may know only the concepts but not the application. Sometimes, reviewers are unclear about what they want to say; they may not be able to state directly what they want the team to do; or they want to see exactly what is in the original project ToR that may have been adjusted or changed during research implementation. The team members should make a careful review and assert their position since they are the ones who have a grasp of the background and framework of the research, and the manner in which it was carried out.

3.3.4. Submitting the Final Report, including Quantitative and Qualitative Databases and Hard Copies of Completed Data Collection Instruments

In submitting the final report, the research team is well advised to submit or make available the supporting documents, research instruments and databases that will substantiate the claims being made in the report. The following guidelines are helpful:

- In preparing to submit the final report, the team needs to work with the finance unit, data management specialists, data management team and others to ensure that the report is supported by a set of project and associated documents.
- Closing the project requires the team to assess what data sets to give to the clients in compliance with their requirements. These generally consist of the final report and associated documents, cleaned data sets, tables, data analysis and interpretation.
- Some clients want only the final report. Others require data sets, final report and annexes. It is wise to comply with the client's requirements.
- The research team needs to be guided by institutional policies on how to make data available to the public, such as privacy, confidentiality, rights of the interviewees and how and for what purpose the donors or other users of the report will use the data.
- One of the dilemmas of a research team is whether to keep the questionnaires used in the study or submit them to the sponsor. Generally, only the soft copy of the data set or the cleaned data is required by clients, not the raw data. In cases where clients ask for the raw data, the team needs to check the ToR and the agreement and submit the raw data if required. However, most clients request only the cleaned data, which is why data cleaning is a critical aspect of research.
- The team leader needs to be aware of what information should be provided. For example, CDRI research generates (1) research knowledge/ findings, and (2) a collection of primary and secondary data in various formats and the treatment required for them to be more useful for others.
- It is important to keep a good file of all the types of reports used during the research so that if clients ask for them, they will be readily available. Some clients ask for inception reports, while others do not. Most donors require progress or activity reports.
- During post-project audit, the first thing donors/clients will look for is data, so the research team should be ready with the different data sets, both for primary and secondary data. Some reports belong to the beneficiary (e.g., Ministry of Health) and the ownership of the data rests with the beneficiary.
- A cover letter or a transmittal letter accompanies each final submission. For every report and a cover letter signed by a superior, a hard copy (CDROM) is required to accompany it.

3.3.5. Getting the Report Peer Reviewed

a. Purpose of Peer Review

Experience indicates that comments of people within the same organisation are quite useful to improve a research project as well as the report. Therefore it is advantageous that before sending the research plan or report to outsiders, they be subjected to peer review.

Since the research article is for public use, the purpose of peer review is to ensure that the report is comprehensible to its final audiences. Peer reviewers usually have valuable recommendations to make for further research and researchers do learn from the analysis of their peers, especially on Cambodian issues. Even if peer review comments seem to be very critical, they are eventually helpful in improving the report and ensuring quality control.

Peer review provides opportunities for the research team to avail of the opinions of experts who can look at the documents/reports with fresh insights. Showing the team's work to others who have relevant field experience increases the possibility that weaknesses in the research itself and in the writing of the report can be identified and improved.

b. Types of Peer Review

Preview can be of several types:

- Professional peer review focuses on professionals to improve the quality, uphold standards or provide certification. Examples are peer reviews in medical and engineering disciplines.
- Scholarly peer review is about ensuring academic quality in a scientific publication. An editor, referee and reviewer may be involved in reviewing one article.
- Formal peer review is the process followed when articles are submitted to a journal.
- Informal peer review is done among the researchers themselves, who do not need to agree with all the comments but only consider those that will improve the paper.
- In an academic peer review, there is a second reader who is usually the mentor or the adviser of the researcher/research team.

c. Procedures

The peer review of a report can involve several procedures, to wit:

- The best time to start peer review is in the early stage of research formulation, inception or design. It should be done as early as the research design or in the inception stage. Sometimes peer review is done very late, leaving very little room for adjustments to the research design and process.
- During peer review, the reviewers send their evaluations to the researcher indicating what they perceive to be weaknesses or problems with the research, along with their suggestions. The researcher then has the opportunity to address the comments raised and to benefit from the wisdom of other researchers.
- An author/research writer is normally asked to respond to a reviewer. If an author cannot reach an agreement with the reviewer, his/her work may be sent to another independent peer reviewer. If a new peer review still elicits negative comments, the work may be rejected. But if one or two new peer reviewers have positive comments, the author's work may be accepted. In some disciplines, researchers can present their work and seek comments from experts in a workshop. In this case, the merits of the research can be debated in the workshop.

- Peer review should be allotted enough time. If little time is allotted, there will not be enough time for reviewers to send their comments or for the researchers to address them.
- Because it is highly advantageous, the peer review can be institutionalised. A mechanism can be installed such that peer reviews can be done informally or formally within the research organisation, for example, over lunch or during meetings or coffee breaks.

d. Cultivating Working Relationships with Peer Reviewers

The peer reviewers we are talking about are usually persons whom the research team knows. This is helpful because, if researchers want to be critiqued in a way that will not discourage them, it is worth knowing the person to whom their report is sent. Sometimes, even people who are part the research team can serve as peer reviewers.

Partnerships in peer reviewing are helpful in long-term projects. Peer review is like volunteer work. One does not get credit for the review work, unlike an editor, who gets paid doing editing. Informal contacts are very important to build a network of peer reviewers.

3.3.6. Summary of Key Points

- ❑ If the research organisation wants to have the greatest impact on its audience, dissemination of the research results should be carefully planned and a dissemination strategy put in place.
- ❑ Policy research is a step toward influencing policies, laws, ordinances and the change process. The policy brief is a useful instrument to achieve this purpose.
- ❑ Project team reflections are important to the success of research. Team reflections should focus on both the tasks to be accomplished and the process of accomplishing those tasks, to contribute to the development of team spirit and the professional growth of the team.
- ❑ In submitting the final report, the research team should be ready with all the supporting documents to prove the veracity of the research. These include the databases, periodic reports and communications with the clients on agreements that have affected the research design and process. Submission also requires a cover or transmittal letter to the sponsor or donor.
- ❑ Before its final submission and before it is read by the client or beneficiaries and other stakeholders, the final report can benefit greatly from peer review. Peer review is also necessary to ensure that the report is comprehensible to the final audiences.

3.4. Documentation Needs of the Research Project and Maintaining Project Documents and Records

3.4.1. Documentation Needs

A research project must be adequately documented in order to be considered complete. Valuable knowledge gained may be lost if the documentation needs of the project are not given careful attention.

The documentation needs of a research project depend on the documents the research team or organisation wants to keep. For example, the research team may want to keep files for

reporting purposes, or the donor may want files of both the raw data and the cleaned data. To determine the documentation needs, the research manager and the team need to think through all aspects of the project implementation and identify what materials would be needed by the project and ancillary teams, as well as the donors/clients. Carefully analysing and consulting as many as possible of the project stakeholders will better ensure meeting the project's documentation needs. Generally, however, the documentation needed covers:

- Literature reviewed, manuscripts, draft papers and presentations, unpublished lectures, working papers etc.
- Research instruments and raw data (GIS maps, data collection instruments, collected data, transcriptions, audio and video files)
- Cleaned data (data sets, analysed data and summaries)
- Project documents (ToR, contracts, conceptual framework, budgets, reports, communication with donors and clients and other stakeholders)
- Research reports (drafts, inception report, mid-term report, progress reports, activity reports, final report and associated data sets)

3.4.2. Maintaining Research Project Documents and Records

Managers should endeavour to obtain and maintain full and complete documentation for their projects. Many projects fail to maintain research project documents due to budget realities and cost pressures.

Without a library of project experiences, lessons learned in the organisation are easily lost. Valuable knowledge may also be lost when research team members leave the organisation unexpectedly. When this happens, the research knowledge is gone as well, and during a similar project in the future, the organisation may be forced to hire a new team to uncover knowledge that has previously been paid for by the organisation.

The research manager must take the lead in maintaining research project documents and records. Once the research team has a handle on the content and type of documentation needed, it can look at the audience of those documentation materials and determine the proper method and style for maintaining them. The following steps are recommended:

a. Step 1—Determine a Process for Documentation Updates

- Keeping current with documentation requires a regimented process. Within the project schedules, the team should plan for continuous documentation updates and ensure that they take the time for these.
- A guidebook for the implementation of your research project can serve as the basis for documents you need to maintain, beginning with the information to be collected and the manner and logistics for collecting it. The research manager needs to update the manual and keep it current as systems for documentation and filing are updated with changes of information technology.

b. Step 2—Form a Data Management Team and Data Management Protocol

- A data management team may be necessary to support the research programme or project in the proper management, filing, storage and access to the research data. Its task is to develop and maintain the databases, support field researchers regarding the process and provide tools and technical support to researchers, such as helping to generate data sets to aid in data analysis and interpretation.

- Research organisations may also manage and maintain a data management protocol that identifies the files to be produced and where these are stored. The locus of responsibility is also determined for each step of the data protocol (Figures 14 and 15).

c. Step 3—Develop and Maintain a File Management System

A file management system is necessary to avoid losing too much time searching for files and to retrieve information quickly and easily. The research team and data management team can work collaboratively to develop a standardised filing system that everyone will understand and utilise. The following are recommended:

- As soon as the research project starts, begin to create folders and design a filing system. Create the file folders as the files arrive. The documentation needs of the project will depend on the project's purposes; e.g., to build up the review of literature, a file on literature review will be needed.
- A system of filing documents helps keep track of the project and saves time and energy. Files should be built slowly. Decide what documentation should be filed and stored: from the ToR to EOIs, to all project communications, agreements/memorandums of agreement, all reports, changes in the ToR, project design etc. In this regard, it is very important to have a file of the research contract because it contains the ToR and the project budget, which the institution will need for auditing.
- Be flexible in organising project files and find the system that is effective for you, one in which you can find document very quickly. Files can be organised in such a way that all the data are stored in appropriate folders. If you do not keep the same folder or files, keep back-up files. Everyone should be required to observe appropriate rules in order to save files and documents.
- Observe consistency in how the files are grouped. Primary data can be filed separately from secondary data.
- Put dates on every file so that you can track how many revisions a file has undergone, especially for files that have gone through many revisions. Files can be kept by year, for example, Year 0-Year 3, as long as you can reconcile them.
- Maintain only one system rather than many different ones, which can confuse the user.
- Keep an institutional file. This can be divided into different sections, e.g., literature reviews from one project to another, public health, democracy, human rights, governance issues.
- Have a separate budget file. Budget files should be easy to retrieve or track back for financial auditing. The research team should keep its own budget and finance files. The finance unit can keep its own budget files, and the administrative unit can keep a copy so that if the finance unit loses a copy, the administrative unit can provide a back-up.
- Documents like questionnaires, transcriptions and translations need to be filed and be accessible to the research team should they be needed for clarification or validation. If 1000 questionnaires were sent out but only 999 were received, loss of data has occurred.
- For a qualitative approach, audio records of FGDs and individual in-depth interviews, transcriptions and interview summaries are kept in both soft and hard copies so that supervisors can find key points at a later time. The schedule used to collect the research data should be included in the documentation.
- Hard copies should be kept of every important file so that in case the computer has a virus or the server breaks down, the files can still be retrieved. The research team should have extra hard discs as well; the data manager should likewise have his/her own back-up disc that can be updated periodically and retrieved easily whenever needed.

Figure 14. Sample Quantitative Data Management Protocol (CDRI Guide)

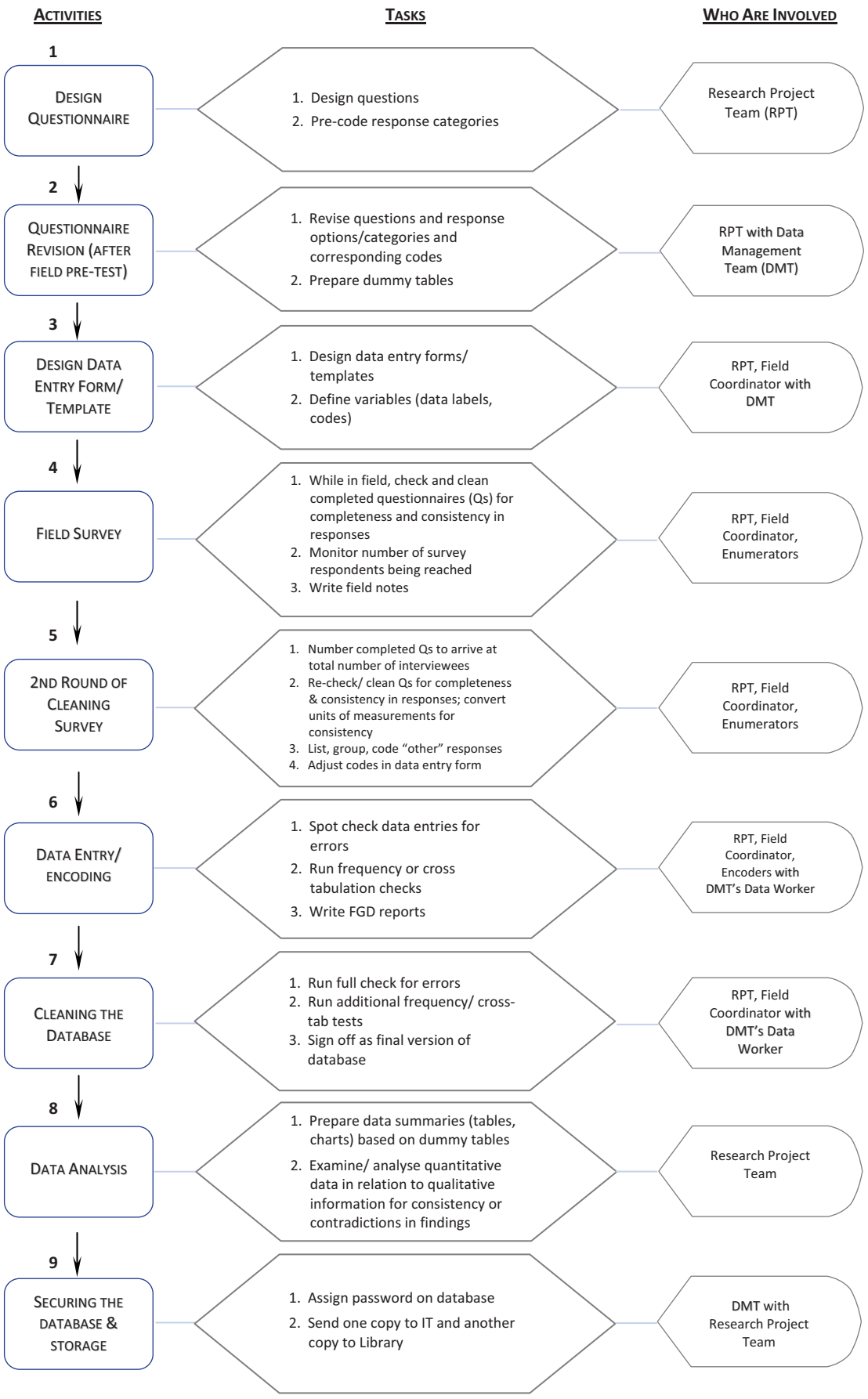
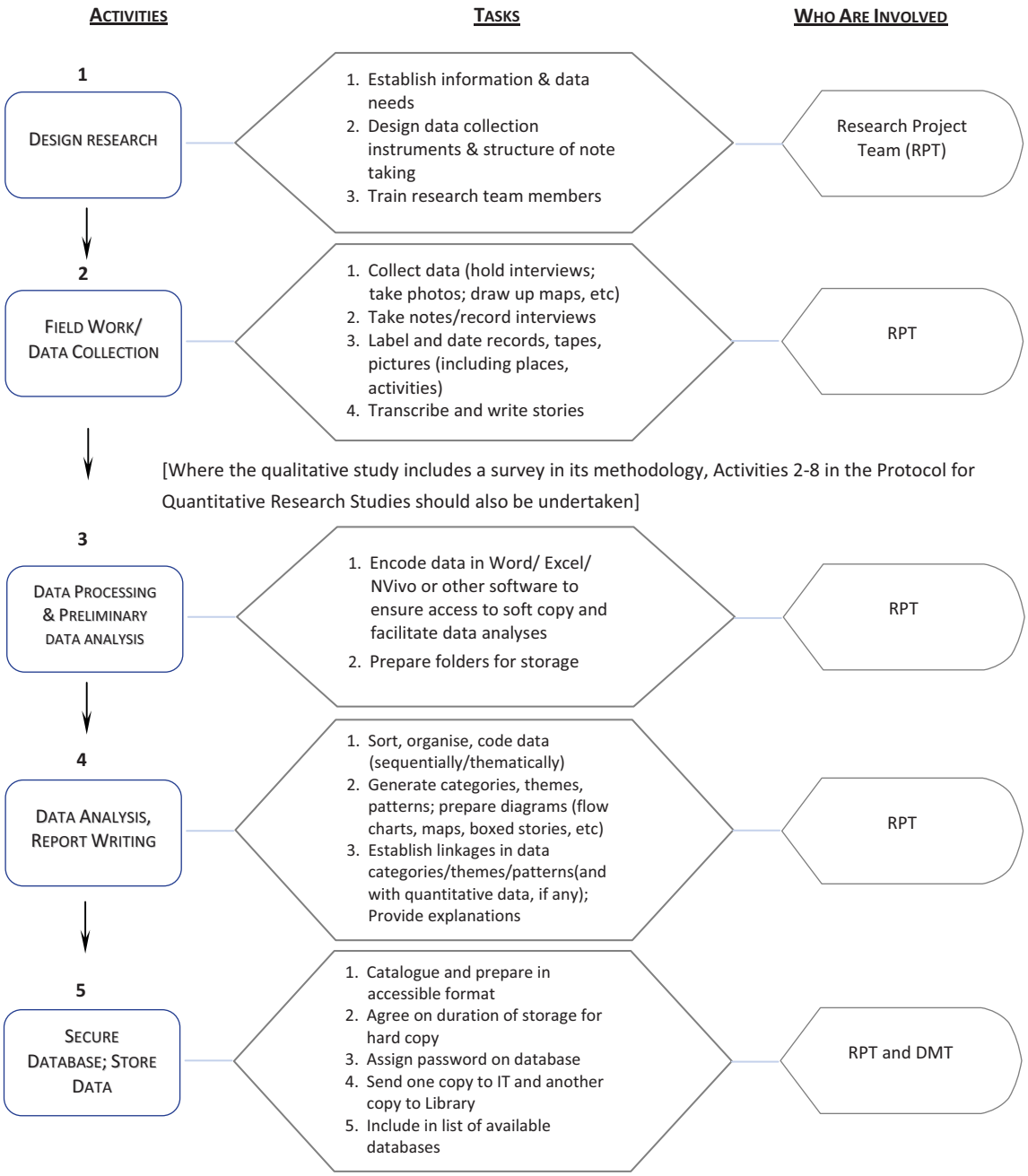


Figure 15. Sample Qualitative Data Management Protocol (CDRI Guide)[5]



d. Step 4—Encourage a Team Approach to Filing

- Every member has a role to play in documentation and filing his/her own documents, but the responsibility for the team's filing system can be divided among team members. Although mainly the research assistant can lead in the filing system, there should be another one or two members who know where to access the information or data and who serve as the focal persons in case the team leader or the research assistant keeping the files suddenly leaves.

[5] On step 2, the team leader and researchers conduct and manage tasks from note taking, transcribing records to writing according to the agreed methods and experience.

