# Pacific Gender and Climate Change toolkit

## Tools for practitioners

(DRAFT)

SPC Secretariat of the Pacific Community

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# About this toolkit

**This toolkit is designed to support climate change practitioners in the Pacific islands region to integrate gender into their programmes and projects. It is aimed at climate change professionals working in national governments, non-governmental organisations, regional and international organisations who are involved in managing and implementing climate change programmes[1].**

While many of us are aware that gender does matter for sustainable development and climate change adaptation and mitigation, we may not know clearly how it matters, and what tools are available that can help to assess how it matters. Knowing is also not enough: we must apply this knowledge in a practical way when we design and implement activities, and ensure that we are capturing useful and important information through our monitoring and evaluation frameworks. This toolkit provides advice at a practical level, to address these needs. The principles and practices proposed in this toolkit are based on many decades of experience in the integration of a gender perspective in sustainable development, natural resources management and disaster preparedness.

The toolkit is divided into three parts. This introductory module explains why gender is a critical consideration in climate change programmes, projects and strategies, and clarifies some common misconceptions. Module 2 focuses on the links between gender and climate change in specific sectors (e.g. food security, water and energy); and uses sector-relevant case studies to explain how to take gender into consideration. It also includes a module on disaster risk reduction recognising that these interventions should be factored into all climate change adaptation programmes and projects. These sector chapters can also be used as stand-alone documents for practitioners to guide their analysis in a specific sector. Module 3 is the 'how-to' section and will take you through the different phases of a typical climate change programme/project cycle, identifying potential entry-points for integrating gender in each phase and also includes a generic gender checklist that may be applied to programmes and projects.

This toolkit will not make you a gender expert! However, it provides guidance along with links to other resources that can help strengthen your knowledge about gender and climate change.

The toolkit is designed to be a living document which will be revised and added to in future. Its use will also be supported by training and technical assistance to further build capacity in the Pacific islands region to effectively integrate gender in all climate change initiatives.

[1] Practitioners working at the community level may also find useful the following "Toolkit to Mainstream Gender into Energy and Climate Change Community Based Adaptation Projects in the Pacific" (SPC, 2013).

# Module 1: Introduction

**Climate change is a real and growing threat to the people of the Pacific islands. Rising sea levels and extreme climate events – such as floods, droughts and cyclones – are already evident and are affecting livelihoods, food security, water availability, and stability of communities. Climate change is likely to affect all people living in the Pacific islands, however not everyone is affected equally, because individuals have differing vulnerability and capacity to cope and adapt to climate change.**

Source: SPC, 2013

Societies, communities, and households are not homogeneous groups where everybody is affected in the same way by climate change and has the same capacity to adapt. Different groups of people have different interests, different priorities, different levels of power, and different capacities to access critical resources for adaptation and mitigation. For example, women, men, girls and boys have different roles and responsibilities within their families and communities, and as a result have different levels of access to resources and power. Women and men also have different skills and knowledge to contribute. However, barriers to the full inclusion of women in decision-making processes can limit their ability to contribute and expand their skills and expertise. Women and men are not homogenous groups either. Factors such as age, socio-economic status, or disabilities, also affect vulnerability, access to power, resources and decision -making processes. For instance a female director in public service is likely to have more decision making power than an unemployed male youth. Gender should therefore be considered alongside these issues.

Despite those differences, among the many adaptation and mitigation initiatives under way in the Pacific region, few integrate gender dimensions across the design and implementation, but overlooking gender can greatly weaken the outcomes of these initiatives. Developing strategies to deal with the range of challenges climate change presents will require all available resources and knowledge.

# Definition: Sex and gender

**Sex** refers to biological differences between women and men. These differences exist for reproduction purposes and are essentially fixed.

**Gender** refers to the socially constructed roles and responsibilities of women and men. The concept of gender includes expectations about the characteristics, abilities, and behaviours of women and men - what people believe women and men can and should do. These roles and expectations are learned and vary across different cultures. The roles expected of women in a rural community in the Solomon Islands may be different from those expected of women in a city in Samoa. The responsibilities of a man in Kiribati may be different from those of a man in Palau. Transgender groups and individuals should also be considered, as they may identify their gender role as being opposite to their sex. These roles and expectations can change over time, and can be affected by changes in economics, politics, technology, education, environment, the influence of other cultures and the media, mass advocacy, crisis, and conflict.

An example of how gender can affect vulnerability to climate change is where a woman cannot attend training about climate change impacts because she is expected to cater for the training with other women). This limits the information she can access to help her make decisions on how best to manage climate change impacts. Another example is the expectation within a society that a man's role is to provide for his family. If an event causes major losses in the main cash crop that men produce to make money for their families, they may feel significant stress, burden and social pressure to find another way to make money. In both cases, these roles (preparing meals, and generating family income) are not 'natural'; they are based on the society's expectations of what men and women can and should do.

Tanna men building fruit dryer Source:SPC-GIZ,2013

# Common Misconceptions

**The expectations and stereotypes about the roles of women and men, about their respective capacity and their needs, often influences programme and project design. These can lead to misconceptions about gender and the meaning of gender equality. In this section, we will examine those misconceptions and provide guidance to those involved in programme and project design and implementation.**

### Misconception 1 : Gender equality is all about women and projects focusing on women

Gender equality is not just about women, it is about the differences between men and women in terms of gender roles, access to resources, and an individual's ability to fully participate. Once we understand these differences, through a gender analysis, and their implications we can see which groups of men and women and girls and boys are disadvantaged; and then develop specific strategies to address these differences. In some cases gender-sensitive projects target men. For example, on Ambae Island, Vanuatu, during drought periods, men are responsible for fetching water from a neighbouring village when their water supply runs dry. If droughts become more severe as a result of climate change, this will add to the workload of the men in the village. A project which improves rainwater harvesting to address water shortages would reduce this added burden.

One of the reasons that gender-responsive programmes often include explicit measures targeting women is the recognition that some issues have a greater impact on women because of their social status and differences in access to decision making processes. Therefore, a gender responsive climate change initiative would pay attention to the causes of differences between women and men and attempt to address those issues, or at least not contribute to reinforcing stereotypes and gender inequalities.

### Misconception 2: We should not question women's roles and men's roles, as this is part of our Pacific culture and traditions

Cultures change and evolve over time. There are many examples of cultural change in the Pacific. For example, many women have paid employment and as such have moved away from their traditional roles of fishing and gathering food for the family; domestic chores are in some cases done by paid house helpers. In matrilineal societies as in many Micronesian countries, women still own and have access to land but men in most cases have taken over decision making relating to land. Rural- urban migration has resulted in people moving from their communities and in the process traditional roles are being modified and changed. Since culture is always changing, we have the option of either passively standing by, or trying to influence that change in positive ways. If our cultures in some way subordinate women and give them lower status than men, then it may benefit everyone in the society, particularly our daughters and sons, to modify this. Positive aspects of culture can promote equality between everyone in a society.

**Misconception 3: Climate change is a scientific matter, so it has nothing to do with gender issues**

The reason we care about climate change is because it impacts people, our well-being and our ways of life. Scientific work allows us to better understand and predict the impacts more accurately. Many differences between people, and the way that climate change affects them, are related to gender differences.

Even the most technical aspects of climate change – such as scenarios for modelling the impact of climate change on Pacific fisheries – have gender implications which we can identify when we think about the way these technical issues impact on people's lives. Men and women use fisheries resources in different ways and information relating to the way in which climate change will impact these resources needs to reach the people involved in managing these resources. The science is vital but needs to be packaged and presented to different audiences in different ways so that they can make informed decisions about how to manage the changes they are facing.