- Create a documentation network, i.e., what should go to each unit so you can track the documentation as the project advances. What kind of system needs to be set up and integrated with the research process? What materials do researchers need to return to the institution, and what should they not use outside because these are owned by the project? What documentation goes to the higher level supervisor?

e. Keep Files from the Beginning until the Close of the Project

- Collect documents and initiate the documentation as soon as the project starts and continue until it ends. There are two kinds: institutional documentation is for the larger organisation (e.g., CDRI maintains institutional documentation as a big research organisation), and the documentation at the level of project managers pertains to activities that have to do with the project, from those related to communications with the donor/client up to the final submission and closing of the project.
- Group documents by type and maintain a filing system throughout. Grant projects require inputs, invoices, financial reports and activity/progress reports. Commissioned projects may not be as concerned about tracking all those, and the donors may be concerned only with the products. The important thing is to keep all documents in appropriate folders or a filing system and follow procedures in the contract.
- Prepare not just a standardised template but one that allows the team to modify files related to the project cycle, i.e., (a) before the project and during negotiations with donors, (b) when project starts (internal and external communications relating to project documentation, budget) and (c) project closure (final reports, cleaned data, data analysis and interpretation).
- Keep a file of all versions of all submissions. If a new one is not valid, step back to the old one and identify the constraints. When the project ends, some files may be discarded, but you need to decide which files to keep for both institution and programme/project.
- Questionnaires should be kept for three years after end of the project; after that they can be discarded but a soft copy can be kept and stored in a data bank.
- Since it is easy for documents/files to be spoiled or damaged, the research team must ensure proper storage, i.e., provide storage room, filing cabinets, libraries, data bank.

3.4.3. Summary of Key Points

- ❑ Valuable knowledge gained during the project implementation may be lost if documentation needs are not given careful attention.
- ❑ Documentation is a form of communication. Making good decisions about what to document and the method, style and process surrounding documentation are important. Every task within the project requires careful consideration, and documentation is no different. In order to be effective, the research team must have a specific goal and audience for all documentation material.
- ❑ The documentation needs of a research programme/project are at either institutional or project level, and both should be adequately met.
- ❑ The manager should understand that a research project must be adequately documented in order to be considered complete. Collecting documents and maintaining a filing system from the project start to the project end should be planned carefully and implemented rigorously.

- Project managers need to establish a standardised documentation system or data management protocol to be used by all staff. This includes determining what your audiences need to know, determining the filing method and style and installing a process for filing and updating.

3.5. Communicating/Interacting with the Donors/Commissioning Organisation

3.5.1. Lessons in Communicating with Donors

There is always some politics involved in the planning and implementation of research, and the team leader needs to be prepared to communicate the team's expectations, dilemmas and progress and constraints in producing quality research outputs. Research managers also need to protect their outputs and their integrity, and share documents for data verification and data audit.

Communicating with donors or commissioning organisations almost always has to do with meeting project milestones and producing results. But sometimes research managers or organisations have a hard time negotiating agreements with donors if milestones are not being met and the negotiating parties have different perspectives. Because research is a scientific endeavour, communication is a vital element of its success.

Lessons in communicating with donors are illustrated in Box 5, based on the CDRI-ADB Participatory Poverty Assessment of the Tonle Sap and the Learning Institute-McKnight Foundation's Co-Management Learning Network (CMLN) study.

3.5.2. Effective Communication

Communicating effectively is one of the keys to the success of a research project. A research manager should ensure that effective communication with clients and with team members is taking place throughout the research project. The following should be observed:

a. Effective Communication with Clients

- Involve the client in all steps of the research project. Clarify the ToR with the clients/donors from the beginning of the project. Come to an agreement so that expectations from both parties are clear; put them in writing for future reference.
- Practise open communication. Listen to clients' ideas and learn from them.
- Work within the system. Know how donors operate and work. For example, the World Bank has its own communication processes/procedures, tools, formats etc.
- Communicate the research team's analytical methods well. As much as possible, explain technical terms in layperson's terms.
- It is very important to know the audience you are communicating with. The team's communication style should be adjusted to fit the style of the donor.
- Nurture a good relationship with clients. For every problem encountered, sit down with them and negotiate. Both parties have a responsibility for communicating expectations, responsibilities, work plans, procedures and research perspectives.

Box 5. Communicating with Donors: Lessons from the CDRI-ADB Participatory Poverty Assessment of the Tonle Sap and the Learning Institute-McKnight Foundation CMLN Study

The Projects:

The focus of Tonle Sap PPA was poverty from the perspectives of the poor. The research questions were: Where is the voice of the poor? Can we capture somehow the perspectives of the people? The project was very ambitious because it was looking at the issue from a qualitative point of view. In quantitative research, a small unit can develop questionnaires or hire a big group of enumerators to ask the questions and get the data for the questionnaires and put these in the computer and clean the data. Qualitative methods are different; they demand not only asking questions but some skills not only in information gathering but in interpreting and analysing data. In this study, ADB assigned CDRI as the implementing agency.

ADB had an idea about the research design and passed this on to researchers who lacked the capacity to do the research. The problems were numerous: the capacity needs of the project team were underestimated, the research team leader left, the enumerators left, and the data to be written up were enormous and necessitated external assistance. The donor deployed its own consultants to train people and researchers to go to the Tonle Sap area. The quality of technical assistance was not so helpful. ADB kept adding more demands, adding things to the ToR, raising the costs of the project. The problem included the manner of reimbursement: "You do the work first, then we give you the money". ADB kept negotiating to change the ToR after the project started. Often, the ADB representative and the CDRI team leaders failed to communicate. There were technical and financial problems. The team leader also lagged in preparing the budge, which created turmoil. The technical part of the research was not well specified and changed from time to time. In the inception phase, the methodology and design were very open, but there was no clear understanding about how long the project was to last.

On the other hand, the CMLN project was very demanding from a cross-cultural point of view. It was a project across countries (Vietnam, Laos and Cambodia). It dealt with protected area national park authorities who have their own culture. The question of the project team was how to deal with bureaucrats. But the LI project team was confident that there was a good match between LI and the donor: both aim to help people in the co-management of natural resources. McKnight was willing to adjust, hence there was flexibility from the donor based on the situation in the field. LI had a better idea of the expectations of the donor. There was a good fit in expectations and personal relationships. Technical assistance was appreciated in LI.

Both studies saw the importance of communications with the donor, and communicating about the study itself. How does the voice of the poor reach policy makers? This is about communication of findings; communicating with policy makers differs from doing so with indigenous people and the poor. For policy makers, this may involve policy briefs and working papers but with the people or local authorities, communication is more informal.

Lessons in Communicating with the Donors and within the Team:

- Defensiveness should be avoided. The research team should be very positive, not defensive but protective. Concerns/constraints can be raised in a very smart way, based on a firm knowledge and capacity to resolve it. Refrain from alienating the donor.
- If the donor demands more and more, that can be a dangerous for the research team. The team has other tasks to do, but rather than jeopardise the relationship, it can request clearer ToR.
- It is important to make sure that the donor and the management and researchers have a good match. You cannot expect the donor to change. Multilateral groups act differently than small funders like McKnight. Be careful in picking partners, and do not expect them to change.
- It is not only communicating with external stakeholders that facilitates or complicates the situation. Communication among team members and the leaders of the organisation also impact on the quality of the product.
- Team members must develop personal relationships and communications with the people involved in the research and be concerned about the working culture donors place on the managers. Managers in turn place demands on the research staff.

b. Effective Communication with the Research Team

- Before understanding the client, the research manager should understand his/her own team, institution and management. S/he is going to be communicating with his/her team or unit more than with other people.
- Provide the space for open communication from the beginning. Although there are many sound communication principles, there is a need to create the structure for practising them. Sometimes, no matter how hard the research manager tries to instil a communication culture, there are still perceptions that the team is not getting enough information, or that there are not enough mechanisms to circulate the information. Formal as well as informal meetings or scheduled email memos could be ways of providing communication space.
- Sometimes meetings are counterproductive because there are underlying issues that do not come out in the discussions. Opportunities should be provided to build capacity for quality interaction and agreements on issues. The place to start is within the small team. Team members can try to improve their own interpersonal communication skills and apply them with members of the larger organisation.
- Pay attention to details. Sometimes team members do not feel free to react or give their comments. Even if team members do react, sometimes there is no agreement. Communication can help resolve issues or problems, but it should be a consensual process.
- Watch out for symptoms of poor communication such as decline in productivity, distrust, lower morale, confusion or absenteeism.
- Try to learn and practise within your team important communication skills of a manager: advising, informing, explaining, discussing, reviewing, counselling, guiding, suggesting, persuading, convincing, coaching, humouring and responding.
- If you take on the role of a manager, you act like a manager. Team members seek and deserve a manager who is open, accessible and responsive. Frequent direct contact with the team, listening to what the members say and having an honest two-way communication with each of them are advisable.

3.5.3. Summary of Key Points

- ❑ Communicating effectively is one of the keys to the success of a research project. Research managers need to ensure that a system exists for effective communication both externally and internally.
- ❑ Communicating with donors or commissioning organisations almost always has to do with negotiating agreements and addressing issues related to project milestones and results. Research managers and institutions need to protect their outputs and their integrity, but at the same time maintain harmonious working relationship with their funders.
- ❑ The research manager should be open, accessible and responsive, and should promote a genuine two-way communication with team members. S/he has to provide the space for open communication from the beginning of the project.

CHAPTER FOUR: MONITORING AND EVALUATING THE RESEARCH PROJECT

This chapter focuses on how research managers can monitor the strengths and weaknesses of research implementation, ensure quality of activities and outcomes in every phase, enhance their sense of ownership and pride in the project and more strongly promote or advocate the use of research findings in policy and grassroots development interventions.

4.1. Monitoring Frameworks

4.1.1. Some Frameworks

Monitoring is defined as the systematic collection, analysis and use of information for the purpose of management and decision-making. Its purpose is to achieve efficient and effective performance of a research project or programme. Monitoring systems should provide information to the right people at the right time to help them make informed decisions.

Monitoring must highlight the strengths and weaknesses in project implementation, enabling managers to deal with problems, find solutions and adapt to changing circumstances in order to improve performance. It provides an early warning system that allows timely and appropriate intervention if the project is not adhering to plan. Because monitoring is an essential part of project cycle management and a vital management tool, it provides information on project progress through a number of resources:

- log-frame matrix
- activity schedule
- reporting documentation/data management
- visiting the project in the field (for action research projects)

Monitoring can be external or internal. For a research team, it is often internal monitoring that is carried out during the research. Following are the features of internal monitoring:

- Aim: to support effective and timely decision making by project managers and to promote accountability for resource use and results
- Persons responsible: project implementing partners and contractors
- When required: it can take the form of an ongoing process, a half-yearly update or at particular milestones/phases
- Why necessary: to check the progress of the research, take remedial action or update plans
- Methods of internal monitoring: ongoing project management based on preparation of the project plans, ongoing data collection, analysis of data and preparation of progress reports and consultation and participation in project management committee and other review meetings

Research monitoring frameworks used by most funding organisations are based on results-oriented monitoring (ROM), which has three quality attributes:

- relevance, i.e., the project meets demonstrated and high-priority needs
- feasibility, i.e., the project is well designed

- management effectiveness, i.e., the project is delivering the anticipated outputs based on schedule and resources

Box 6 illustrates AusAid's monitoring activities for research programmes/ projects it supports.

Box 6. Monitoring Framework from AusAid's Perspective

For AusAid, monitoring and evaluation, or M&E, has to do with continuous improvement of projects and making conclusions at the end of the project's life.

The donor and the research institution need to speak the same language and have a common understanding of the diverse terminology on related topics. Performance measurement, management information, quality management, performance assessment, results-based management and management by objectives all refer to the means by which data are gathered from various parts of the programme to reach conclusions about effectiveness and efficiency. AusAID uses the term "objective" to refer to the change to which the activity has contributed by the end of the activity period.

Difference between Monitoring and Evaluation

- Monitoring is a continuous process of systematic data collection on specified indicators and analysis of the extent of progress and achievement of objectives, and an understanding of progress in the use of allocated funds.
- Evaluation is the systematic and objective assessment of an ongoing or completed activity, programme or policy and its design, implementation and results to determine the relevance and fulfilment of objectives, development efficiency, effectiveness, impact and sustainability. In AusAID, the terms evaluation and review are frequently used interchangeably.
- In AusAID evaluation, both the direct and indirect impacts are studied. Evaluation is done in an interval of between six months and one year. Project holders use the evaluation results to make changes in the project design. Monitoring is done periodically and is ongoing. It keeps track of what is in the plan of work and assesses internal and external progress. Monitoring focuses on the progress of the project activities; in evaluation, the focus is the outcome.
- Project teams are expected to conduct a formative evaluation in the middle of a research project; then an evaluation at the end to sum up all the accomplishments of the project. Formative evaluation is part of monitoring and collecting data that will be inputs to your summary evaluation.

Criteria and Requirements for M&E

- All research project activities are assessed and expected to satisfy the following criteria:
  - Relevance: The project contributes to higher level objectives of the aid programme as outlined in country and thematic strategies.
  - Effectiveness: The project achieves clearly stated objectives and continually manages risks.
  - Efficiency: The project team manages the activity to get maximum value for money from aid funds, staff and other resources.
  - Sustainability: The project appropriately addresses sustainability of the benefits of the activity after funding has ceased, with due account given to partner government systems, stakeholder ownership and phase-out. It is very important that communities can continue to receive the benefits of the project. The project should ask how to keep everything sustainable and how the project manager can cope with this kind of sustainability.
  - Gender and Disability: The project advances gender equality and promotes the role of women, children and the disabled.
- M&E arrangements and an M&E system are required. These terms refer to the entire set of processes, tools, formats and protocols that define how people, data and time interact so that the performance initiatives can be meaningfully assessed and improved. The M&E format requirements include: the log-frame matrix, schedule of reports, implementation schedule format and the risk matrix format.
- M&E obligations: AusAID needs to know that all the activities funded are both effective (delivering progress towards their objectives) and efficient (delivering quality, providing value for money and

continuously improving).

- Questions for reflection when designing monitoring and evaluation are:
  - What questions do you need to answer to obtain a strong understanding of your project's performance and outcomes?
  - Why and how would you involve stakeholders in the evaluation of your project?
  - In your sectoral groups, look at the selected projects from the group and develop ideas about how you would measure the outcomes (indicators) and then how you would you report on the achievement of the overall objectives.
- Certain M&E information is needed in activity designs. The project team has to specify the way in which outputs and objectives will be measured; an M&E plan should also be in place. There should be provision for learning and reflection and feedback into management direction, including a mid-term review and regular independent advice and guidance. The monitoring tools required for this purpose are: reports, site visits, reviews, formal meetings and informal discussions.
- The monitoring plan needs to include assumptions and how risks will be monitored and addressed.
- In the analysis of results of monitoring and evaluation, the project team must base its conclusions on evidence. AusAID expects that there will be many variables that contribute to both success and failure of activities, and these should be acknowledged.

4.1.2. Gender Integration in Monitoring Research Projects

Integrating gender into monitoring a research project or programme enables the study team to determine the extent to which it has included gender-sensitive practice in the project or programme's design, implementation, analyses and policy implications or recommendations. It also conveys to donors the team's commitment to presenting an unbiased analysis of findings when portraying the perspectives of both men and women participants to the research, and therefore to research that is of higher quality and validity.

A checklist for ensuring the inclusion of gender in research is shown below (EC 2011).

EQUAL OPPORTUNITIES FOR WOMEN AND MEN IN RESEARCH

- ☐ Is there a gender balance in the project consortium and team and in decision-making positions?
- ☐ Do working conditions allow all members of staff to combine work and family life in a satisfactory manner?
- ☐ Are there mechanisms in place to manage and monitor gender equality aspects, e.g. workforce statistics?

GENDER IN RESEARCH CONTENT

Research ideas phase

- ☐ If the research involves humans as research objects, has the relevance of gender to the research topic been analysed?
- ☐ If the research does not directly involve humans, are the possibly differentiated relations of men and women to the research subject sufficiently clear?
- ☐ Have literature and other sources relating to gender differences in the research field been reviewed?

Proposal phase

- ☐ Does the methodology ensure that (possible) gender differences will be investigated: that sex/gender-differentiated data will be collected and analysed throughout the research cycle and will be part of the final publication?
- ☐ Does the proposal explicitly and comprehensively explain how gender issues will be handled?

☐ Have possibly differentiated outcomes and impacts of the research on women and men been considered?

Research phase

☐ Are questionnaires, surveys, focus groups etc designed to unravel potentially relevant sex and/or gender differences in your data?

☐ Are the groups involved in the project (e.g. samples, "test" groups) gender-balanced? Is data analysed according to the sex variable? Are other relevant variables analysed with respect to sex?

Dissemination phase

☐ Do analyses present statistics, tables, figures and descriptions that focus on the relevant gender differences that came up in the course of the project?

☐ Are institutions, departments and journals that focus on gender included among the target groups for dissemination, along with mainstream research magazines?

☐ Have you considered a specific publication or event on gender-related findings?

Results-oriented monitoring has application in gender integration (Table 14). As shown, important gender concerns can be integrated into ROM's key criteria and in relation to the different phases of the research as well as in its practical outcomes.

Table 14. Engendering Criteria and Standards in Research Project Implementation and Monitoring

Quality Frame: **Criteria and Standards During Implementation**	**Quality Attributes:** ***The research is being implemented as planned, and is well managed***				
Key criteria applied in ROM	The research remains relevant and feasible	The research is being managed well by those directly responsible for implementation (inputs are provided, and activities are implemented according to plan and schedule).	Research objectives are being achieved (delivery of results, contribution to research specific and overall objectives)	Quality data management needs and issues are clearly addressed	Integration of gender analysis and conceptual tools Has every component of the research been put under the "gender lens"?
Quality of research design: Appropriateness of research objectives to the problems, needs and priorities of the target sector and groups and the intended audience of the research An assessment should include the quality of research project preparation and design.					• Are there implications for women and men? • Gender roles, division of labour • Access and control over resources • Access to power • Gender practical needs and strategic interests • Issues, challenges and opportunities

Quality Frame: Criteria and Standards During Implementation	Quality Attributes: *The research is being implemented as planned, and is well managed*				
Efficiency of implementation to date: Whether activities were implemented at reasonable cost, i.e. how well means and activities were converted into results and the quality of the results achieved					• What are the methods used in collecting the gender-specific data? • Were they collected at a reasonable cost? • Were the data of good quality?
Effectiveness to date: The contribution made by the research results to the achievement of the research objectives					• Did the gender analysis contribute to the achievement of the research objectives and to the explicit gender objectives?
Impact prospects: The effect of the research on its wider environment, and its contribution to the wider sector objectives summarised in the overall research objectives					• How can the research contribute to women's empowerment and gender equality? • What empowerment outcomes are envisaged?

Source: Velasco 2011b

4.1.3. Summary of Key Points

- ❑ The purpose of monitoring is to ensure the efficient and effective performance of a research undertaking. Monitoring systems should provide information to the right people at the right time to help them make informed decisions.
- ❑ Monitoring of gender integration follows the key criteria applied in results oriented monitoring, which include quality of the research design, efficiency of implementation, effectiveness and impact prospects.
- ❑ M&E has to do with continuous improvement of projects and making conclusions at the end of the project's life. The project team needs to set out in the design the way in which outputs and objectives will be measured and have an M&E plan in place.

4.2. Elements to Track for Quality Control[6]

4.2.1. Ethics

Ethics play a critical role in ensuring the quality and integrity of any research. The following checklist provides some guiding principles.

a. Ethical Considerations in Research

Globally:

- ☑ Respect the laws and cultural norms of the society that is being studied.
- ☑ Conduct the research with professional integrity (honesty, transparency, objectivity).

Before research:

- ☑ Include ethical guidelines in all research proposals and contracts.
- ☑ Decide whether or not participants will receive remuneration and, if so, in what form.
- ☑ Consider the special needs and rights pertaining to each target participant group.
- ☑ Explore the option of involving individuals from the local community as interviewers.
- ☑ When dealing with sensitive or emotional issues, seek advice from psychologists on how to minimise distress to participants.
- ☑ Compile a contact list of referral agencies for participants in need of support or assistance.