**Misconception 4: Gender sensitivity means understanding that women are more vulnerable to climate change impacts**

In some circumstances, some groups of women are more vulnerable to climate change impacts than other groups. Some groups of men, however, are also particularly vulnerable, such as men who live in squatter settlements, work in agriculture, are unemployed, or are elderly and living alone. What is important is understanding why and how different groups of people are vulnerable. It is also vital to consider people's capacities (their skills, knowledge and abilities). Women and men contribute various talents and capacities to enable climate change adaptation. Women are not just vulnerable, nor are they victims; they have skills and abilities which are vital for effective response.

"I remember that during the development of the National Climate Change Policy [in Tuvalu] it was really interesting to learn how both men and women responded as to how we can address the impacts of climate change, including sea level rise, in Tuvalu. In some cases the men folk seem to be more traditionalists, especially the older men, while women tended to think about the future of their children."

Loia M. Tausi, Project Co-ordinator Pacific Adaptation to Climate Change (PACC), Tuvalu Contribution to the Climate Change & Development (CCD) Community of the Pacific Solution Exchange Query: Gender and Climate Change

**Misconception 5: The best way to ensure gender equality is to have some women in attendance at meetings when decisions about climate change are discussed**

Women should be in attendance at meetings, and they should be encouraged to speak, contribute, and freely express their opinions. Making sure men and women equally participate in decision making, however, requires much more than meeting attendance. Women should be involved in decision-making at all stages; their viewpoints should be taken into account; their skills and capacities used and their concerns and priorities addressed. Pursuit of gender equality will require a broad strategy and activities on numerous levels, which ultimately aim to improve women's status in the context of the project and the society.

Many experiences in the Pacific region and across the world show that all of society benefits when women have equal voice in decision-making and governance processes, when they have equal access to critical resources, and when the respective needs of women and men are addressed and their respective knowledge and capacity is recognised and enhanced. This leads to safer societies, more sustainable use and management of natural resources, increased food security, more useful infrastructure, better educated and healthier people, and economic growth. Incorporating a social perspective, which looks at the differences between men and women, will lead to more effective climate change programmes and projects

"In Ugi community in Makira Province, Solomon Islands we started with some of the risk assessment tools with the community with regard to awareness and information sharing. The initial DRR [disaster risk reduction] activity involved a fair cross section of representation from men, women and youths. As a result, men in the area now seem to consult with women most especially when it is something to do with disasters.... As a follow on to the project activities, further awareness and information dissemination on climate change is done with the children as the focus group. It is very fascinating to see the involvement of women in these follow up activities with the children. We therefore realized that the involvement of women in child-focused activities will definitely contribute positively to sustainability and ownership of project activities. The women are also very helpful in interpreting concepts and ideas in the local language for the children. I personally feel that this might not be the case if women were not involved at the initial stages."

Fred Talo, Disaster Risk Management, Private Practitioner, Solomon Islands. Contribution to Climate Change & Development (CCD) Community of the Pacific Solution Exchange Query: Gender and Climate Change.

SPC-GIZ 2013

**Misconception 6: Addressing gender issues means addressing only the practical needs of both men and women**

Many climate change programmes and projects consider the practical needs of women and men, such as access to food, water and technologies. These interventions are often introduced to improve living conditions. This approach, although important, does however not address fundamental issues about different access to resources and decision-making. These long term needs are described as strategic needs.

For example a contributing factor to a person's vulnerability may be their lack of information about how to prepare for a cyclone. In some cases women may not participate in a disaster risk reduction training programme because they do not have time to go to a meeting for a whole day or in the evening. It is therefore important to organise training at times and locations that are convenient for women and men to attend. Another factor restricting women's participation could be that men usually attend meetings and training and represent their household because this is the social norm and their traditional role. In this case, efforts to raise awareness with both men and women about the benefits and importance of women's participation in the training must be done. It could be useful to plan a separate training for women only, if women feel more comfortable to ask questions and express their views in this setting.

We often shy away from dealing with these issues as they can be sensitive and we would rather leave them to be addressed by the communities themselves. A programme does not have to be a "gender programme" to address gender issues and promote gender equity and equality. Any climate change initiative should address gender issues as failing to do this can reduce our programme's effectiveness and success.

*Addressing strategic needs requires a good understanding of the specific gender relations and decision making processes in a particular country or community. It is recommended to work with gender experts to support this process and to help the programme find entry points to address both practical and strategic needs.*

# Illustrative example:

**Participation in household decision making**

A Demographic and Health Survey conducted in the Solomon Islands found that a significant number of women are less involved than men in household decision-making on how their family's money is spent in regard to major household purchases, daily needs, their own health care, and visits to their family. While 54.6% of women surveyed did participate in all four types of household decisions, 40% responded that they did not have a say in one or more of these decisions and 6.4% have no say in any decisions made for the household (Solomon Islands 2007 Demographic and Health Survey, SPC). Being able to make choices is an critical factor for adapting to climate change. Decisions have to be made about how to invest household incomes to protect assets, or how to adjust livelihoods based on climate change impacts or where to go to get assistance to manage these changes. If women are not able to take those decisions, or participate in the decisions, they are less able to adapt and are more vulnerable to climate change impacts.

### Misconception 7: Both men and women will benefit from the interventions so there is no need to differentiate

Many climate change strategies focus on technological solutions and infrastructure, which are designed based on the assumption that everybody will benefit, so it is not necessary to differentiate between women and men. However, not taking into account human factors and gender perspectives may lead to interventions that are not viable for all.

In Tuvalu (see Module 2.2), during consultations on composting toilets as a way to improve sanitation and reduce pressures on limited water availability, women raised key concerns about the location of the toilets (and specifically a preference for them to be built inside the house as opposed to a separate building) and concerns about using human compost for agriculture and gardens. As a result the recommendation for interior construction of toilets has been incorporated into the water policy and additional awareness and training was provided to address concerns about the use of human compost. Without these additional interventions the same 'technical' solution would have had much lower acceptance and therefore effectiveness.

### Misconception 8: Gender-based violence (GBV) has nothing to do with climate change

Climate change may increase the intensity of disasters such as tropical cyclones, floods and droughts. Both women and men experience higher stress levels immediately before disasters because they need to protect their family members, and after disasters as a result of the loss of their homes and possessions. Evidence shows that during and after disasters, levels of sexual and gender-based violence often increase. After two tropical cyclones hit Tafea Province in Vanuatu in 2011, the Tanna Women's Counselling Centre reported a 300% increase in new domestic violence cases[1]

### Misconception 9: "I'm a woman so the gender perspective is covered"

Although women often have an insight into gender issues and vulnerabilities, being a woman does not qualify someone to integrate gender into a project. This requires skills and training in gender analysis and other gender tools. It is important to work with gender experts and social scientists who have these specialised skills, to improve the effectiveness of climate change initiatives.

(Kilsby and Rosenbaum p22)

# Section 2: Applying a gender lens to key climate change and development priorities

## Part 1: Different Roles, Different Priorities, Different Needs

Women and men work together to fulfil the needs and contribute to the wellbeing of their families; but they often perform different activities on a day-to-day basis to meet these needs. A first step for integration of gender into climate change programmes and projects is to recognise the different roles, priorities, and needs of men and women, and the ways in which both perspectives are valuable. Below are some examples of how climate change affects men and women in key development sectors.

### *Food production and food security*

Climate change will affect food production all along the food chain, from direct impacts on primary production which may lower crop yields, to indirect impacts such as damage to infrastructure from extreme events, for example roads, making transport of food difficult. Climate change impacts, such as temperature and rainfall changes, more intense flooding and droughts, saltwater intrusion and ocean acidification will compound existing threats to food security from unsustainable land fishing and land use practices and declining biodiversity.

Men and women are often involved in different aspects of food production and preparation:

- In some countries men are often more involved in commercial forms of agriculture and will face the pressure to cope with damage to crops and reduced productivity due to the impacts of climate change.
- In others it is traditionally women who are responsible for agriculture. In many countries women are also playing an increased role in commercial agriculture and value addition.
- Women are often responsible for food preparation and have traditional knowledge that can contribute to identifying successful adaptation strategies.
- Women and men often have differentiated roles in fisheries activities. Women are more likely to carry out near shore activities, whereas offshore fishing is usually undertaken by men.
- Therefore, it is not only important to look at the extent of climate change impact on a particular ecosystem but also identify who is being affected by those changes and how they are being affected.