During the research:

- ☑ Ensure that the data collection occurs in a neutral and secure setting.
- ☑ Give sufficient information about the nature of the research study to the participant.
- ☑ Obtain the (written) informed consent of participants.
- ☑ Minimise participant stress or discomfort by avoiding undue intrusion.
- ☑ Respect the right of the participant to remain silent on issues too sensitive to discuss.
- ☑ Consider any concerns or issues raised by the participant, even if these may not be pertinent to the research objectives or relevant to the data collection.
- ☑ Maintain a positive attitude and a neutral or emotionally acceptable expression when interacting with participants.
- ☑ Take the necessary steps to avoid false expectations following participation.

After research:

- ☑ Treat all information obtained from participants as confidential.
- ☑ Protect the anonymity of participants.
- ☑ Undertake reasonable measures to maintain the security of data.

b. Intellectual Property and Copyright[7]

Another element critical to the quality and integrity of social science research relates to intellectual property and copyright. Intellectual property has to do with "the rights or entitlements that are attached to products of the intellect (as opposed to physical property) which include forms of artistic expression such as songs, books, films, and images, as well as

[6] Parts of this section largely draw from: http://www.iom.int/jahia/webdav/site/myjahiasite/shared/ shared/ mainsite/published_docs/brochures_and_info_sheets/Training_Research_Checklist.pdf, accessed on 7 August 2010.

[7] This topic has been added as an additional issue that research managers should consider even as it was not covered during the 2011 course on which this handbook is based.

technological inventions such as hardware and software" (Chandler and Munday 2011). On the other hand, copyright "is the exclusive right given by law for a certain term of years to an author, composer, designer, etc. (or his assignee) to print, publish, and sell copies of his/her original work" (Oxford English Dictionary).

Among the different types of intellectual property, copyright is that which applies to social research (Tarling 2006). Aspects of research to which a copyright can apply are the literary works, data sets and sound and video recordings (*ibid*). Social science research data and the reports prepared during the research are typically automatically protected by copyright. Tarling (2006) also notes that infringement of a copyright can occur when researchers:

- copy or otherwise exploit the work;
- issue copies of the work to the public;
- broadcast the work or show the work in public; or
- make an adaptation of the work.

To avoid such infringement, the research team or manager should find out who owns the copyright of material they might be working with (e.g. a questionnaire, a data set, audio records of interviews) so that permission about its use can be solicited as appropriate.

To distinguish copyright infringement from plagiarism, the latter is about "using another's work without acknowledgment, as if it were one's own original work, which constitutes an ethical offense".[8] The University of Connecticut Libraries further note that "it is possible to plagiarise without violating copyright; to infringe on another's copyright without plagiarising; and, to both plagiarise and violate copyright at the same time" (*ibid*).

Research managers will need to be aware of these concerns in undertaking any social research. Many donor or commissioning organisations often specify their copyright ownership of the results of a commissioned study, so the research team has to closely review its contract. A typical statement of such copyright ownership, which is usually under the heading of "copyright, patents and other proprietary rights", is as follows:

> (Donor) shall be entitled to all intellectual property and other proprietary rights including but not limited to patents, copyrights and trademarks, with regard to documents and other materials which bear a direct relation to or are prepared or collected in consequence or in the course of the execution of this contract. At (donor's) request, the Contractor shall take all necessary steps, execute all necessary documents and generally assist in securing such proprietary rights and transferring them to (donor) in compliance with the requirements of the applicable law.

Taking these concerns (i.e., intellectual property, copyright, plagiarism) into account in the various phases of any research endeavour can only strengthen the study team's and institution's credibility and continued engagement by different aid agencies.

c. Other Important Ethical Considerations

Interviewees and the researchers are both products of their own backgrounds, biases and prejudices that affect the way they view or interpret things. Researchers should be conscious and reflective of where their biases are coming from. They should minimise these because they can affect the implementation of the research and its results. In quantitative research there is more chance of controlling the biases/ethical perspectives. In qualitative research, the design of the instrument can help minimise biases.

[8] Taken from http://www.lib.uconn.edu/copyright/plagiarismVsCopyright.html

Do no harm. Because research is about the complexity of human experience, researchers should be mindful of how not to harm other people and also themselves, emotionally or in other ways. People's privacy should be respected, and researchers should be careful not to manipulate data.

Local people can become victims of power relations through information that research provides. Therefore, research questions should be framed to be as ethical as possible, and researchers should be careful about how they use the data.

4.2.2. Research Methodology

Research is as strong as each of its steps. If the research team can do quality work in each of the steps (data gathering, cleaning the data, writing the reports), the end results will be as good. Like building a house, the methodology helps build a strong foundation for the research.

a. Critical Points in Research Methodology

In deciding on the methods and approach of a study, one may ask the following questions:

- Is the research problem:
  - precisely defined and operationalised with measurable indicators?
  - referring to the characteristics of the whole population in focus?
  - testing hypothesis on the causal relationship between factors (variables)?

  If the answer to these questions is yes, then choose the survey method.

- Will I able to:
  - get information about the parameters of the whole population in focus?
  - obtain a relevant, complete, precise and up-to-date sampling frame?
  - define an appropriate sample size and draw it in a random way?
  - contact selected respondents within available resources and maintain acceptable level of non-responses?
  - effectively administer the survey and control performance of data collectors?
  - competently process and analyse data to assure statistical significance of findings?

  If the answer to these questions is still positive, your survey results have a chance to be representative and strong. Otherwise, consider whether unrepresentative findings and (as a consequence) limited scope for generalising are still worth the efforts and financial expenditure required by a survey.

If at least one to the previous questions was negative, consider the following:

- Is the research problem:
  - dealing with unexplored or new phenomena?
  - focused on disclosing and understanding the mechanisms and motives underpinning human behaviour (also within networks and organisations)?
  - requiring rich and detailed information?
  - referring to issues that interviewees may find sensitive, embarrassing or psychologically traumatic?

- Would the findings still be valuable and interesting, despite the lack of representativeness?

If answer to these two sets of questions is yes, then think about less structured approaches and qualitative methods.

b. Tracking the Research Methodology and Exercising Quality Control

The following questions can be used to keep track of the quality of each step of the methodology:

- Defining the research problem
  - What literature did you read?
  - How did you come up with your conceptual framework? What alternative conceptual frameworks did you consider?
  - Why do you want to conduct research on this topic? Even if you have very systematic research, if it is not very relevant, it is not meaningful. We are not interested in producing knowledge only for understanding (academic theory). We want some relevance. Will your research findings be useful and feasible?
  - Does the team have an interest in the research topic? If not, do not get into it because frustration may set in as the research gets underway.

- Formulating the study problem
  - Will this study add to a particular knowledge? What gaps will it fill?
  - What priority interests are there?
  - Do the research questions come from the donor? What is your interest as a research organisation? What is the interest of the people you are working with, and of the people themselves? If questions are not of interest to people, your research will not be relevant.

- Specifying the information needs
  - What information needs do you have: qualitative or quantitative? The information needs depend on how you define the problem.
  - Representativeness: what is your unit of analysis?
  - Triple constraints: How do the information needs affect your scope, time and resources? How do you control the flow of money? How do you keep to the schedule?
  - Are you getting the types of information you need?

- Sampling procedures and sample size
  - Are you following the sampling procedures proposed in the research design?
  - Is there rigour in your sample collection?
  - Does your sampling allow you to you get a spectrum of perspectives on the issue you are looking at?

- Designing the data collection instruments
  - Is there policy regulation that needs to be observed in data collection and to what extent are you abiding with it?
  - Does your qualitative research method allow you to choose interviewees, key informants, FGD participants who can provide the information you need to answer your research problem?
  - If you are using quantitative instruments, do they demonstrate validity and reliability?
  - What types of words do you use? Are you posing questions that people understand?

- In proposals, most of the time, the methodology is clear, but there is no description of the kind of data to be gathered. What are the data that you will use for each of your methods?
- Have you done a pre-test? Does it give the type of information you need?
- Are you using leading questions? The positivist perspective says no to leading questions. However, if you are not getting answers, you have to lead your respondents. In qualitative research, the researcher is the instrument; hence, leading questions may be needed.

- Processing and summarising data
  - How do you maintain the integrity of your data?
  - Are you keeping track of your milestones? Who is doing what and what data need to be processed and summarised? These are decided at the outset of research design.

- Refining research design
  - The questionnaire can be adjusted when your team goes to the field, or when pre-testing is conducted. The more pre-tests you can do, the better; however, it incurs additional costs.
  - In social capital research, researchers should first visit the location and assess the overall atmosphere. Then, from the first field visit, a review of the responses from the qualitative interviews is made to get some understanding of the problem. The team then develops the questionnaire and the guidelines for the survey. If the team has been to the area before, it may not be necessary to assess the situation before the survey.
  - In qualitative design, there may not be a need for a pre-test. However, the team may need to get comments from other researchers (peer review) to ground what it is doing.
  - Part of the implementation is refining the research design. The research team should ask: how will those data shape the rest of the research? This will help the team improve the design as the research is implemented, depending on time and resources allocated.

- Data management
  - How does your team collect good data and how do you manage it?
  - How will data be processed? Do you have encoders simultaneously entering or encoding the data so that you can check right away with the questionnaires and ensure a good data set?
  - Does the team have a good process for cleaning the data? Is there good supervision of fieldworkers in cleaning the data again and looking for inconsistencies?

- Data analysis
  - Does your team sit down together to come up with (or confirm or revise) the data analysis framework?
  - What theoretical perspectives guide your data analysis?
  - Team members should decide how the data will be written up, managed and stored. Many times, these tasks are worked on by individuals, not by the team. If only one individual is doing it and leaves the team unexpectedly, it may mean serious delay or may require hiring consultants who did not have a hand in the design, which will entail additional costs.

4.2.3. Report Writing

a. Reasons for Writing a Research Report

Report writing is about trying to make sense of the data and communicating observations and ideas to one's audience. How do you communicate your ideas to make sense to your audience?

Research is only as good as your communication of data. A good researcher should be good not only in data gathering but also in writing the report. Remind your team that reports are written for varied reasons:

- to publish, to share the findings
- to boost one's ego, i.e., for fame
- as a form of self-expression
- to gain access to people who are normally not accessible
- to improve people's lives through the findings
- to have a bigger influence on stakeholders.

b. Some Ethical Considerations in Report Writing

How do you write a report so that the language will not harm the research participants? How do you find a balance between your own personal interpretation of the data and what the data are telling you?

Social reality is very complex, and no single study is going to capture all of it. In positivist thinking, there is an objective truth that we are trying to learn. Current thinking contends that there is no absolute truth, but researchers look at reality from different points of view. They all have different interpretations and use their own theories and conceptual frameworks. Data does not speak for itself; researchers have to interpret the data.

Two people can look at the same data and have two different interpretations. Researchers should not impose their own interpretation on other people's interpretation. Neither should they assert their truth above someone else's truth. In interpreting the data, the researcher's own culture will come into play. It also affects the way we write.

Can research be value free? Is the final report reflective of an objective or constructive truth? Values come into one's work. It is dangerous if the researcher is not aware of his/her own biases.

c. Technical Aspects in Writing the Report

Your writing helps you to understand your research and what your data are about. How do you ensure that the writing gets done? How do you help your team to get the writing done?

- Can you divide the writing of the different parts of the report among the team members with different backgrounds? If divided among team members, each will have a different way of writing, of interpreting. How do you reconcile the ideas in the writing? How do you put the analysis together?
- Report writing can also be divided by theme. If this is the case, the team leader can consolidate the individual reports into one final report.

There is a big responsibility in having the report carry "one voice" or maintaining consistency of style. The team leader needs to rewrite as needed to preserve consistency throughout the integrated report.

How do you write your report to impact on the donors, policy makers, other stakeholders? How do you write in Khmer to communicate your ideas differently to the policy makers and to local people/research participants? How can we communicate the lessons from action research?

To what extent are the following technical aspects considered?

- Is there clear and logical organisational structure?
- Are the context and key themes logically presented and cross-referenced?
- Is the writing style appropriate and effective for the report's objective and audience?
- Are the citations and full references given for all sources referred to or consulted?
- Did the writer/s observe effective use of tables, diagrams, other illustrations?
- Were correct spelling, grammar and use of punctuation observed?

4.2.4. Resources

Tracking resources in a research project involves a number of important considerations, namely, finances, time and research personnel.

a. Finances/Project Budget

- *Monitoring overall spending*

  If you have a big budget for fieldwork, and have not accomplished what was indicated in your work plan, then prepare to justify why it was not done and how much funds are unspent. A research manager should use the budget plan to track implementation activities and gaps in the work. Ongoing expenses must be compared with the proposed budget. Not spending the budget within the specified time is a signal to speed up implementation so that the funding is expended for the purpose it was provided for.

- *Transparency and accountability*

  The project manager needs to be aware of how the team should manage the budget flow, and how the budget is evaluated in the end. Work with the team to make sure you do not harm the group. For example, do not claim funds for things the team failed to do.

- *Budget adjustments*

  When you need to move budget items, you can use the form for budget re-allocation, but justification is needed. Finance people can make the financial adjustments for you, but the change in the real world is up to the team/research manager based on the actual implementation process.

- *Fund allocations*

  You cannot move funds from one project to another because donors will not allow it. They set rules and make periodic audits. If they learn that you have moved their funds for another purpose, they will cut or stop the funding. You need to look at all the criteria and rules of the donor since they usually set certain percentages or ceilings for administration and for operations.

- *Unspent funds*

  If you have funds remaining, donors do not expect you to return the money because that is additional accounting work for them. Therefore, spend your budget as much as possible. If you do have a surplus, use it to help sustain your institution.

b. Time and Research Personnel

- The team should monitor its schedules, and everyone must be aware of the milestones and reporting mechanisms. The time allotted for the project dictates the research and the budget allocation. Sometimes the research drags because the milestones are not being delivered on time.
- If in reviewing the research design, you enlarge the scope of your research, your cost increases. If you want to extend or shift the scope, you have to negotiate with the donor. To avoid this, try to spend the budget during the time allotted for it as much as possible. Otherwise the team's ability to expend the funds for their intended purpose would be in question.
- Extending the project duration for additional activities will affect the budget, schedule and quality of the outputs. One single well-selected research activity might satisfy all your research objectives, while different activities available to you will cost different sums. When results from two activities are the same, you may want to select that which will incur the least cost.
- Sometimes personnel time and activities in the field are increased to meet donor demands or to address delays in the project. The budget is usually affected. You will face a deficit for every increase in personnel and time, so it is a challenge to keep to the budget schedule despite changes in personnel and activities. In case researchers need to be replaced, train the new team members to take on the work. Always keep track of these changes and make adjustments as to who will take over to achieve the project milestones and who should replace those who leave.
- All team members should be proactive in the budgeting process and in addressing budget and personnel issues. If the team has a budget for an activity, it should be used appropriately, and the team should exert efforts to spend it for the purpose for which it is allocated.
- Late submission of deliverables and the final research report may be due to concerns about quality. In order not to fall into this trap, do not take on too much. Also, focus on research writing in the midst of data gathering. A lot of the work is teamwork so it is important to manage the writing of the report as a team.
- Never sacrifice the quality of the work. When there is too much to do within limited time, it will be better to make adjustments on the scope of the work. Be aware that unanticipated things can happen. A desired sample size, for example, may not have to be reduced by modifying the questions for the study (thus adjusting the scope) prior to fieldwork.
- A research manager should not want to get into a situation in which the research is taking more time than expected. Hence, during peer review, get feedback as to whether the work plan is realistic or not. Sometimes donors will ask if you need as many variables as you have identified. It is advisable to check with seasoned researchers as to how much you can do in the time frame you have.

4.2.5. Summary of Key Points

- ❑ To ensure quality control, research managers need to keep track of ethical considerations in research, research methodology, report writing and resources (finances, time and personnel).

- Research is concerned with people, both the researched and the researchers. For this reason, ethics play a critical role in ensuring the quality of the research, and ethical standards should be observed.
- Good research is a product of good methodology. Research managers should exercise quality control throughout the research implementation, including the methods and instruments to be used, data gathering, data cleaning, data analysis and writing the research report.
- Report writing is a complex process that involves both ethical and technical considerations. Ethical considerations to watch out for include communicating the research findings in a language that will not harm the interviewees, exercising integrity in handling the data, finding a balance between the researcher's own interpretation and what the data reveal. Technical considerations concern clear and logical presentation, cross-referencing and citations, mechanics and style and comprehensibility.
- The research team, administration and finance staff should exercise quality control and keep track of all the financial resources, time and personnel invested in the project. Appropriate mechanisms should be in place to utilise the research funds judiciously for successful completion and delivery of the research products.
- Deliverables/milestones, draft reports and the final research report should be delivered on time.

4.3. Managing Research Project Assumptions, Risks, Scope and Stakeholders

4.3.1. Handling Research Project Assumptions, Risks, Scope and Stakeholders

During the research project design, the research team identifies what needs to occur to ensure the research question is answered or that the results are delivered.

In the same manner, the threats to achieving the objectives are anticipated. The goal is to identify and record the major uncertainties and assumptions that may affect the project. As the project progresses, the list of risks should be reviewed to ensure it remains comprehensive. Some items will disappear while others will need to be added.

Risk management should start as early as possible. In the research proposal, the research manager provides a section on how the team will manage the risks. Risk management involves planning and asking the following:

- What risks exist to achieving benefits or impacts, or what needs to occur to ensure benefits are realised (strategies for sustainability)?
- What continuing commitments are required from the research team/organisation, donor/funder and other stakeholders to sustain outcomes?
- Are there any recurrent budget requirements, or other policy, legislative, institutional, management or human resource considerations that need to be addressed?

Donors' decisions on providing funds will depend on the research proponent's risk management strategy, that is, how to judge whether a risk is low or high and how it will be minimised. Research managers can use a matrix (Figure 16) as a tool for assessing project risks and describing what risk management strategy will be employed. If the research proponent is able to show how risks will be managed, as the matrix does, it has a higher chance of getting the funds.

The matrix is also useful for monitoring and evaluation. As a monitoring tool, it allows the research manager or team to identify at what levels an identified risk is occurring and its nature (in terms of adverse impact, likelihood, and the like) and to take corresponding actions to offset a possible situation. Actions taken can then be recorded in the matrix and used in the preparation of progress reports to highlight management decisions in the course of the project. Donors can use this kind of matrix to evaluate how well risks were identified in the design and managed or minimised during implementation.

Along with risk management, it is important to prepare a contingency plan. For example, if the research team cannot collect information in an area, an alternative nearby village can be chosen. There are always risks to a project, but research managers should manage the risks and keep the donor informed.

Figure 16. Sample Risk Management Matrix

Risk Class	Risk Event	Potential Adverse Impact	Likelihood*	Impact*	Risk Level*	Risk Management Strategy	Responsibility
Development Risks							
Intervention Risks							
Management Risks							

**Likelihood: Low, Medium, High *Impact: Low, Medium, High *Risk Level: 1=Low, 2=Moderately low, 3=Medium, 4=Moderately high, 5=High, 6=Extremely high*

Source: Sin 2011

4.3.2. Summary of Key Points

- In planning a research project, the research manager anticipates risks. The goal is to identify and record the major issues that may affect the research project.
- Donors' decisions on providing funds will depend on the research proponent's risk management strategy. Having a clear risk management strategy gives research proponents a greater chance of getting funding for the project.
- It is important to prepare a contingency plan, alongside the risk management plan to ensure that project objectives are realised and the outputs delivered.

4.4. Reporting on Progress

4.4.1. Mechanisms and Issues in Reporting Progress

a. Reporting Mechanisms

Different donors require different reporting systems, especially if the research project or programme is of long duration (one to five years). Some common practices among them, however, include the preparation and submission of the following:

- *Inception report:*

  This report in the beginning phase of the project frequently reflects the initial activities of the research, such as the firming up of the research design, including the preparation of the data collection instruments; mobilising the different research partners (governmental agencies, NGOs, grassroots organisations, academic institutions); and establishing the mechanisms necessary for the conduct of the research (e.g. a steering committee). The intent is to show the steps being taken to ensure the success of the project and to receive additional guidance, if appropriate, from the donor.