### *Water*

Water is already very scarce in some island countries and territories like Kiribati, Tuvalu, Tokelau, Niue, Nauru and the Republic of the Marshall Islands. Atolls in the Pacific are particularly affected, due to heavy reliance on a slender groundwater lens. The causes of water scarcity and reduced water quality are not solely climate-related and include unsustainable use of water, lack of maintenance of equipment, and pollution of underground water because of activities like livestock production and poor sanitation and waste management. Climate change impacts, such as saltwater intrusion and changes in rainfall patterns, will likely add to these problems and further reduce the availability of safe drinking water in most Pacific island countries.

- Men and women may have different priorities regarding water use. Men are more likely to use and manage water for agriculture and livestock production, while women are often responsible for household water usage and its management.
- Water-borne diseases affect everyone, but children and the elderly are more at risk. When a community has an outbreak of diseases, women are usually tasked with caring for the sick in addition to their usual day to day role. Therefore it is vital that women have easy access to information about the timing of water shortages and supply disruptions, and forecasts of drought.
- Sanitation programmes tend to target women because of their roles in care and household water management. It is important that men are also engaged, so that they understand and actively contribute to ensuring household sanitation practices and appropriate management.

- In some cases, women's traditional knowledge about water resources is critical. During a drought in the Federated States of Micronesia, women's knowledge about the islands' hydrology allowed them to easily find places to dig wells for drinking water. Women are not normally involved with decision-making, but the information they provided benefited the entire community.

### *Energy*

Many Pacific island countries and territories are remote, isolated, and scattered over miles of ocean contributing to high-energy production costs. Coupled with small populations and markets, this leads to relatively high per unit costs. Limited access to cash income constrains the ability of everyone to access energy.

- Women and men need energy for many of their daily activities, and because of their different roles they may have different energy needs. For example men may prioritise fuel for fishing boats and women may prioritise fuel for cooking.
- National governments often prioritise energy policies that focus on transport and large-scale energy infrastructure to expand and maintain the overall energy supply network. These policies often equate access to electricity with the provision of electricity supply. This can obscure issues of affordability and who has access at the local level.
- When modern forms of energy supply are not available or are too expensive, women will often use biomass for household energy needs, such as fuel-wood from mangroves for cooking. This contributes to health risks associated with smoke inhalation.

### *Disaster risk reduction and climate-related disasters*

Climate change is likely to lead to an increase in the intensity of disasters such as cyclones, floods, droughts and severe storms. Communities in the Pacific use many diverse strategies to cope with and respond to disasters and extreme weather events.

- Both men and women play a critical role in the preparation and recovery process but women may not have the same capacity to influence decision-making. Men, particularly those with greater levels of power and authority, are usually the ones informed and consulted by response agencies, including governments, and they directly participate in the decision-making and management processes for disaster risk management. This could mean that women's needs and priorities are not properly addressed in early warning systems, preparedness, and during the recovery process.

### Policies and strategies

Few climate change strategies take into account differences in term of roles, knowledge and priorities of women and men. Greater vulnerability of women is acknowledged in many strategies related to climate change (for example the Samoa National Adaptation Plan of Action, the Solomon Islands National Climate Change Policy, and the Fiji Climate Change Policy) but very few initiatives are proposed to address the causes of their vulnerability.

**Part 2: Different power, different access, different opportunities: taking into account the gender perspective in climate change programmes**

An important step for the integration of gender into climate change initiatives is to acknowledge that not everybody has the same opportunities and the same power within their households, communities, and societies. Socio-economic inequalities mean that some people are more vulnerable than others. Inequalities reduce individuals' capacity to cope with climate change impacts. Understanding and responding to these inequalities, in programme design and implementation, will make efforts to adapt to climate change more effective.