- *Quarterly progress reports:*

  As the name suggests, these occur every three months and usually cover the technical and financial progress of the project. Technical aspects can focus on research activities started or instituted, related capacity building initiatives (if part of the research endeavour), dissemination activities either through publications or workshops/seminars and/or research uptake (also if an intended output of the project). Technical and financial challenges being met and how these are being overcome are also included in these reports.

- *Annual reports:*

  The annual report is often a summary of the quarterly progress reports and synthesises the project's (a) technical and financial activities and milestones in relation to set objectives, (b) challenges being met—e.g. deviations from planned activities, reasons for such deviations and steps being taken to stay on track and (c) partners' contributions to the milestones. The annual reporting reflects the monitoring undertaken during the year, and as such can also frequently cover donor concerns in relation to project impact, gender, capacity building, dissemination strategies and research uptake. Aid agencies often have a template for the annual reporting on a project's progress and may have the report reviewed by an independent expert.

- *Project completion reports:*

  This form of reporting takes place at the end of the project and may be also called a final project report. Often, these require compliance with a donor's template, which guides the research team in presenting detailed but synthesised information on major areas that may have been previously reported in different forms. AusAid, for instance, has its own template, which includes: summary data, activity description, expenditure/inputs, approach/strategy adopted and key outputs received, key outcomes (expected and unexpected), expected long-term benefits and sustainability, lessons and recommendations for future engagement.

Other forms of reporting that aid agencies may expect are those done on monthly, six-monthly or mid-term basis that mirror progress on the planned activities and towards set

targets/milestones/desired outcomes; performance issues and reasons and remedial actions; and updated work plan.

Beyond these reports or documents expected from a research team by donors, other reporting mechanisms are also used. In CDRI, examples of other reporting mechanisms are:

- Periodic face-to-face meetings of project/programme steering committee members, where the project donor is also invited to participate and, if unable to attend, is copied the minutes of the meetings during email communications.
- Skype consultations/meetings (monthly or as a situation arises), especially if the projects are part of a research consortium where there are counterparts in other countries and the donor's base is outside Cambodia. This form of reporting has assumed importance in recent years as it permits timely discussions on project status and performance issues.
- Periodic (biannual, annual) workshops, which also have the intent of sharing preliminary findings to receive comments on ways forward in implementation activities and processes and on how analyses can be improved.

b. Criteria for Reporting

There are variations as well in what aid agencies look for in the reports that they receive. As suggested above, however, the amount of detail may differ. Some of the key things that may be required are:

- background/rationale
- research approach/strategy
- capacity building
- dissemination strategies and research uptake
- gender and disability inclusion
- project performance/implementation issues
- insights and lessons

Reporting the research project's implementation issues can also vary. Some of the major areas that donors look for when the project encounters challenging situations are:

- methodological constraints (e.g. limited/lack of data) and related contextual issues that affected implementation (e.g., staff turnover);
- participation/management by all stakeholders (delivery organisation, donor, counterpart organisations, partner government agencies);
- technical assistance/advisers and approaches to capacity development; and
- governance and management/institutional arrangements.

4.4.2. Summary of Key Points

- ❑ Reporting on the progress of research projects can take the form of periodic written documents or face-to-face interactions. Internet-based communications has especially gained importance as it allows immediate discussion on implementation and budget issues being met.
- ❑ As a form of research project monitoring, periodic reporting on the research projects offer a range of up to date information to donors, enabling their active engagement and deepening their appreciation of the realities against which projects are implemented.
- ❑ Research reports for aid agencies almost always focus on value for money. It is important that all report types reflect important information in accordance with the research phase,

incorporating performance *vis a vis* project objectives and related components, work plan, challenges being met and remedial actions, outcomes and (incipient) impact, as well spending patterns in relation to the project budget.

4.5. Designing the Research Project's Strategy for Communicating Findings

4.5.1. Planning the Strategy for Communicating Findings

There is no single strategy for disseminating research findings to stakeholders. The most important thing is to identify the messages you want to share and how to be heard to maximise the impact of the results.

Part of any dissemination strategy is making information available and accessible (Table 15). Researchers should know how to speak publicly, especially how to inspire stakeholders to be interested in the findings and topics of the research.

Table 15. Matrix for Sample Research Results Dissemination Strategies

Toolkits	Content/ Format	Availability & Accessibility	Characteristics of Users	Requirements for Accessibility
Workshops, seminars and conferences	Comprehensive findings Face – face	A day or two	Technical groups/ relevant stakeholders	Active participation
Policy & research briefs	Specific issues Concise/ bullet Print/ e-copy Eng/ Khm	Print copy at CDRI/ Library E-copy at website	Specific working groups for policy discussion	Mail, e-mail
Dialogues and roundtables	Specific issues Face – face	A few hours	Specific groups for input on recommended decision	Membership for specific tasks/ issues
Briefing/ orientation	Update research/ knowledge Face – face	A few hours	Delegation	Partnership/ cooperation
Books: Working Paper, Dev't Review and Flash Report	Comprehensive/ Academic Print/e-copy Eng/Khm	CDRI Libraries Bookshops Website	Technical/academic groups Comprehensive evidence	Analytical/ critical thinkers/ researchers
Website and online publication	E-copy of all prints above ICT platform	24/7 at www.cdri.org.kh	General/mixed audiences	ICT and Internet connection

Source: Em 2011

Dissemination plans should reflect a strategy for simplifying technical language for local people, when to use policy briefs and for whom. If the academe is the audience of the research, then publications or libraries would be very useful to disseminate findings. If the mission of a research organisation such as CDRI is the use of policy research, it should not ignore the practitioners who are the key users of the knowledge to be introduced, such as the

NGOs who need more knowledge to improve their performance and who have better chances of using research knowledge in the implementation of their own projects.

4.5.2. Policy Research and Disseminating Findings

In disseminating research findings, particular attention should be given to policy makers and stakeholders for whom research information is important to help policy.

In CDRI's experience, there are five key challenges in the policy research landscape in Cambodia. These challenges may help shape the kind of dissemination strategies that need to be planned if researchers are to deliver policy messages to the right audience:

- Policy making, anywhere, is complex and hard to influence, but especially in a system like Cambodia's.
- Policy making is often opaque, not transparent, with many gatekeepers, influencers and stakeholders, competing interests, diverging views, often-counter interests of the poor and elites (the decision makers are often not "at the table").
- Policy makers seldom have a research background and do not share the language of researchers; they may also be of varying education levels.
- Policy makers have a limited or uneven attention span; are stretched across many issues; and can be cautious or suspicious of "outsiders" and their credentials or accountability.
- Policy makers often don't easily see the knowledge gaps that need to be filled for good policy making but will often be responsive in relationships of trust and collaboration built over time with supportive and credible expert help.

Given this policy landscape, researchers need to give careful thought and consideration to the following when planning their dissemination strategy:

- Know the existing policy well—its history, strengths and weaknesses—and factor this into the research design as well as in the dissemination strategy.
- Have a balanced and objective view of what has been achieved (clearly acknowledge it) and what still needs to be done.
- Check and double check that key stakeholders have been genuinely consulted and listened to/involved in the development of policy research ToR.
- Make an early judgment about the degree to which the research is actually policy relevant and to what degree (and regularly review this).
- Assess "policy readiness" in the research design; where possible, involve policy makers and influencers as partners in research design, implementation and especially dissemination and critical review.
- Plan for "layered" accessible research products in appropriate languages and degrees of technical complexity.
- Regularly review the policy relevance and suitability of methodologies to support policy recommendations for policy influence.
- As researchers, be open-minded, humble, modest, self-critical and respectful of the policy and implementation achievements and difficulties of others. Avoid tendencies to adversarial activism (and "preaching") as it seldom works nor is it necessary or appropriate for good research.
- Policy influence is about careful consultation, listening, responsiveness and respectful advocacy of policy recommendations that are research evidence-based and achievable.

- It is important to identify the policy landscape in which we operate. Often the most significant players are not at the table, i.e., the ministers involved and those who are behind them in the ruling party. Seek out these influential persons and assume they are as important as those who will be served by good policy making.
- Policy makers seldom have a research background. It can be very difficult to challenge them to understand the language of research. Acronyms and economic terms need to be translated into the language they understand.
- Policy makers have a very limited attention span and different lifestyles, and they demand many pieces of paper to document, sign and critique. It is very important to understand that we are all busy but policy makers are busier.
- It is important to ascertain who some of the influencers and stakeholders of policy are whom the research team would like to reach with its message. Depending on the subject, stakeholders may be local people, line ministries, elected government officials, the ruling party, and even the opposition party because it needs to be informed and respond critically to policy. Donors may also be policy stakeholders because they put money in. They are influencers and check the practice of government. They are a development partner. Donors have constituencies and are accountable to their own people, and they want to see results.
- It is important to consider "policy readiness" among government officials. For example, aspects of D&D reforms may be too far ahead on very complex issues. Engage partners and policy makers, local officials and government ministries in the research design, implementation and evaluation to help shape policy recommendations.
- A small-scale research project might have very specific outcomes for a community but not have broader implications for a policy. In a large project, researchers should be committed to disseminating parts of the research (layered accessible research products) to different target groups.

4.5.3. Disseminating the Findings to Stakeholders

The strategy for disseminating research findings should consider the wide range of practitioners. Will the policy research/briefs be relevant to the practitioners? If not, the articles need to be simplified. Are the research findings sufficient to stimulate the demand of local NGOs or practitioners for more knowledge or evidence? The following guidelines will help the research manager and team:

- The team should assess if it really knows enough about the impact of its dissemination strategy. Does it have an effective way of assessing the effectiveness or impact of dissemination? If there is such a mechanism, the team can take steps to improve its own knowledge in order to help policy makers. This strategy is needed because it is a learning point. It does not preclude other audiences.
- It is also possible to design research-based training (in which research findings are integrated into the curriculum) and deliver this to the practitioners for research-based decisions and actions. However, it really depends on the team's research mandate. It may be that the mandate is to influence government policy makers, and not to provide training or build capacity.
- Dissemination workshops, when planned and implemented carefully, are an influential venue for different audiences invited to listen and participate in the discussion and see the relevance of the findings to their projects or policies. However, the research team needs to define who they want to influence. The research team may need to familiarise

itself with each ministry's areas of emphasis and then articulate the team's research agenda with the relevant ministries.

- If research organisations want to influence policy makers, they have to know the policy background of the particular government, ministry or agency and who the policy makers are. Toolkits should be prepared to communicate with the particular target audience (policy briefs, PowerPoint materials, research mini-papers).
- The research team/organisation needs to have a clear philosophy and vision of how to implement its communication strategy, who to influence and the monitoring and evaluation framework to be used for this strategy. In the research proposal, the proponent needs to present a communication strategy that is consistent with the bigger communication strategy and requirements of the donor.
- Researchers should be careful with the tone of their findings; sometimes the wording used in sharing can change the implication of a study.
- Ownership and partnerships should be developed. Trust must be developed with stakeholders, who should also be involved in ways that give them ownership about what to do to address an issue. The influencers of policy—local people, local officials, line ministries—should likewise be involved.
- Researchers supply knowledge and stimulate the demand for knowledge, and therefore they need to find knowledge. Keeping themselves informed as to what is going in the policy landscape is important for a research team/organisation to be relevant.
- Some toolkits and venues for results dissemination include: the project profile (particularly the research objectives and outputs), publication policy, writers' guides, donor-funded project meetings, project team meetings and event committee meetings.

4.5.4. Summary of Key Points

- ❑ There is no single strategy for disseminating research findings to stakeholders. The most important step in designing a communication and dissemination strategy is to identify what message the team/organisation wants to share, how to disseminate it and how to be heard to maximise the impact of the research.
- ❑ The research team/organisation needs to have a clear philosophy and vision of how to implement its communication strategy, who to influence and the monitoring and evaluation framework for its strategy.
- ❑ Dissemination workshops are a powerful way to bring together different groups to listen and participate in the discussion and see the relevance of the research findings to their projects or policies. It is important that the research team/organisation first define who it wants to influence and why.
- ❑ The policy landscape and who the policy makers are should be known to the researchers. As well, researchers need to have toolkits to communicate with their target audience, including policy briefs, power point presentations and research mini-papers.
- ❑ A guiding principle in dissemination forums is to develop ownership and partnerships. Suspicion must be replaced with trust.

4.6. Facilitating the Adoption of Research Results

4.6.1. Making Research Count

For researchers and the organisations that fund them, the overarching objective of development research is to improve the lives of people in developing countries; and more often than not, public policy is an indispensable instrument for converting new knowledge into better lives and better futures (Carden 2009).

a. Facilitating Pathways to Influence

It is sometimes very difficult to assess what a piece of research has achieved and its influence on people's lives. However, social scientists believe that research can fundamentally change people's lives and researchers can choose the impact they want their research to create. The general path to take is to write a good research report and conduct research dissemination.

Creating pathways to influence in order to encourage adoption of research results requires more than just preparing good reports and conducting dissemination workshops or making the presentation simple. It requires building partnerships to communicate and disseminate information.

Experiences of research organisations show that there is a need to build an environment of policy readiness. Three factors are necessary to achieve this:

- Communication: Because it is hard to influence policy makers, researchers should be careful with the language they use. For example, it is better not to use the word "must" and instead say policy makers "should". This is more diplomatic. As researchers try to bring change for policy discussion, they should exercise caution in making recommendations.
- Relationship building: Researchers are themselves policy influencers. It is not their role, but that of the policy makers and the policy implementers (elected officials, ruling party and line ministries) to adopt recommendations and implement them. This cannot be achieved if the research teams/organisations have not forged a good relationship with the policy influencers.
- Institution building: It is helpful to determine the policy landscape of a particular government agency/ministry and the policy influencers with whom a research organisation will link up and consult. It is good to be cautious because policy makers can either help smooth the way to policy readiness or shut the door. Research institutions have to build their own credibility, track record, internal capacity and technical knowledge to get to the technocrats in the various ministries and establish their own pathways to influencing policy makers.

b. Encouraging the Adoption of Research Results

To encourage practitioners, policy makers and educators to make use of the research findings, they must be disseminated in a manner that is meaningful, accessible and engaging. There must be available strategies and mechanisms for making research information available to policy influencers, policy makers and development workers in order to increase utilization of results. Users should be identified. Will these be local communities, fishery administration, NGOs, civil society, government agencies and/or other ministries? Critical points that could impact on the users and other institutions should be identified as well.

Changing behaviour is not as easy as simply getting the information into the hands of practitioners. Research findings must have utility by proposing solutions to given problems. Such solutions must be feasible in a given context.

To foster the adoption of research results, research managers need to be aware of the research uptake triad and ensure that these are considered:

- Context: Consider the politics, political and economic structures and interests, institutional pressures, cultural differences and preferences for change of the audience we are aiming to influence.
- Evidence: Strength of evidence from the research can challenge existing wisdom and can impact on the credibility of the researcher and how the results are adopted.
- Credibility: Links between researchers and policy makers must be established and addressed positively. Considerations that may underpin such links are networks and relationships, power and trust, political and economic structures and interests and institutional pressure.

It is important for research organisations to plan an effective communication strategy with policy makers to facilitate adoption and utilisation of research results. Such a strategy should include:

- Effective transmission of "innovative knowledge" to policy makers and practitioners (government policy makers may change policies every so often, even if some policies have not been fully implemented; hence, researchers should try to understand who the policy influencers are and make sure that the research results are shared with them)
- Understanding the policy process and engaging policy makers and other influencers throughout the research
- Involving policy makers in dialogues, workshops and informal meetings and developing a wider discourse in which policy is respected and helpful dialogues are held between researchers and policy makers
- Ensuring objectivity, credibility and quality of the research (research that is well designed and executed, and skilfully communicated, can help craft policy that is more effective, more efficient and more equitable)
- Seeking the people who make the decisions and developing networks, alliances and relationships that are centred on advocacy
- Nurturing personal relationship and observing appropriate channels
- Strengthening team composition and promoting ownership of the research results
- Development of communication and dissemination materials such as policy briefs, workshop proceedings and research reports
- Developing the capacity of policy researchers to think critically, analyse and make alternative interpretations, look for evidence that will back the research, and produce and apply knowledge

4.6.2. Summary of Key Points

- ❑ Research that is well designed and executed and skilfully communicated can help craft policy that is more effective, more efficient and more equitable. Capacity building plays a very important role in producing and applying knowledge.

- Researchers can maximise their policy and grass-roots influence by conducting their work to the best of their ability and communicating their results to decision makers and the public according to a coherent and context-appropriate strategy.
- Research managers must be aware that the path from research to practice is complex. There must be strategies (practices, programmes, procedures) and mechanisms for facilitating and influencing the adoption of research results.
- Researchers can choose the impact they want their research to create. Once this is clear, they can create pathways to influence or encourage adoption of research results by preparing good reports, conducting dissemination workshops and/or building partnerships.
- To encourage practitioners, policy makers and educators to make use of research findings, these must be disseminated in a manner that is meaningful, accessible and engaging.

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ANNEXES

ANNEX 1

SUMMARY CHART OF -DRF- RPDM TRAINING PROGRAMME DESIGN AND CONTENT AREAS[9]

Modules	Anticipated Outcomes/Outputs	Content Areas
Module 1: Conceptualising the Research Project (4 days)	1. Deepened appreciation for research projects' formulation processes, including key considerations of their conceptualisation (e.g., client needs) 2. Improved understanding of the concepts and practices underpinning research project development and management.	▪ Understanding Project Management in the Context of Research, including differentiating - the implementation of a development project and a research project - management dilemmas in a development project against those of a research programme/project - a research programme and research project, especially in terms of scope and scale [discussion also to cover interdisciplinary studies and different research approaches—e.g., policy research, action research, participatory action research, ethnographic studies, participatory learning and action (PLA),environmental economics research etc., and the conduct of joint and individual research projects ▪ Developing and managing a research programme/project - General project management principles, phases and tools and their applications, and project cycle management - The life cycle of a research project - Who is the research project for? Identifying the research project stakeholders: owner, manager, policy makers, other key players ▪ Research as a knowledge generation and business endeavour ▪ Distinguishing EOIs, research proposals and concept notes, to include interchanges on: - Understanding the terms of reference (ToR) and related project documents - Matching donor information needs and demand, and reconciling institutional interests and differences ▪ Relating with donors and other research sponsors/partners and gaining an understanding on their levels of appreciation for (including current practices on) methodological and analytical frameworks, tools and techniques
Module 2: Planning the Research Project Effectively (7 days)	1. Greater familiarity with planning approaches and tools for the development of a research project 2. Increased ability in macro and micro social analysis, including the integration of cross-cutting development issues (gender, social	▪ Planning tools and the importance of efficiency and effectiveness in research projects; soliciting the participation and ownership of stakeholders, particularly policy makers - Results-Based Management (RBM) and the Logical Framework Approach (LFA) - Gantt Chart, the Programme Evaluation and Review Technique-Critical Path Method (PERT-CPM) - Gender planning and methodological tools - the Project Management Triangle ▪ Writing the research proposal

[9] Prepared by Rebecca F. Catalla, PhD, research adviser, CDRI, September 2010.

Modules	Anticipated Outcomes/Outputs	Content Areas
	protection/social inclusion, environmental sustainability, peace and security), as bases for planning and designing research projects 3. Enhanced values and cognitive skills in engaging research project partners, particularly policy makers, in the research project processes 4. Increased knowledge and competency in preparing a research proposal, including mobilising institutional resources for such preparation and writing	- Firming up research objectives; detailing the variables to be examined and analytical approach to be taken - Defining the methodological approach to the study - Managing the review of related literature and keeping an effective focus - Preparing the sampling design, and gaining access to sampling framework [for qualitative and quantitative data collection] - Designing the research project's strategy for communicating/disseminating findings to different stakeholders - Establishing the research team composition - Preparing the work plan and identifying research project milestones (e.g., interactions/communications with the donor/commissioning organisation) within the planned time frame - Preparing and establishing the research programme's/project's budget/financial requirements at zero and fixed resource levels - Putting together the parts of the proposal
Module 3: Keeping the Focus in Executing/ Implementing the Research Project (9 days)	1. Enhanced knowledge and competencies in the management and utilisation of resources (time, finances and personnel) in the day-to-day operations of the research project 2. Increased grasp of and abilities on research project administration and oversight, including managing teams towards the efficient use of project resources 3. Enhanced knowledge and skills in increasing the competence and motivation of research staff in their work and in ensuring the ethical conduct of research projects 4. Improved knowledge and skills to enhance interpersonal relations and communications skills among	Managing the research implementation phases and tasks and exercising rigour - Mobilising the study team; clarifying roles and responsibilities, as well as lines of authority and decision making; reviewing the work plan collectively to level team expectations - Dealing with the additional collection and review of the literature and remaining focused - Working on the final sample selection [study sites, respondents/group discussion participants] - Handling the preparation of data collection instruments [formulation, pre-testing (as appropriate), finalisation, translation into Khmer language and editing]; soliciting feedback from stakeholders - Preparing for and conducting the training of enumerators/interviewers - Gathering the information [survey, group interviews, KIIs, etc] and ensuring the safety/security of the study team - Firming up the research investigation's analytical framework; preparing the dummy databases, training the encoders - Gaining control over the data processing tasks: editing, encoding, cleaning - Getting immersed in the data analysis (descriptive and inferential); preparing the data summaries - Drafting the report, including how to write concise reports, research project summaries and abstracts Coordinating activities and tasks for the research project and keeping the team together; handling

Modules	Anticipated Outcomes/Outputs	Content Areas

	research project team members
	5. Greater clarity on the skills and competencies required for short/long term research projects using qualitative/quantitative approaches
		research project and research team member-related challenges and issues
		- Completing/ terminating the research project
		  - Preparing for and conducting the presentation of findings to stakeholders/holding dissemination workshops [for validation or sharing purposes), including developing policy messages
		  - Holding project team reflections on lessons from research project phases and activities
		  - Finalising the report, and incorporating comments/feedback from presentation/dissemination workshop
		  - Submitting the final report, including quantitative and qualitative databases, hard copies of completed data collection instruments
		  - Getting the report peer reviewed, edited for publication; publication for dissemination
		- Documentation needs of the research project and maintaining the research project documents and records; establishing the roles of a research programme assistant
		- Communicating/interacting with the donors/commissioning organisation throughout the research project

Module 4:
Monitoring & Evaluating the Research Project (4 days)
	1. Firmer appreciation for ensuring quality of activities and outcomes in every phase of a research project
	2. Enhanced sense of ownership and pride over the research project
	3. Strengthened appreciation for and efforts to promote or advocate for the use of research findings at levels of policy and grassroots development interventions
		- Monitoring frameworks in research projects
		- Elements to track in research project's life for quality control
		  - Ethics
		  - Research methodology, including quantitative and qualitative interviews and self-administered questionnaires
		  - Report writing
		  - Resources (finances, time, research personnel)
		- Reporting on the progress of the research project (e.g., inception, quarterly and final project reports)
		- Managing research project assumptions, risks, scope and stakeholders
		- Reflecting on/assessing the research project's activities and outcomes
		- Facilitating/encouraging the adoption/use of research results

ANNEX 2
LIST OF POWERPOINT MATERIALS, HANDOUTS AND READINGS

CHAPTER ONE: CONCEPTUALISING THE RESEARCH

Handout:	Action Research, DRF National Symposium September 9-10, 2010
PowerPoint:	Managing dilemmas in the development project versus research programme/ project
Handout:	Various Research Approaches
Handout:	Definitions of Research Approaches. Excerpts from the book Designing Qualitative Research, 3rd Edition by Catherine Marshall and Gretchen B. Rossman
Handout:	Types of Research
Handout:	Management Principles that Apply to All Projects
Handout:	Fundamental Principles of Project Management
Handout:	Project Management Fundamentals
Handout:	Project Planning: A Step by Step Guide
PowerPoint:	Project Cycle Management by Ung Sirn Lee
PowerPoint:	General Project Management Phases and Tools by Ung Sirn Lee
PowerPoint:	Research Project Life Cycle by John McAndrew
Handout:	Who is the research project for: Identifying the Stakeholders by Larry Strange
Power Point:	EEPSEA and Environmental Economics Research
PowerPoint:	EEPSEA Monitoring of Outcomes
PowerPoint:	Ethical Issues Associated with Valuation Surveys
PowerPoint:	Behavioural Economics and Its Application to ENR Management
Handout:	Key Aspects of Research as a Knowledge Generation Endeavour and as a Business. Culled and modified by R.F. Catalla from *Table 1 responsibilities & Accountabilities Outline Relating to Research*. Presented in the report on CDRI's Functional Management Analysis, February 2010
E-handout:	Sample EOI
E-handout:	Sample concept note
E-handout:	Sample research proposal
PowerPoint:	Understanding the Donor by Janet Taylor
Handout:	The McKnight Foundation-Learning Institute Co-Management Learning Network for Indigenous People (CMLN): A Case Study
Handout:	The ADB-CDRI Participatory Poverty Assessment of the Tonle Sap: A Case Study

CHAPTER TWO: PLANNING THE RESEARCH EFFECTIVELY

PowerPoint:	Project Cycle Management and Logical Framework Analysis CM-LFA by Esther Velasco
PowerPoint:	Results-Based Management by Esther Velasco
Handout:	The Generic Logical Framework Matrix by Esther Velasco
Handout:	Levels of Results by Esther Velasco
Handout:	Illustrative Example of a Reproductive Health (RH) Results Chain by Esther Velasco
Handout:	Illustrative Example of a Financial Management Results Chain by Esther Velasco
PowerPoint:	Gender Analysis by Esther Velasco
PowerPoint:	The Development and Management of Research Projects: Key Elements to Its Understanding by Ung Sirn Lee
PowerPoint:	Research Project Development and Management Tools by Ung Sirn Lee

PowerPoint: Planning the Research Project Effectively, Section 1 – The Research Problem by Dr. Kwok Kian-woon

Reference Material: *Harman, Grant (2006) "Research Policy and the Changing Role of the State in the Asia Pacific Region", pp. 43-64 in Higher Education, Research and Knowledge in The Asia Pacific Region, edited by V.L. Meek and C. Suwanwela (New York: Palgrave)*

Handout: Phase 1: Essential First Steps. Bouma, Gary D. & Rod Ling. *The Research Process*, Fifth Edition, pp. 25-132

Handout: The CDRI-ADB Participatory Poverty Assessment of the Tonle Sap: A Case Study

Handout: The McKnight Foundation-Learning Institute Co-Management Learning Network for Indigenous People (CMLN): A Case Study

Research Report: *"We Are Living with Worry All the Time"* A Participatory Assessment of the Tonle Sap, Cambodia Development Resource Institute, April 2007

Power Point: Writing a Research Proposal by Esther Velasco

Handout: Review of the Literature. Chapter 2 of Creswell, John W. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, pp.23-47

PowerPoint: Planning the Research Project Effectively, Discussion on Sampling by Dr. Kwok Kian-Woon

Powerpoint: Management and Considerations in Sample Design: Quantitative Studies by Dr. They Kheam

Handout: Sampling Design: For Media in General, Foreign Radio Listening Behaviour in Particular, Existing and Potential Listener by Means of Survey Based on a Sample Representative of the Population 15 Years of Age and Older Living in the Surveyed Country 2010

PowerPoint: Establishing Project Team Composition: learning from Empirical Based Experiences by SO Sovannarith

Handout: Building Project Team Composition by Hean Sokhom

PowerPoint: Project Planning and Milestones by UNG Sirn Lee

Handout: Planning Research Activities and Identifying Milestones by UNG Sirn Lee

PowerPoint: The Cambodia Poverty Dynamics Study: Round 3 Data Collection and Initial Analysis (wet season data collection, qualitative research and research reports): Terms of Reference

Excel: Work Plan, Cambodia Health Workforce Retention Survey Project Phases

PowerPoint: Form Tech 7: Staffing Schedule, CDRI's Standard Forms for Technical Proposal

PowerPoint: Form Tech 8: Work Schedule, CDRI's Standard Forms for Technical Proposal

PowerPoint: Proposal for Cambodia Poverty Dynamics Study, 2008 to 2009

PowerPoint: CDRI Budgetary Process by CDRI Finance Team

PowerPoint: Project Cost Management by Ung Sirn Lee

Handout: Annex 6.b Budget Notes, DANIDA

Excel: 2007 Annual Work Plan (AWP) for HIV-AIDS Study

Excel: NAA Work Plan and Budget for the Period Covering January to December 2007

Excel: FAO-RFLP Budget Work Plan Sample

Handout: Proposal for Development of Impact Assessment Methodology for Mine Actions Sector in Cambodia

PowerPoint: A Good Proposal by SO Sovannarith

PowerPoint: How to Build Highly Effective Team
Handout: Literature Review Talking Points
Handout: Handout 1- Exercises 1 & 2, Managing Project Sample Field Work
PowerPoint: Working on the Final Sample Selection
Handout: Talking Points on the Final Sample Selection
PowerPoint Good Questions, Good Interview by Zachary Zimmer
Handout: Talking Points on Handling the Preparation of Data Collection Instruments and Soliciting Feedback from Stakeholders
Handouts: Questionnaire Development

- *Exercise – Matrix of Hypothesis on Variables and Data, 21 April 2011*
- *Explanatory Matrix of Hypotheses ad Variables and Data, 21 April 201*
- *Original Household Survey Questionnaire – Impact Assessment of Farmer Organisations on the Food Security of the Rural Poor (Survey Instrument for FO Members and Non-FO Members)*
- *Updated Household Survey Questionnaire – Impact Assessment of Farmer Organisations on the Food Security of the Rural Poor (Survey Instrument for FO Members and Non-FO Members)*

PowerPoint: Preparing for and Conducting the Training of Enumerators
PowerPoint: Crafting Your Survey Instrument/Managing and training Enumerators for Surveys
PowerPoint: Guidance in Field Work Safety
Handout: Talking Points on Firming up the Research Investigations' Analytical Framework
Handout: Talking Points on Gaining Control Over Data processing Tasks
Handout: Cambodian Tables – Tobacco
Handout: Talking Points on Getting Immersed in Data Analysis
Handout: SPSS Data File.sav
Handout: Drafting the Report
PPT/Handout: Style Guide to English Linking Words
PPT/Handout: Writing Abstract Style Guide
PowerPoint: A Toolkit to Examine Research Project Coordination Issues
Handout: Diagrams on Research Project Coordination Tasks (Quantitative and Qualitative Views)
Handout: Case Study – External evaluation of Speak Out
PPT/Handout: Managing Group Processes
PowerPoint: Research to Policy or Developing Policy Messages
PowerPoint: Disseminating the Findings: How Research Findings are Used?
Handout/PDF: Conflict and Collective Action in Tonle Sap Fisheries: Strategic Priorities to Improve the Governance & Support Community Livelihoods
Handout: Experiencing Freedom's Possibilities: Horizontal Learning in CDRA's (Community Development Resource Association) Home Weeks
PowerPoint: Project Team Reflections
Handout/PDF: CDRA Horizontal Learning: Freeing People to Help Each Other by Doug Keeler
Handout: Responses to Comments on the Draft Progress Report on (Name of Project) _ Template
Handout: SAMPLE Comments/Responses on Semi-Final Draft on Safety in Phnom Penh: A Diagnosis on Crime & Violence in Five Urban Poor Communities in Phnom Penh, Cambodia
PowerPoint: Procedure and Protocol for Research Data Management: CDRI Guide
PowerPoint: John McAndrew's Comments on CDRI's Tonle Sap PPA Chapters 1,3, 4 & 5
PowerPoint: Peer Review by Phalla Chem
PowerPoint: Documentation Needs of Research Project

Handout: Filing System of Research Programmes in CDRI
PPT/Handout: Key Points for File Management
Handout: Communicating Effectively with Your Clients
PowerPoint: Effective Communication at Workplace by Yousef Al Mullah

CHAPTER FOUR: MONITORING AND EVALUATING THE RESEARCH PROJECT

Handout/PPT: Engendering Criteria and Standards in Research Implementation and Monitoring
PowerPoint: Logical Framework for Projects
Handout/PPT: Monitoring Frameworks in Research Projects/Gender Integration
Handout/PPT: Monitoring Frameworks under AusAID Perspective
Handout/PPT: Designing the Research Project's Strategy for Communicating Findings with Stakeholders
Handout/PPT: Principle Strategies for Communicating with Stakeholders
Handout/PPT: Facilitating/Encouraging the Adoption of Research Results
Adobe Flash Player: Factors Influencing Policy Readiness, AFSSRN Experience by Fred Carden, IDRC
Handout/PPT: Talking Points on Elements to Track in Research Project's Life (Ethics), from Rebecca F. Catalla. *Conducting a Small Research Study: Ten Steps to Analysis,* 2nd Edition, 2006
Handout/PPT: Ethical Issues Associated with Valuation Surveys
Handout/PPT: Talking Points on Elements to Track in Research Project's Life (Research Methodology), from Rebecca F. Catalla, *Conducting a Small Research Study: Ten Steps to Analysis,* 2nd Edition,2006
Handout/PPT: Talking Points on Elements to Track in Research Project's Life (Report Writing), from Rebecca F. Catalla, *Conducting a Small Research Study: Ten Steps to Analysis,* 2nd Edition,2006
Handout/PPT: Talking Points on Elements to Track in Research Project's Life (Resources: Time, Personnel and Financial Support), from Catherine Marshall and Gretchen B. Rossman*, Designing Qualitative Research,* 3rd Edition, 1999
Handout/PPT: Reporting on Progress in Research and Development under AusAID Funded Projects
Handout: Example of a Monthly Progress Report in Water Resources Management Research Capacity Development Programme (WRMRCDP), July 2011
Handout/PPT: Talking Points on Reflecting/Assessing the Research Project's Activities and Outcomes from *Fred Carden, Knowledge to Policy: Making the Most of Development Research, IDRC, 2009*
Handout/PPT: Profile of Research Approaches of Participants
Handout/PPT: Diagram of Research in the Context of the Programme/Project Management Cycle
Handout/PPT: Project Cycle in the Context of Research (Matrix of Tasks and Responsibilities)
Handout/PPT: Checklist of Research Project Management Principles, Tools, Methodology, Ethics and Skills

ANNEX 3

THE CDRI AND ADB PARTICIPATORY POVERTY ASSESSMENT (PPA) OF THE TONLE SAP: A CASE STUDY

Compiled for the CDRI-DRF training on research project development and management

1. Project Synopsis

The Tonle Sap Basin is of special concern to policy makers as it contributes directly or indirectly to the livelihood needs of at least 15 percent of Cambodia's population. There is an apparent wealth of natural resources in the region but despite this, the basin has a high level of poverty, in some areas reaching as much as 80 percent.

The Tonle Sap Participatory Poverty Assessment (PPA) was undertaken by the CDRI in collaboration with the Asian Development Bank and the National Institute of Statistics from October 2004 to November 2006, with an original planned duration of September 2004 to February 2006. The study sought to provide policy makers, donors and civil society with a deeper understanding of (1) the relationship between poor people's livelihood strategies and their use and management of natural resources, (2) the gender dimensions of poverty and (3) the role of local governance in poverty reduction in the Tonle Sap region.

As a policy research instrument, the Tonle Sap PPA was specifically designed to incorporate poor people's perceptions of and experiences with poverty in its study and analysis as well as in the formulation of poverty reduction strategies through public policy. The study showed that many of the poor and destitute in the region are not benefiting from Cambodia's rapid economic growth; but more importantly, it showed that while the poor often appear to be beyond the reach of public policy, there was evidence that this was not necessarily always the case and that there were prospects for hope.

Formulating the Project Idea

Qualitative and participatory approaches to the study of poverty are a reaction to the perceived shortcomings and limitations of quantitative approaches. PPAs employ efforts to involve the poor in the research process in ways that empower them to articulate their own standards of well-being, identify problems associated with meeting basic needs and achieving life ambitions and propose solutions to their problems. The Tonle Sap PPA was a "second generation" study that followed an earlier nationwide PPA done by the ADB in 2001. The ADB had specifically intended that the information from the Tonle Sap PPA would be used to inform the ADB's programmes and projects in the region as well as aid the preparation of Cambodia's National Poverty Reduction Strategy based on a better understanding of the real priorities of the poor. It also envisioned that the PPA would be embedded within the government policy making process through active collaboration with relevant ministries and other stakeholders.

The parameters for the study had been set by the ADB as the contracting agency as outlined in its ToR. It was intended to be a more regionally focused and longer research process than the initial national PPA it sponsored, involve multiple national, regional and local stakeholders and develop a micro-level perspective of the poor's experiences with and responses to poverty by listening to the voices of the poor and destitute, with particular attention to women.

2. The Partners and Project Beneficiaries

CDRI, NIS (representing the Ministry of Planning) and ADB were the lead agencies for the study. Since the research was intended to impact on policy and policy formulation, involving the ministry and building the capacity of the staff in conducting a participatory approach were quite critical to the research. The ADB originally planned that the Poverty Monitoring and Analysis Technical Unit would act as the government counterpart agency for the PPA, but it was found to have ceased functioning. In its place, the NIS was engaged by the ADB as the official government counterpart.

The participants who had the most stake in the research, and the eventual target beneficiaries, were the poor in the Tonle Sap region whose "voices" provided fresh, and sometimes unexpected, insights and perspectives on the dynamics of poverty and feasible interventions. The study was designed to provide them with opportunities to express their opinions and to advocate policies that would affect them and their families. Extensive interaction and village discussions were facilitated between CDRI/NIS fieldworkers and key informants, focus group participants and local district and commune officials.

NGOs (local and/or international) in each of the six provinces provided data and information for both the village research and case study components of the PPA, as well as for the literature review.

The Challenges

Ensuring the involvement of the project partners and sustaining their participation were the main challenges. Despite their strong background in quantitative research, there were limitations among CDRI and NIS counterparts in the practice of qualitative and participatory research. The NGO partners, though familiar with participatory approaches and practising these in their work, had their own commitments and priorities. The research team was faced with the challenge of how to include the poor and destitute in the research so that they were truly active participants, rather than mere objects of study. There was also the challenge of how to draw out the perceptions among participants in the PPA villages, given their level of confidence and their socio-economic status.

The Solutions

CDRI and NIS staff assigned for the fieldwork and data collection took part in training and capacity building sessions on qualitative research as well as the field practicum to complement their existing research skills. As the government counterpart, the NIS was also crucial to encouraging participation of the villagers. In addition to observing and participating in the village studies, it helped facilitate official contacts at all levels of the administration, especially with regard to obtaining official project mission letters and organising commune, provincial and national workshops. The NGO partners were subcontracted for their inputs, and in this way ensured the quality of outputs and sustained their interest. Local people's participation was facilitated through various participatory approaches. To draw out village members' perceptions in non-threatening ways, various types of community interaction were employed: FGDs, individual interviews and impromptu discussions. District and commune officials were consulted, meetings were organised and coordinated through village officials, and provincial and commune workshops were coordinated by the NIS counterpart staff.

3. Finding a Donor

The Tonle Sap PPA was a technical assistance project initiated by the ADB. CDRI was selected by the ADB as the independent executing agency due to its previous work with the World Bank on a related poverty assessment project. Funds for the project were sourced from the Department for International Development, UK and were provided directly by the ADB to CDRI. In the beginning, the ADB and CDRI appeared to be a perfect match: the ADB had earlier conducted a nationwide PPA, while CDRI had been involved in the World Bank funded study *Moving Out of Poverty Study*. Their experiences would complement each other, and there was a greater chance for the Tonle Sap PPA to benefit from lessons of the two earlier projects in both design and management.

The Problems

The project faced a number of administrative issues related to the prompt disbursement of ADB funds and reimbursement of CDRI funds both at the early stages of the project and toward the completion. Also, CDRI had assumed that as an independent executing agency that had vast knowledge of the country situation, it would have a bigger voice on decisions in the day-to-day project management and implementation. However, there were several instances, according to the project staff, in which the donor agency placed heavy demands for additional activities and consultants, which were not in the ToR or the original project proposal that the donor agency had approved. Consequently, additional financial resources and contract variations had to be negotiated repeatedly, and the project suffered a setback in meeting deadlines, especially for the completion of the field data gathering and submission of the final report. The delays in fund disbursements had also forced CDRI, on many occasions, to keep the project afloat by drawing on its own funds. The project director had felt that "for an independent institution such as CDRI that has no substantial reserves to draw on and must manage cash flow carefully, this was a matter of great concern to the project management team".

Also, the quality, consistency and continuity of technical advice and support, from both within the ADB and its consultants, fell short of CDRI's expectations. The lead person from the donor agency had been ambiguous about the expected outputs, scope and timelines of the project and often appeared insensitive to the cultural nuances of the research. Discussions on lessons from the PPA at various stages of the project were shelved repeatedly. For instance, in submitting the PPA report, CDRI requested an opportunity to discuss the mutual lessons with the ADB but did not receive a response. The delays and misunderstandings with the donor were a cause of concern for the CDRI project staff, as many felt it could affect their reputation and that of CDRI as a leading research agency in the country.

The Solutions

CDRI saw the need for the donor agency to review its procurement and financial systems to improve the efficiency and timeliness of financial disbursements and pay "up front" rather than by a very inefficient and bureaucratic system that caused cash-flow difficulties for local agencies, especially where they are independent agencies with their own efficient financial and administrative governance systems.

For a research undertaking of this scope and importance, it was found helpful if the donor agency could (1) improve the quality, consistency and continuity of technical advice and support, from within the agency and especially from its consultants; (2) genuinely involve local agencies in the early design of projects and minimise the use of freelance consultants of indifferent quality and often very limited local knowledge and experience; (3) provide training to donor agency personnel and consultants on effective cross-cultural communication, partnership skills and sensitivity to local cultures, especially where capacity building is involved; and (4) take local

capacity building seriously and provide training to its personnel and consultants with adequate resources built into project budgets to achieve it.

4. Executing the Project

Staffing Issues

The project was coordinated by a CDRI project leader who was supervised by the CDRI research director, and was supported by a technical adviser who reported to the project leader. To simplify the management structure and reduce the human requirements of the project, three research assistants were each given responsibility for coordinating and overseeing the fieldwork of two researchers in two of the six provinces.

In addition to the research objective, the other important objective of the Tonle Sap PPA was to strengthen the capacity of local researchers, including CDRI and NIS staff, in what appeared to be a new and increasingly important research methodology, one necessitating a much closer guidance and supervision than previously planned. This was especially relevant for quality control in terms of monitoring the use of appropriate qualitative research tools and methods, documentation and reporting.

Responses

Due to the heavy demands placed on the staff by the use of participatory approaches and qualitative techniques for the field research, the planning and preparation of the project focused heavily on providing training and practical experience to both the fieldworkers and research assistants. The initial participatory research methods training was conducted by an external consultant contracted by the ADB from December 2004 through January 2005. The start of the training was delayed for several days to coincide with the consultant's schedule. The consultant's time was also extended by several days to provide for a brief field test of the research tools and work on data recording and documentation.

Twenty individuals were originally trained as fieldworkers for the village survey work. The classroom training included the development of a preliminary checklist of issues and topics that would form the basis of research questions and the field guide for the teams, documentation and the use of qualitative research tools and methods and the development of a field guide that provided the key research questions along with specific guidelines on the conduct of the fieldwork. A field practicum was built into the training to provide facilitators and research assistants the opportunity to practise using participatory tools learned during the initial training and strengthen their documentation and reporting skills. The field practicum also provided opportunities for team members to develop good working relationships and enabled the project staff to observe how facilitators and team leaders performed under field conditions.

5. The Methodology and Practical Issues

The study was primarily qualitative, but quantitative measures helped guide the site selection as well as support the qualitative analysis. Sources of quantitative data concerning the Tonle Sap region included the population census of 1998, the Cambodian Socio-Economic Survey of 1999, the commune database (SEILA, 1998-2001) and the Tonle Sap database (Oxfam America, 2000), additional studies from World Food Programme, UNICEF, the Ministry of Agriculture, Forestry and Fisheries and recent CDRI studies and data from NGOs working in the six provinces. The *Moving Out of Poverty Study* also provided panel data for three villages in the study area and was a useful point of reference. It also informed the development of the qualitative components of the PPA.

The field research was conducted in 24 villages in six provinces around the Tonle Sap Lake over eight months between March and October 2005. This was originally planned for February to September 2005, but the fieldworkers were deployed only in March due to additional time devoted to planning and preparation (training of researchers and fieldworkers, field practicum and site selection). Considerable effort was put into selecting sites representative of the Tonle Sap region in the provinces of Kompong Chhnang, Kompong Cham, Kompong Thom, Siem Reap, Battambang and Pursat. Site selection was done by purposive sampling representing specific regional characteristics and circumstances such as commune poverty levels, household livelihood activities and geographical location. The site selection also took into account the percentage of female-headed households, ethnicity, governance issues and staff security.

The field research was divided into two phases, each covering three provinces. On average, the research teams spent a total of 17 days in the field per village: 10 days of actual fieldwork and daily documentation, four days for village report writing and presentation, one day for the commune workshop and two days' travel. In each province, the two teams worked under the supervision of a provincial team Leader. The PPA project leader, with support from a project technical adviser, supervised the provincial team leaders. CDRI's research director provided overall direction during the fieldwork.

Participatory rural assessment tools were used during FGDs including social mapping, well-being ranking and natural resources mapping. To ensure that the techniques were non-threatening and elicited participation from the villagers, PPA teams first used thematic maps to identify prospective communes according to poverty rates and geographical location. As well, three types of interaction were employed: FGDs, individual interviews and impromptu discussions.

The Challenges

The study was both innovative and ambitious in scope and methodology. The first set of challenges involved the development of a conceptual framework that would identify the key research themes and questions that would focus the research and guide the eventual analysis. This was particularly important because many policy makers and influencers in the study's intended audience may not be familiar with qualitative research methodologies and may be expecting to find only numerical data. Another reason concerned the need for transparency regarding the research design, implementation and analysis. There was also the challenge of how to implement the research methodology in the field in a way that would provide reliable data that could be objectively analysed. A third set of challenges involved the presentation and dissemination of research findings in ways that would inform policy makers and policy influencers. An overarching set of challenges concerned how to integrate genuine local capacity development into all these processes.

The very idea of research purporting to enable the poor and the very poor to speak for themselves in a developing country like Cambodia raised complex and difficult methodological questions and issues. The relationship between urban-based researchers and rural participants also had a bearing on the integrity of the data and subsequent analysis. Documentation and reporting were an extremely important component of the PPA methodology and, given the enormous volume of data generated, constituted a significant project management and resource challenge. Commitment and attention to organisational and production details associated with translating the village reports and organising and preparing documents for publication needed to be sustained. The process of transferring information from the spoken word (e.g. FGDs) into field notes, then into daily reports and on to village reports provided several points where information leakages could occur. A draft final report for presentation to project partners and stakeholders

was completed and disseminated in November 2006, but it was only in April 2007 that the final report incorporating comments from stakeholders was finally published.

The original plan as outlined in the project ToR was deemed overly ambitious in the time frame relative to actual implementation requirements. The most important area concerned training, which required much more time than originally envisioned. Both the ADB and CDRI needed to be flexible in adjusting the schedule to accommodate the need to prepare the fieldworkers as well as possible. The original budget in the original contract was insufficient for implementation requirements. Two important areas were the costs of translation and transportation/logistics.

The Solutions

Using the literature review as a starting point, the development of the Tonle Sap PPA research framework was structured around four related themes: rural livelihood strategies, natural resource use and management, gender and local governance. The conceptual framework was underpinned by a complex set of linkages between livelihood strategies and household income and well-being. For analytical purposes, 23 of the 24 villages were divided into land- and water-based livelihoods, while one village was categorised as an urban-based village.

The FGDs provided an important research technique that enabled the villagers to become active participants, and at the same time narrowed the gap between the researchers and the participants. The structure, composition and implementation of the FGDs and individual household interviews were designed to ensure that women had ample opportunities to articulate their experiences and opinions.

In order for the report to reflect a better sense of people's voices, much of the text was interspersed with quotes and stories where relevant and appropriate. These were largely drawn from the Khmer language versions of the field notes for individual interviewees and the English translations of the village summaries. The selection of the quotes and stories was purposive in order to highlight particular issues or problems. Making decisions on which quotes to use was sometimes subjective and introduced the possibility of bias. To counteract this, efforts were also made to identify positive comments and success stories.

Delays caused by the bulk of qualitative data to be analysed and the limited skills of personnel to synthesise findings and integrate them into a research report led to the hiring of two foreign experts who were contracted to write the interim, draft and final report, culminating in an extensive monograph of 11 chapters. The report writing time for these two experts was not reflected in the existing contract plus variations and thus required extension of their time.

6. Disseminating Findings

The presentation, dissemination and utilisation of participatory research findings in ways that inform policy makers and other policy influencers are important elements of participatory research and need to be planned and woven into the research design.

The Problems

The Tonle Sap PPA was both innovative and ambitious in scope and methodology, raising many challenges and lessons regarding design, implementation and local capacity development. It used an iterative process that yielded important information in the form of outputs and reports. This required a well-coordinated effort to disseminate information during each phase of the study to various types of audiences.

The Solutions

The first output was a comprehensive literature review and research conceptual framework, including the village matrix used in the site selection. This report was circulated among the ADB, government counterparts and other stakeholders for review and comment prior to implementation. The second outputs were the reports from each of the provincial teams, which were prepared when the research teams returned to CDRI after the field research and presented during provincial workshops in November 2005. The original plan called for provincial workshops to be convened at the conclusion of fieldwork in each province, but the project staff decided to convene them after the completion of the entire fieldwork in October. This allowed more time for deeper analysis and synthesis of the material in each province so that observations and findings were discussed more concretely with provincial stakeholders. The provincial reports were circulated among the ADB, government counterparts including provincial authorities and other stakeholders for review and comment to inform the final project report.

As a final output, CDRI submitted to the ADB and the government a comprehensive report of analytic depth that detailed the findings, observations and conclusions from the field research and case studies. The report included policy and programming recommendations based on the inputs from village men and women who participated in the research. As with the other written outputs, the report was produced in English with Khmer translations of the executive summary. Finally, two conferences were convened to disseminate and discuss the research findings and elicit comments to improve the final draft prior to publication—a national conference and a round-table discussion held in Phnom Penh on 28 and 29 November 2006, respectively. The final project document was published in April 2007 by CDRI with a Khmer translation.

7. Key Achievements

The first step in designing effective policies for the poor and the very poor is to develop a comprehensive understanding of their situation and circumstances. The Tonle Sap PPA represented an important contribution to the development of such understanding. The methodology was sound and robust in engendering participation of the poor and the poorest from the villages, NGOs and local officials and in generating a large amount of quality information with which international and local analysts were able to produce quality reports.

The Tonle Sap PPA proved to be highly relevant for policy makers, the private sector, civil society organisations, the research community including CDRI and Cambodia's development partners. First, the information and insights from the study complemented other recent policy research aimed at poverty reduction, such as the 2004 Cambodian Socio-Economic Survey (CSES), the World Bank's *2006 Poverty Assessment* and CDRI's two other poverty studies—the Moving Out of Poverty Study and the Poverty Impact of Regional Economic Integration Study. Second, it helped establish a policy research framework that listens to, considers and responds to the experiences and opinions of the poor and the very poor. Third, together with other relevant studies, the Tonle Sap PPA helped identify a longer term research agenda aimed at strengthening local capacity for monitoring progress toward the government's poverty reduction priorities as outlined in the National Strategic Development Plan and Cambodia's Millennium Development Goals. Thus the Tonle Sap PPA was an important step in informing and promoting more effective policies and practices for reducing poverty in Cambodia.

8. Key challenges

While the poor's perceptions were clear in the research report, how most effectively to integrate into the policy process the issues and new perspectives voiced by the poor and other stakeholders remained a big challenge, including how these perspectives could be integrated into the strategic planning of government ministries and NGO partners. Eventually, the situation of the poor and destitute in the Tonle Sap region should be addressed through programmes and projects that respond to their voiced concerns.

In a project of this scope and size, it is not unusual to come across situations where the harmonious relationship between the donor agency and executing agency is compromised. One of the challenges in the Tonle Sap PPA project had been how to keep the communication channels open and work through the differences among project partners.

The CDRI executive director, in a letter to the donor agency, provided a candid assessment of the key challenges in the implementation and management of the project: "Since the inception of the project there has been much discussion of, review, and change to the process, scope and methodology of the project by agreement between the parties. However, this has meant significant delay due to the demands of translation of the enormous amount of interview data reflected in the village reports, then the organisation and management of the remaining data from the FGDs, household interviews, key informant interviews, and provincial workshops. Further delays arose due to the departure of two key CDRI research staff working on the project, partly due to the demands and project management challenges of this project. This has also meant that, rather than building the capacity of key Cambodian research staff, the project has actually eroded CDRI's capacity, especially in the analysis and writing, which was to be a key area of capacity building for the Cambodian researchers, and forced us to rely on expatriate expertise for much of the writing, an unavoidable outcome if we are to produce a quality product, but a most undesirable one from a local capacity building perspective."

9. Evaluation

One of the key components of maintaining high standards of research practice concerns evaluation. In the case of the Tonle Sap PPA, close monitoring and supervision were carried out during long periods in the field. The staff found this to be especially relevant for quality control in terms of appropriate use of qualitative research tools and methods, documentation and reporting, and it provided the mechanism for an informal evaluation of the usefulness of the methods, the adequacy of the efforts of project staff and adjustments needed in the study. The project, however, lacked a formative and summarising evaluation component which could have strengthened the project design and should have been built into it, such that periodic assessments of the progress of the staff and improvement in project performance could have been reflected upon and indicators of project success could have been ascertained better.

10. Overall Lessons

The study showed that the poor's own perceptions of poverty and its causes could find their way into policy and poverty reduction programmes. However, the key is to formulate collaborative mechanisms among the people and local institutions in which the comparative advantages of each set of actors are complementary.

Key challenges to the success of a participatory policy research project such as the Tonle Sap PPA concern the relationship between ownership of the process and outcomes; partners' participation in the formulation, design, implementation and analysis of the research; and utilisation of research findings for policy influence. The study also found that accuracy and

reliability of the data lie at the heart of research integrity, so considerable detail was needed in documentation and reporting. It also showed that there could be difficulties when research projects were essentially designed outside the country by donor agencies or consultants with little or no local input.

Mechanisms for dissemination and policy influencing strategies should be built into the project design, ideally driving the process from the beginning rather than added on in an ad hoc fashion. The PPA local and provincial feedback sessions and the national PPA workshop and round-table discussions at the end of the project were very useful but were once-only events. Planning for the use and production of Khmer language materials and for their adequate resourcing must be ensured in the project design and budgeted appropriately. A vast volume of qualitative research data was collected in Khmer and then summarised or translated into English. The final product, the report itself, was produced in English but summarised in Khmer and shared with a wider audience along with a Khmer policy brief. All these translation activities were necessary despite limited time and financial and manpower resources.

Complex and innovative research methodologies such as the Tonle Sap PPA require a strong local capacity building component that should be sustained after the project. The expensive external once-only international consultants were useful, but building a core of local trainers from among the project partners and providing mechanisms for follow-up training programmes and capacity building within the country could have had longer term benefits for the local research institutions. Concomitantly, to sustain partnership and collaboration among agencies and the donor agency, it was deemed important to initiate and follow up a process of establishing long-term programme partnerships with leading Cambodian research and policy institutions rather than ad hoc project-based relationships in which local institutions were seen more as local consultants or implementing agencies rather than partners.

ANNEX 4

THE MCKNIGHT FOUNDATION AND LEARNING INSTITUTE'S CO-MANAGEMENT[10] LEARNING NETWORK FOR INDIGENOUS PEOPLE PROJECT: A CASE STUDY

Compiled for the CDRI DRF training on research project development and management

1. Project Synopsis

The Co-Management Learning Network (CMLN) for Indigenous People and Protected Areas in Southeast Asia has existed since 2006. In Laos, Vietnam and Cambodia, it has been implemented by the Global Association for People and Environment, Fauna and Flora International and the Learning Institute, respectively. Activities conducted by the network have increased recognition and acceptance of the co-management approach and improved the capacity of government officials and indigenous representatives, which has contributed to participatory biodiversity conservation and improvement of livelihoods. The overall goal of the project has been to strengthen collaborative management practices that enhance biodiversity conservation and livelihood support for local resource users. In a long-term regional perspective, this project will support the institutionalisation of local co-management approaches operated that address the needs of indigenous and marginalised people and promote equitable resource conservation and management. It will also encourage networking of co-management practitioners, bringing together local, regional and national stakeholders to share knowledge and experience through workshops, meetings, study tours and other means. This will generate more effective co-management approaches.

In its widest context, the project targets indigenous peoples living in northern Cambodia, southern Laos and northern Vietnam as main project beneficiaries. This case study will focus primarily on the Cambodian experience.

Formulating the Project Idea

The initial idea of forming a collaborative management network stemmed from the United Nations Convention on Biodiversity signed by 150 government leaders at the 1992 Rio Earth Summit. This promoted conservation of biodiversity while recognising that biological diversity involved not just plants, animals and micro-organisms and their ecosystems but also people and their need for food security, shelter and a clean and healthy environment in which to live. In particular, the convention recognised the close and traditional dependence on biological resources of many indigenous and local communities. It further acknowledged that these people have generated significant knowledge over generations that could contribute to the convention's goals. Gathering and disseminating this invaluable fund of information thus became a focus, as did measures to ensure the rights of these people to participate in the management of the natural resources on which they rely and to share equitably in the associated benefits. Dubbed "collaborative management", this process aimed to create the conditions whereby, for instance, indigenous people collaborated with local and national authorities, especially in the management of protected areas.

The spur to the introduction of a collaborative management learning network in South-East Asia was forerunners in other parts of the world. The initial proposal in 2006 followed a regional meeting, held in Thailand, to envision goals and a common vision for a South-East Asian network. The idea was to find mechanisms and processes whereby indigenous and the authorities in the region could start to collaborate on the management of protected areas, with the overall aim of

10 The term "co-management" is the shortened version of collaborative management.

safeguarding the rights, culture and livelihoods of the indigenous, while conserving biodiversity and promoting the sustainable management of natural resources.

Furthermore, it was anticipated that the project teams in the three countries could network and learn from each other.

The initial project ran from 2006 to 2008. Experiences and lessons from this guided the proposal for the second project—from 2008 to 2010—and a third, one-year, project is now underway.

2. The Partners and Target Beneficiaries

Global Association for People and Environment, Fauna and Flora International and the Learning Institute are the lead organisations in the three countries. They, in turn, work with local NGOs that interact directly with indigenous groups.

In Cambodia, the project is focused on the area of the Virachey National Park Protected Area in Ratanakkiri where the indigenous Kavet live. Here, the Learning Institute has worked in collaboration with Non-Timber Forest Products, a local NGO.

Target beneficiaries are particularly the indigenous people, but also the protected area authorities: they too benefit from a closer relationship with, and greater understanding of, the indigenous so that management runs more smoothly and is more fruitful, thereby benefiting all.

The Challenges

The idea of linking countries in this project—with the ultimate aim of creating a dynamic network—was innovative for South-East Asia and had great potential. The initial idea was to recruit seven countries for a rich and diverse picture. However, finding and motivating the right partners has proved challenging: national and local NGOs are already busy, so persuading them to spend time in this initiative has not been easy. Furthermore, some argued that national differences, let alone the uniqueness of each indigenous group, meant that common lessons would be limited. There were further problems in linking donors to support a seven-country project; each donor has its own agenda, goals, funding timescales and reporting schedules, making this idea a coordination nightmare.

The Solutions

Despite the reluctance of some countries and organisations to take part, the emergence of funding from one overall donor (see below) helped to recruit the current three network members. As an added incentive, the offer of technical support in implementing the project—and the associated prospect of capacity building for staff—along with the opportunity to share problems and learn from counterparts, ultimately proved sufficiently enticing.

3. Finding a Donor

Throughout the five years to date, the project in all three countries has been fortunate in securing support from the McKnight Foundation. This has proven to be a perfect match: in South-East Asia, McKnight has the aim:

> Through community building and empowerment, we use our resources to strengthen local institutions and initiatives that sustain and improve the livelihoods of the most vulnerable people in Cambodia, Laos and Vietnam.

Furthermore, it puts an emphasis on indigenous people and supports efforts to increase their self-determination.

This match between the goals of the donor, project and participating organisations has been one of the keys to its longevity. So often, the donor goal differs from that of the grantee, so that there is a constant struggle: the donor wishes projects to be adjusted to meet its aims, while grantees try not to stray too far from their own goals and strategic objectives. It is easy in such circumstances for grantees to become increasingly donor-led, ultimately losing sight of their own identity. This has not been the case in this project. Furthermore, as a private foundation, McKnight has been flexible and willing to listen to grantees if adjustments have been needed to project activities, outputs or budget lines. This, too, is not always the case, particularly with large national or international donors, which are tied to their own political policies or are obliged to adhere to a one-size-fits-all funding approach that takes no account of the varied needs of each country. Thus, although McKnight has made requests of the grantees to meet its own needs, these have been negotiated with sensitivity and a willingness to listen to the grantees and to respect their local knowledge. The current project evaluation exercise (below) is an example.

The Problems

The success of this relationship highlights problems that exist with other donors. Issues of imperfect matches of goals and strategic objectives have already been mentioned, as has the inflexibility of some donors, who are unwilling to adjust their approaches to match the real situation. A positive relationship has been built with the McKnight South-East Asia representative and other staff, so that proposals can be written with precision to meet their needs and be fully understood by them. The Learning Institute has learned that, when this kind of relationship is lacking, it can be very difficult to assess the language and the degree of technicality that should be included in a proposal. It is often unclear whether a proposal will be assessed by people who are experts in the area and who will expect sophistication in the terminology used or whether it will go to a more general audience that might need a simpler explanation and will probably reject a proposal it does not have the expertise to understand.

The Solutions

The solution, of course (although it is not always possible), is always to seek a donor that is the best match for your organisational and project objectives—or at least be firm about how much you are prepared to compromise.

Knowing who will ultimately assess your proposal helps—although this is not always revealed. And working hard to create a relationship of equal partners—in other words, regularly communicating—can help not just to ensure that the project runs smoothly, but also that there is greater potential for a continuation or scaling out of the project, or that the donor will be more inclined to support other projects for which you might seek funding. McKnight has been a perfect fit, has acted more as a project partner than merely the donor and has provided invaluable technical support, while also being willing to learn from project staff in a spirit of mutual respect.

4. Executing the Project

Staffing Issues

Although funding has run smoothly, finding appropriate staff for this project has not been so easy. The sum available has not been sufficient for fully qualified staff to be recruited, so expectations have been lowered, and staff capacity building has been time-consuming.

Furthermore, funding has covered staff for only a percentage of their time, so that they have necessarily been involved in other projects. This poses problems in balancing the competing demands of different projects and in time management. In addition, the research in this project was mainly qualitative, which required not just a knowledge of collaborative management and related indigenous and biodiversity issues, but also an ability to extract information, especially from indigenous people with their own cultures and conventions, as well as their own languages. Finding or training staff to communicate sensitively and effectively with indigenous people as well as with government officials, to extract information that is valid and reliable for analysis, has been difficult. The analytical capacity of field staff, and their ability to turn findings into written documents, has been limited.

Responses

Although the project has already been extended twice, this kind of good fortune cannot be banked on. Therefore, in what has to be assumed is a short-term project (one or two years in this case), it is not feasible to spend long on training staff who have varying capacity building needs. Furthermore, staff turnover has added to the challenges of ensuring that the team is sufficiently skilled. This has placed extra pressure on the team leader, who has needed constantly to observe the team members, to assess what new skills they require, both before they went to the field and during the project activities. Varying needs have made formal training events unhelpful, so capacity building has taken the form of informal half-day coaching and mentoring sessions. This has been time-consuming for the project leader, distracting him from other administrative and field-based tasks.

A degree of staff turnover is inevitable, especially when a project is extended: donors can often leave decisions on extensions to the very last minute, creating great uncertainty for staff, although this has not been an acute problem in this project. And even if people have the required knowledge and skills, they still need time to settle into a project. There does not appear to be any way of stopping this, so it has to be absorbed as an inevitable challenge that will need to be overcome during most projects: time must be allocated for ongoing staff training or induction.

5. The Methodology and Practical Issues

This project has involved capacity building for co-management participants—achieved through study tours and workshops—and the establishment of channels for information dissemination (see below). But there has also been a research element. This has focused on discovering the indigenous people's perceptions of co-management and livelihoods issues through participatory action research. Information and perceptions have been gathered through focus groups and semi-structured interviews that have encouraged the people to identify problems and solutions themselves. The Learning Institute has traditionally focused on PAR as a means to ensure that solutions to problems or improvements to the advantage of target beneficiaries fully match the needs identified and will boost a sense of ownership (and therefore acceptance leading to sustainability) among stakeholders. It is a form of adaptive learning that uses existing experience to guide planning and through which participants are learning by doing.

The PAR in this project began with focus group discussions with key informants including commune council representatives, protected areas representatives and village elders. These key informants were facilitated to identify for themselves the elements to determine wealth rankings within their communities. Four wealth classes were identified, from which interviewees were chosen randomly. This selection was influenced by percentages given by the key informants to the wealth rankings (how many members fell into each of the four wealth groups), but there was a particular emphasis on people in the poorest wealth group.

This research found that the indigenous villagers were largely unaware of the concept of co-management because there was limited information dissemination. Remedies were then devised and implemented.

A second questionnaire survey—this one focusing on NTFPs—indicated that malva nuts had potential as a significant source of income. This information is now being used by the villagers to diversify livelihoods and generate more income.

The Challenges

In addition to the challenges already mentioned in terms of project staff issue, an unexpected challenge arose in that, after meticulous prior planning, the team arrived in one village only to find it closed for harvest. This meant a wasted visit with associated waste of time and funds.

The Solutions

Mentoring and backstopping can support young or inexperienced researchers in the field. Unexpected delays, such as the one mentioned above, can be minimised (although never eliminated) by, wherever possible, never making assumptions about anything and always checking everything that can be checked. It is not uncommon for a project to be delayed, but this causes many problems, not least because donors often need projects to be completed within a given time for administrative purposes and cannot necessarily approve an extension.

6. Disseminating Findings

The results of this project were formally disseminated through written material—reports and papers—and more informally through workshops and seminars. Although the project attracted keen interest, this tended to be concentrated among field practitioners and academics.

The Problems

Policy makers have been less enthusiastic about receiving this information. Attracting and encouraging them to act on research findings remains a general challenge for the Learning Institute in this and other projects. In addition, communicating to indigenous people themselves has also presented problems: language and illiteracy are particular issues. Furthermore, indigenous people have their own hierarchies and information dissemination processes. If these are not identified and understood, sections of target communities can be excluded because information does not reach them. Similarly, there may be a temptation for project staff to impose new dissemination systems, which will not be accepted because they do not respect existing norms.

The Solutions

Employing the general principles of good communications, it has been recognised that different means of communication and different messages are required for different audiences.

For instance, indigenous people tend to have little experience and inhabit a narrow world. Making messages relevant to them requires attention to language, presentation (i.e., media—perhaps picture posters, meetings and other means that do not require reading) and an understanding of their information needs. This project has also benefited from identifying and using the people's existing dissemination processes, thereby ensuring that as many people as possible have been made aware of research findings, while respecting cultural conventions.

Fully successful ways of attracting the interest of policy makers have not yet been identified. However, the hope is that by joining forces with others to achieve a louder, combined "voice", the project can be more successful in prompting changes in policy making or implementation.

7. Key Achievements

Within the site at Kok Lak, the concept and application of a co-management approach and negotiation agreement have now been accepted by the community and park officials. This has reduced tension over access to and use of natural resources in the park. The elimination of confusion caused by having two different committees—the community protected area and community forestry committee—within one commune has also been a significant step. The intra-community communications network has boosted information sharing among indigenous people about issues in the protected area. Moreover, the project has developed capacity for indigenous representatives and park and NTFP staff in the concepts and methods of participatory resource management through learning by doing. Class training and participatory action research addressing issues related to protected area management and livelihoods diversification have also helped. Nationally, lessons from the project have been used in discussions about protected area policy and management strategy.

8. Key Challenges

Challenges remain. For instance, a lack of analytical capacity to interpret field practice into official written documents often prevents the indigenous view from being heard and understood by the park authority. Limited understanding of the legal context governing co-management is another hindrance, as is the absence of a good facilitation process in consultations between the indigenous community and the authority. Furthermore, the attitude of government officials, who are not used to accepting indigenous people as equal partners, needs attention. Changes in national policy or practices are also needed.

9. Evaluation

As part of project activities during this current year, the McKnight Foundation has requested, and provided funding for, a project evaluation. This very useful exercise will identify the progress the project has made since 2006, specifically in:

1) bio-diversity conservation in protected areas
2) the rights of the indigenous in natural resource management
3) friction and collaboration between indigenous people and park authorities
4) recognition of the project at various stakeholder levels
5) indigenous institutional capacity

It will also assess the views and experiences of other organisations and individuals involved in collaborative management projects and networks.

The results of this evaluation will be used to guide the planning of future projects, and there is every chance that funding will continue, possibly enabling activity to be scaled out to different areas.

10. Overall Lessons

The personal view of the project leader, Mr. Tol Sokchea:

“Looking back, one lesson I learnt is that I could not treat the indigenous community as one group when there were actually four smaller elements: they were not dramatically different, but each one had to be approached in a different way. It was part of learning their cultural norms and ensuring that we responded so that the project intervention would be successful.

“In the project itself, I realised that there was a strong need for me to coach the team members— that it was crucial for them to have the capacity to take out messages especially at ground level, and to extract the most relevant information that is needed not just to help the indigenous at ground level, but also to help policy makers and other researchers. Different information is needed by different groups affected by this project.

“I also learnt that I needed to take staff turnover into account—and that even when they are fully trained, new staff need time to settle into the project. In any case they will need support and technical backstopping. But as long as the people in the community you are trying to help don’t change, you can still hope that the project itself will progress.

“On a personal level, it enabled me to transfer the lessons I learnt at university to a real situation—to apply theoretical skills to actual activity, and to understand the people, particularly what it means to be poor and how they struggle to survive. It was gratifying to have the authority—the power and the resources—to intervene and make a difference. I also experienced and gained an understanding of dealing with the wider context—donors, policy makers and other organisations, who have political or financial authority over your work—and how you deal with these factors to help people who are in a troubled situation, how you manage your team to respond, and how you tell people about your work.

“In short, it opened my eyes to the bigger picture, much more than I saw during my university studies: reading a thousand books cannot teach you as much as having the real experience.’

ANNEX 5

Sample Expression of Interest – ADB Format

ADB Asian Development Bank

Expression of Interest Consulting Firms

(EOI template is applicable for Technical Assistance/ TA and maybe adapted for loan projects to accommodate an executing agency's specific requirements)

1. Project Data

Project Number	
Project Name	
Project Country	

2. Eligibility

Declaration

We hereby declare that:

[N.B.: EOIs may be submitted by a firm, sub-consultancy, or a joint venture. For short-listing purposes, the combined experience of a sub-consultancy or a joint venture will be evaluated although the qualifications of the lead firm will be given a greater weight. Whereas the firm, sub-consultancy, or joint venture is free to submit additional information, short-listing will be based primarily on information included in this EOI template]

(i) we have read the advertisement, including the terms of reference (TOR), for this assignment;
(ii) we have not been engaged to prepare such TOR as a firm, sub-consultancy, or joint venture; and
(iii) no full-time or part-time or contracted expert employed by our firm, sub-consultancy, or joint venture has been engaged to prepare such TOR.

We further confirm that, if any of one or more of our experts is engaged to prepare TOR for any ensuing assignment as part of our work product under the assignment to which this advertisement relates, our firm and any such expert(s) will be disqualified from short-listing and/or participation in such follow-on assignment.

Lead Firm		DACON Registration Number(not mandatory):
Signed by: Position :		
Associate/Partner 1		DACON Registration Number:(not mandatory)
Signed by: Position :		
Associate/Partner 2		DACON Registration Number:(not mandatory)
Signed by: Position :		
Associate/Partner 3		DACON Registration Number:(not mandatory)
Signed by: Position :		

3. **Management Competence'**(Please answer each question in one paragraph of 3-5 sentences)

a. If you are proposing a sub-consultancy or a joint venture, outline the rationale for and benefits of the "association." Outline proposed management coordination of the "association," including the role of each firm.

b. Does your firm/sub-consultancy/joint venture have standard policies, procedures or practices in place that promote quality in: the workplace, your interaction with clients, and the outputs you produce? If yes, describe briefly.

c. Does your firm/sub-consultancy/joint venture have a dedicated unit or staff solely responsible for quality assurance? If yes, describe briefly.

d. How will you ensure the quality of your firm's/sub-consultancy's/join venture's performance over the life of this assignment?

e. How will your firm/sub-consultancy/joint venture deal with any complaints concerning the performance of the staff or the quality of the reports submitted for this consulting assignment? What internal controls are in place to address and resolve complaints?

4. Technical Qualifications

	Narrative Descriptions Based on the attached reference project sheets, highlight the technical qualifications of your firm/sub-consultancy/joint venture (maximum of 2 pages).

Project Sheets

Indicate up to 6 reference projects that the firm/sub-consultancy/joint venture feels are relevant. You may refer to your DACON projects sheets for more detailed information (N.B. Applicable to TA only)

Project 1 of 4

• Project Name			
• Name of Client			
• Country		Project location within Country	
• Participation		As lead firm As associate firm	
• Value of Services		(US$)	
• Source of Financing			
• Consultancy Services			
(i) No. of staff			
(ii) No. of person months			
• Length of Consultancy Assignment			
• Start Date		(dd/mm/yyyy)	
• Completion Date		(dd/mm/yyyy)	
• Name of Associate Firms (if any)			
• No. of Person-Months of Professional Staff Provided by Associated Firm(s)			
• Name of Senior Staff (Project Director/Coordinator, Team Leader) Involved and Functions Performed			
• Detailed Narrative Description of the Project			
• Detailed Description of the Actual Services Provided by your Firm			

Project 2 of 4

• Project Name				
• Name of Client				
• Country		Project location within Country		
• Participation		As lead firm As associate firm		
• Value of Services		(US$)		
• Source of Financing				
• Consultancy Services				
(i) No. of staff				
(ii) No. of person months				
• Length of Consultancy Assignment				
• Start Date		(dd/mm/yyyy)		
• Completion Date		(dd/mm/yyyy)		
• Name of Associate Firms (if any)				
• No. of Person-Months of Professional Staff Provided by Associated Firm(s)				
• Name of Senior Staff (Project Director/Coordinator, Team Leader) Involved and Functions Performed				
• Detailed Narrative Description of the Project				
• Detailed Description of the Actual Services Provided by your Firm				

Project 3 of 4

• Project Name				
• Name of Client				
• Country		Project location within Country		
• Participation		As lead firm As associate firm		
• Value of Services		(US$)		
• Source of Financing				
• Consultancy Services				
(i) No. of staff				
(ii) No. of person months				
• Length of Consultancy Assignment				
• Start Date		(dd/mm/yyyy)		
• Completion Date		(dd/mm/yyyy)		
• Name of Associate Firms (if any)				
• No. of Person-Months of Professional Staff Provided by Associated Firm(s)				
• Name of Senior Staff (Project Director/Coordinator, Team Leader) Involved and Functions Performed				
• Detailed Narrative Description of the Project				
• Detailed Description of the Actual Services Provided by your Firm				

Project 4 of 4

• Project Name				
• Name of Client				
• Country		Project location within Country		
• Participation		As lead firm As associate firm		
• Value of Services		(US$)		
• Source of Financing				
• Consultancy Services				
(i) No. of staff				
(ii) No. of person months				
• Length of Consultancy Assignment				
• Start Date		(dd/mm/yyyy)		
• Completion Date		(dd/mm/yyyy)		
• Name of Associate Firms (if any)				
• No. of Person-Months of Professional Staff Provided by Associated Firm(s)				
• Name of Senior Staff (Project Director/Coordinator, Team Leader) Involved and Functions Performed				
• Detailed Narrative Description of the Project				
• Detailed Description of the Actual Services Provided by your Firm				

Annex 6

SAMPLE CONCEPT NOTE: CDRI-IFPRI STOCK-TAKING ON FOOD SECURITY, NUTRITION AND AGRICULTURAL DEVELOPMENT POLICY IN CAMBODIA

May 2010

I. Context and Premise

The International Food Policy Research Institute (IFPRI) is undertaking a stock-taking exercise as a first step in an anticipated long-term programme to support the development and implementation of effective policies to strengthen food security and Cambodia's ability to adapt to climate change. The purpose of the stock-taking exercise is to identify gaps in knowledge and priority areas for future food security and climate change policy related research in Cambodia based on an assessment of prior studies, available data, and consultation with a range of stakeholders in and around the national agriculture and food security policy debate. The exercise aims to provide a reference point for government, international organisations, civil society/think-tanks, universities, and research organisations in planning research and capacity building services to address the knowledge gaps.

CDRI's participation in this project is in support of the above broad purpose and fulfils more specific objectives. First, it will assist IFPRI in its efforts to provide directions to future investments in the food security arena, particularly with regards to policy-oriented research and capacity building. CDRI'S particular role in this regard would be – based on its knowledge and data bases – to provide a grounded assessment and perspective in identifying and examining policy gaps and responses that shape equitable access to food security-related opportunities and resources. Second, it will help define a platform for dialogue among multilateral and bilateral development agencies seeking to harmonise their support in this area. Third, it will offer an opportunity to CDRI to build its researchers' capacities during this pilot collaboration with IFPRI, particularly in examining the influence of climate variability and longer-term climate change on food security and future economic development.

The scope of analysis concerns agriculture, food security, and climate change in the broad sense, comprising the full range of important food production systems (crops, fisheries, livestock, forest products), as well as the factors that condition people's access to food, within the context of broader development objectives including poverty reduction, economic growth, good governance, and environmental sustainability. The stock-taking will not only identify knowledge gaps and a menu of priority topics for further research, it will also assess the process of policy formulation and implementation, and present a framework for monitoring and evaluating the impact of policy interventions. For CDRI, this project opens an opportunity to (i) begin consolidating its knowledge base on food security and agricultural development policy as it independently and collaboratively works with IFPRI; and (ii) learn from IFPRI's analyses on the nutrition component of the study.

II. Activities

Below are the activities that IFPRI sets out to accomplish during this three-month scoping exercise. CDRI's proposed areas of focus for each activity are presented directly under each.

1. Review the literature on agriculture and food security policy research in Cambodia. The literature review intends to characterise the state of knowledge and provide a benchmark for future research on agriculture and food security policy. While the principal focus is on research documents directly related to Cambodia, the review will also consider important

research in other countries or regions that is of relevance and interest to the Cambodia study on substantive, methodological or policy grounds. This activity will synthesise major research-based policy conclusions and perspectives available in the literature and the knowledge gaps in this regard.

CDRI's particular interest in this activity lies in examining Cambodia's policy visions and policies on agriculture and food security, these policies' institutional bases and implementation procedures, the extent to which these policies have been implemented, and the various players engaged in related policy formulation and implementation. This task will build on a review of CDRI's related publications and other documents and, to a limited extent, national level materials [e.g., the *National Strategic Development Plan* (NSDP) and its 2009-2013 Update; the National Programme for Household Food Security and Poverty Reduction 2007-2011; the Strategic Framework for Food Security and Nutrition in Cambodia (SFFSN) 2008-2012; MAFF policy instruments (including its Water and Agriculture Strategic Plan and 2009-2010 Annual Report); the National Social Protection Strategy for the Poor and Vulnerable; the World Bank's *Sustaining Rapid Growth in a Challenging Environment*; FAO's *Mapping of Food Security and Nutrition Situation and On-Going Field Agent Efforts in Cambodia* in 2007]. At CDRI, key materials to be examined will include but are not limited to:

- Poverty Dynamics Study (ongoing)
- Moving Out of Poverty Study (MOPS), 2007
- Papers from the CDRI-ANZ 2009 and 2010 Outlook Conference (including the *Cambodia Development Review*, 13:2, April-June 2009)

2. Characterise the current situation for food security, nutrition and poverty from a broad perspective and multiple levels. Through basic statistical analysis, based on multiple household surveys that have been conducted in the country and data regularly collected, in combination with information drawn from relevant literature, this activity intends to identify the initial conditions and key issues for food security, nutrition and poverty at national, sub-national and household levels. Through this activity, indicators will be developed to quantify food insecurity and under-nutrition at different levels and across different demographic groups and poverty status. This activity will pay special attention to the regional/spatial pattern of food insecurity and food insecurity and malnutrition among vulnerable groups such as women, youth and the extreme poor by jointly examining natural environment conditions such as agro-ecological conditions, weather shocks and climate variability and change. To the extent available information permits, hot spots of food insecurity and vulnerability to external shocks including to climate change will be identified spatially.

   CDRI proposes to undertake a similar focus that IFPRI will take on this second activity. Its distinct task will be to pay special attention to household level analyses based on the Institute's related studies and materials (data, publications, other reports). To examine the access, availability and utilisation aspects of food security, analyses in this regard will draw on data and reports from:

   - Two ongoing/2010 studies with ADB (i.e., Socio-economic baseline assessments on the GMS Southern Coastal Corridor Project and the GMS Transmission Project)
   - Poverty Dynamics Study (ongoing)
   - Sustainable Pathways for Attaining the Millennium Development Goals, a project with the Stockholm Environment Institute (SEI), 2009-10
   - Tropical Forests for Poverty Alleviation – from Household Data to Global Analysis, 2010
   - Building Resilience of Community Fisheries in the Tonle Sap Lake: Collective Action and the Capacity to Manage Resources, 2010

- Building Community Capacity for Poverty Reduction Initiatives in the Tonle Sap Basin (including the 2009 Baseline Survey), 2009-10
- Related reports from the CDRI-ANZ 2009 and 2010 Outlook Conference
- Rapid Assessment of the Impacts of the Economic Crisis on Cambodian Households (Rounds 1 and 2), 2009
- Child Poverty and Disparities in Cambodia, 2008
- Participatory Poverty Assessment of the Tonle Sap, 2007
- Moving Out of Poverty Study, 2007
- Managing Natural Resources for Poverty Reduction, 2006

3. Initiate the quantification of the determinants of food security and poverty. IFPRI's research in many other developing countries has demonstrated that factors that affect food security vary, and it is necessary to specify the most important factors at play in order to develop effective policies and intervention strategies. The possible factors determining food security outcomes at the national and sub-national levels include level of and change in agricultural productivity and production diversification, domestic and regional market integration, international trade, and agro-ecological conditions including climate conditions and variability, while the factors affecting food security at household level include level of income and sources of income generation, consumption patterns and preferences, role and position of women in household and intra-household time allocation of women, household size, number of children, level of education, particularly mother's education, as well as many other demographic factors. While it is infeasible during the stock-taking phase to fully assess how these factors determine food security and poverty at national, sub-national and household levels, it is necessary to start investigating relevant issues and prepare for further in-depth analysis, including issues related to the vulnerable groups such as women, youth and the extreme poor. Moreover, this activity will help researchers identify required analytic tools and in-country capacity for conducting such analysis, such that subsequent capacity development will be more targeted.

   In taking on this third activity, CDRI will also conduct household level analyses to quantify the determinants of food security and poverty. Data and reports to be examined will build upon:

   - Two ongoing/2010 studies with ADB (i.e., Socio-economic baseline assessments on the GMS Southern Coastal Corridor Project and the GMS Transmission Project)
   - Poverty Dynamics Study (ongoing, including an analysis on remittances and poverty reduction, other related small studies from this research)
   - Rapid Assessment of the Impacts of the Economic Crisis on Cambodian Households (Round 1, 2009) particularly in relation to social safety nets
   - Moving Out of Poverty Study, 2007 (quantitative data at household level)
   - Managing Natural Resources for Poverty Reduction, 2006 (quantitative data at the household level)

4. Stocktaking on the identification of various impact channels through which existing climate variability and longer-term climate change may affect food security and future economic development, including national and sub-national economic growth, poverty reduction and vulnerability. These impact channels will include crop agriculture and irrigation, aquaculture and coastal fisheries, livestock, energy (including hydropower), and rural and coastal infrastructure (including roads). Stocktaking will assess the availability of information to lead to a more in-depth study to be undertaken as a potential follow-on activity. At policy level, this activity will evaluate the level of understanding of climate change among the government, NGOs and private sector in Cambodia, and review past and on-going

environmental projects within the country. It will synthesise existing studies on climate variability/change in Cambodia and the broader region, as well as studies and policies addressing adaptation and mitigation measures, and observed impacts of past extreme weather events (i.e., floods and droughts). This activity will also pay attention to the information that will be useful in assessing agricultural mitigation potential in the country by agricultural sub-sector, location, timeframe, and mitigation activity. To support the development and implementation of effective policies for adaptation for future climate change, it is important to increase awareness of climate change impacts on water resources and food production in the country and to build capacity for policymakers and researchers to analyse and assess new information on climate change and help them develop adaptation strategies that can be taken forward by the country itself. For this purpose, it is important for this activity to collect information that will help to identify local institutions with the capacity to evaluate different aspects of climate change (e.g., water resource institutions with hydrology or water basin modelling capabilities, and agricultural research institutes with crop modelling experience). As an output, this activity will lead to the development of a proposal for collaborative, integrated research agenda on climate-resilient food security and development strategies.

This fourth activity will be an area on which capacity building of CDRI researchers is being sought. However, it will also offer analyses and perspectives based on related research projects it has done and is doing at present, specifically:

- Hydrological Knowledge and Community Participation for Improving Decision-making on Water Allocation for Irrigation (a physical component research on water resources management), 2009-10
- Sustainable Pathways for Attaining the Millennium Development Goals, a project with the Stockholm Environment Institute (SEI), 2009-10
- One of two ongoing/2010 studies with ADB (i.e., Socio-economic baseline assessment on the GMS Southern Coastal Corridor Project)
- Building Resilience of Community Fisheries in the Tonle Sap Lake: Collective Action and the Capacity to Manage Resources, 2010
- Building Community Capacity for Poverty Reduction Initiatives in the Tonle Sap Basin (including the 2009 Baseline Survey), 2009-10
- Managing Natural Resources for Poverty Reduction, 2002-06

CDRI will also seek additional information from governmental and non-governmental agencies that can help shed light on the various impact channels through which existing climate variability and longer-term climate change may affect food security and future economic development. Mindful of the interactions that IFPRI might have already done, some of the agencies to be approached are the Ministry of Environment, the Ministry of Water Resources and Meteorology, Cambodia's National Disaster Committee, and the local office of the Asian Disaster Preparedness Center.

5. On the basis of the four activities above, produce a prioritised set of policy research topics and categorise them as short-term (1-2 years) and medium-term (3-5 years) studies on food security, nutrition, poverty and climate change. A list of potential research topics will be ranked, reconciled and prioritised after consultations with various stakeholders to reflect the actual need for relevant policy research. The early involvement of stakeholders at this stage of scoping research priorities increases the likelihood that future results will directly inform policy implementation for achieve maximal impact.

   CDRI will also provide support to IFPRI on this activity. At the same time, however, it will line up a list of potential studies it can develop proposals and seek funding for and which can feed

into the development of a longer term research programme on poverty, agriculture and rural development. An implicit agenda is to continue to build its researchers' capacity for analysing food security and poverty and, towards this end, foster collaborative efforts with IFPRI and other international institutions.

6. Identify additional research topics where there is a high benefit to be gained from international exchange of experience. This will include research that, although not dealing directly with Cambodia, have a methodological or policy value for ongoing and future agriculture, food security, and climate change research in Cambodia, particularly on subjects that local research and data have not elucidated sufficiently.

   CDRI will collaborate with IFPRI on this activity, also as part of its capacity building agenda and to expand its network and partners in the area of food security, poverty and environmental analyses.

7. Develop a plan for institutional collaboration and capacity strengthening through joint research. Institutional collaboration between IFPRI and CDRI will be assessed during the stock-taking phase, and if possible, joint research will be launched immediately thereafter. Possible collaboration with other research institutions and with the government agencies will also be assessed.

   CDRI is partnering with IFPRI in this stocktaking activity and as noted in Activity #5 above, it will seek to pursue and/or continue this institutional collaboration after this first endeavour.

III. Expected Output

The final output of the stocktaking activities is a report that synthesises findings from the literature review and stakeholder consultations in terms of both knowledge gaps and prioritised topics for additional study. The report will provide a basic assessment on conditions of and factors affecting food security, nutrition and poverty from a broad perspective and multiple levels. The report will pay particular attention to the challenge of integrating policy initiatives in relevant sectors and emphasise an integrated framework in designing food security and climate change strategy and policy priority setting. The report will also provide the immediate basis for dialogue and joint agenda-setting among relevant partners with regards to future research and capacity development priorities.

CDRI will share its findings and analyses with IFPRI to help strengthen its report. However, it will also produce its own report such that it produces a synthesis and confluence of the studies it has done on food security, poverty, natural resources management and agricultural development policy.

IV. Consultation Process

CDRI's and IFPRI's stock-taking is envisioned as a three-month exercise, comprising the six activities outlined above, and culminating in a final report. The CDRI team will undertake consultations with the IFPRI team members or through electronic mail or video conferencing. It will also participate in an IFPRI-organised round-table event(s) to present the exercise in progress and seek guidance and input from a range of stakeholders. Similarly, it will take part in the planned dialogue workshop with several development partners in Phnom Penh to present and deliberate on the findings of the stock-taking and explore joint agenda-setting for future activities.

V. Proposed Budget

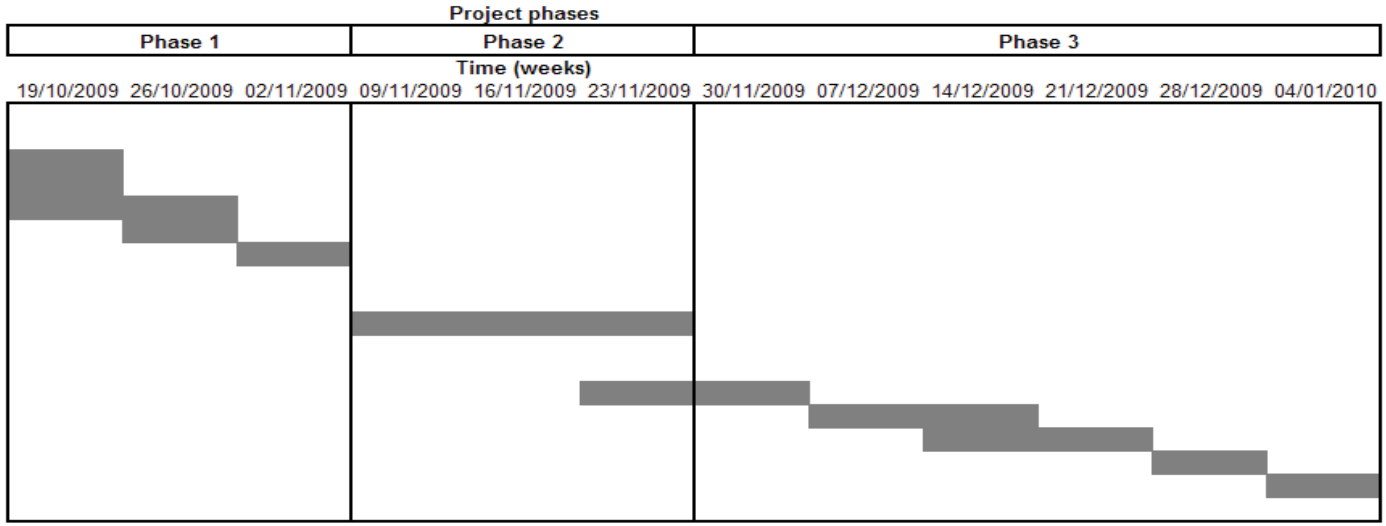
	Description	Quantity	Number of days	Rate (US$/day)	Total (US$)
A.	**Personnel Costs**				
	Research Director	1	3		
	Research Adviser	1	8		
	Research Fellow	1	20		
	Research Associates	2	40		
B.	**Secondary materials for literature review**				
C.	**Institutional/Managerial cost** (15%)				
D.	**TOTAL (A + B + C)**				

ANNEX 7

Work Plan—Cambodia Health Workforce Retention Survey Project Phases

(This sample work plan indicates all tasks and activities by phases (Phase 1, Phase 2 and Phase 3) per week, (total of 12 weeks); dates for the deadlines; data collection schedule by province; total time allotted for survey; and number of survey teams from CDRI and team leader.)

Work plan
Project name: **Cambodia health workforce retention survey**
Project number: **OPI 31306**



Deadlines Start conditional on agreement with Work **02/11/2009** **23/11/2009** **04/01/2010**

Data collection schedule

	Phnom Penh	Battambang	Kampong Cham
Sample size	120	40	40
Briefing time (days)	4	1	1
Travel time (days)	0	4	2
No of session of 10 each	12	4	4
No of days to complete @ 2 sessions per	6	2	2
Total days to complete	10	7	5

Total survey time 22 days

Survey team

CDRI	2
TL	1

ANNEX 8

TIMELINE FOR CDRI POVERTY DYNAMICS STUDY, 2008-2009 (IN CDRI PROPOSAL FOR POVERTY DYNAMICS STUDY)

(A sample work plan with project phases, also covering the description of tasks under each major activity heading. For example, Phase 1 activities include (1) literature review, books and IT, (2) preparation and initial field visits, (3) consultation and capacity building, (4) round one field work and preparation and the time frame for each of the activities on a monthly basis from 2008 to 2009.)

Timeline for CDRI poverty dynamics study 2008-2009

Phase 1: Preparation and Round One Fieldwork - January to March 2008

		January					February				March			
Description		2-Jan	7-Jan	14-Jan	21-Jan	28-Jan	4-Feb	11-Feb	18-Feb	25-Feb	3-Mar	10-Mar	17-Mar	24-Mar
1	**Literature review, books and IT**													
1.1	Purchasing 30 books (poverty, gender ...)													
1.2	Purchasing 2 laptops, voice recorders													
1.3	Design and creation of MOPS specific website and its link to global MOPS													
2	**Preparation and initial field visits**													
2.1	Finalize contract, team, and develop detailed work plan													
2.2	Cleaning the existing data, making it useable for analysis													
2.3	Prepare (incl. pilot testing of the survey) for and conduct initial field visits by key researchers													
2.4	Prepare top-line reports from field visits													
3	**Consultation and capacity-building**													
3.1	Expert meeting to finalize research objectives and questions													
3.2	NVIVO training, buying software and manual													
3.3	Preparation of policy/research briefs and their dissemination													
3.5	Preparation of Khmer language briefs													
4	**Round one fieldwork and preparation**													
4.1	Revise and finalize Round One survey instrument													
4.2	ACCESS TRAINING													
4.3	Conduct enumerator training													
4.4	Pilot survey instrument													
4.5	Commence fieldwork													

Phase 2: Complete Round 1, start Round 2, analysis and reporting (may be modified during Phase 1)

Description		2008									2009											
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	**Literature, publications and website**																					
1.2	Literature review																					
1.2	**Producing policy brief, ADR/CDR articles**																					
1.3	Updating website																					
2	**Round one fieldwork, cont.**																					
2.1	Complete fieldwork including price survey																					
2.2	Data entry and cleaning, archiving and storage																					
2.3	Initial data analysis																					
2.4	STATA training, buying software and manual																					
2.5	Top line reporting																					
3	**Round two fieldwork - survey**																					
3.1	Revise survey instrument																					
3.2	Conduct enumerator training																					
3.3	Pilot survey instrument																					
3.4	Conduct fieldwork including price survey																					
3.5	Data entry and cleaning																					
3.6	Initial data analysis																					
3.7	Top line reporting - quantitative																					
4	**Round two fieldwork - qualitative**																					
4.1	Redesign qualitative instruments																					
4.2	Refresher training for facilitators																					
4.3	Conduct qualitative fieldwork																					
4.4	Data entry and coding																					
4.5	Initial data analysis																					
4.6	Top-line reporting - qualitative																					
5	**Reporting - overview & thematic papers**																					
5.1	Finalize concept and outline for full report																					
5.2	Additional quantitative and qualitative analysis																					
5.3	Drafting of report (This should be an on going activity, starting much earlier)																					
5.4	Finalize report and publish																					
5.5	Determine concepts and outlines for thematic papers																					
6	**Consultation & dissemination processes**																					
6.1	Meeting for consultations																					
6.2	Provincial and national dissemination workshops																					

ANNEX 9

Form Tech 7: Staffing Schedule—CDRI's Standard Forms for Technical Proposal

(A work plan reflecting staffing schedule with names of staff and total staff-month inputs divided between home and field. It shows the time allocation in terms of how many days and what trainings are needed to prepare for the activities.**)**

FORM TECH-7. STAFFING SCHEDULE[1]

N°	Name of Staff	Staff input (in the form of a bar chart)[2]													Total staff-month input		
		1	2	3	4	5	6	7	8	9	10	11	12	n	Home	Field[3]	Total
Foreign																	
1		[*Home*]															
		[*Field*]															
2																	
3																	
											Subtotal						
Local																	
1	Research Staff 1	[*Home*]													25		
		[*Field*]														15	
2	Research Staff 2	[*Home*]													10		
		[*Field*]														15	
3	Research Staff 3	[*Home*]													10		
		[*Field*]														15	
4	Team Leader	[*Home*]													30		
		[*Field*]														30	
											Subtotal						
											Total						150

1 For Professional Staff the input should be indicated individually; for Support Staff it should be indicated by category (e.g.: draftsmen, clerical staff, etc.).
2 Months are counted from the start of the assignment. For each staff indicate separately staff input for home and field work.
3 Field work means work carried out at a place other than the Consultant's home office.

Full time input Part time input

ANNEX 10

Form Tech 8: Work Schedule—CDRI's Standard Forms for Technical Proposals

(A work plan indicating all main activities of the assignment, including delivery of reports (e.g., inception, interim and final reports) and other benchmarks such as client approvals. For phased assignments, activities, delivery of reports and benchmarks are indicated separately for each phase. Time frames of the activities are indicated in the form of a bar chart.)

FORM TECH-8. WORK SCHEDULE

Table Legend	
Project Activity	
Deliverable	🗐
Workshop/Consultative Meeting	W
Client Approval	A

N°	Activity[1]	Months[2]												
		1	2	3	4	5	6	7	8	9	10	11	12	n
1	Team mobilisation, organisation and inception report													
2	i. Submittal of Inception Report	🗐												
3	ii. Formal Meeting to Review Inception Report	W												
4	iii. Approval of Inception Report	A												
5	Design fieldwork strategy and questionnaires													
6	i. Submit fieldwork strategy and questionnaires		🗐											
7	ii. Pilot testing													
8	iii. Approval and finalise		A											
9	Conduct fieldwork													
10	Analysis and write report													
	i. Submit of draft report				🗐									
	ii. Review and revise the draft report					W								
	iii. Submit of final draft					A								

1 Indicate all main activities of the assignment, including delivery of reports (e.g.: inception, interim, and final reports), and other benchmarks such as Client approvals. For phased assignments indicate activities, delivery of reports, and benchmarks separately for each phase.

2 Duration of activities shall be indicated in the form of a bar chart.

RESEARCH PROJECT DEVELOPMENT AND MANAGEMENT—A HANDBOOK

CDRI

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