Men are often expected to be breadwinners, and the main decision makers in their households and communities. These factors can result in the exclusion of women's views from key decisions. When this happens, communities miss out on the significant knowledge, skills and capacities of half their population. Gender inequality therefore weakens the resilience of many Pacific communities to climate change impacts.

To address the impacts of climate change, people need:

- information, education and training on issues such as seasonal forecasts and climate change projections, suitable adaptation approaches and technologies , and new livelihood options;
- to be able to make choices and decisions regarding adaptation measures, livelihood options decisions, and perhaps whether to relocate as a response to changes;
- access to resources, such as finance, land and knowledge;
- strong social capital and support networks to foster sharing of skills, knowledge, access to resources, and emotional support.

Although Pacific societies do not always specifically or overtly discriminate against women, women often have less access to all of these resources. They may have fewer opportunities to participate in decision making, less access to and control over resources, and less opportunity to realise their basic human rights. These inequalities have little to do with women's physical abilities; they are generated by social norms about women's and men's status, and what they are expected to do.

## Definition:

Gender equality, or equality between women and men, refers to the equal enjoyment by males and females of all ages of rights, socially valued goods, opportunities, resources and rewards. Equality does not mean that men and women are the same but that their enjoyment of rights, opportunities and life chances are not governed or limited by whether they were born male or female.

(IASC 2006) Gender Handbook. The Basics on Gender in Emergencies http://www.who.int/hac/network/interagency/a1_the_basics_of_gender_equality.pdf)

Addressing gender inequality will make initiatives to address climate change impacts more effective by drawing on the skills and knowledge of the whole community. It is critical to empower women and engage men in a process where women and men work together as partners and decision makers from the household level to the national level.

"Gender inequalities intersect with climate risks and vulnerabilities. Women's historic disadvantages — their limited access to resources, restricted rights, and a muted voice in shaping decisions — make them highly vulnerable to climate change."

UNDP. Human Development Report 2007/08. Fighting climate change: Human solidarity in a divided world

## Illustrative example:

The Solomon Islands National Disaster Risk Management Plan takes note of one lesson learned from recent disasters: several cases of exploitation and abuse of power by men have been reported in the distribution of relief supplies to women, as an expression of power imbalances. This has resulted in the recommendation that women should be put in charge of the distribution of relief items.

The gender assessment of the response to the flooding in Fiji in 2012 found that women were more vulnerable to violence when they distributed relief supplies without the support of men. It was therefore recommended that in future men and women work together in distribution.

Recognising and responding to the differences between men and women discussed above will support more effective climate change adaptation and mitigation programmes, projects and policies. Gender mainstreaming is recognised as an effective approach for addressing gender inequality and achieving sustainable development, and is likely to make a significant difference in building resilience to climate change.

Mainstreaming gender in climate change initiatives is about making sure that both women's and men's needs are addressed; making sure they can access resources and services equally; and that they benefit equally from the initiatives.

**This may mean working differently. We need to look carefully at how priorities are set, who is involved in decision-making processes, how resources are managed and allocated and who has access to these. Monitoring this requires the use of gender-sensitive indicators.**

## Definition:

**Gender mainstreaming** is the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality.-ECOSOC 1997

United Nations, 2002, Gender mainstreaming: An overview http://www.un.org/womenwatch/osagi/pdf/e65237.pdf

# Conclusion

Managing climate change risks and minimising their impact on key development priorities will require all available resources, knowledge and the involvement of all groups in society. Integrating gender into climate change adaptation and mitigation initiatives at all levels is vital to ensuring this happens. We all share the responsibility for clarifying the misconceptions associated with gender, and replacing them with an understanding of the different roles and responsibilities, skills and knowledge held by women and men that can contribute to adaptation and mitigation solutions.

In many cases, social norms and gender roles are obstacles to women's access to critical information, training and resources for adaptation and mitigation. Climate change programmes, projects and policies must address these inequalities so that women, and all other groups, can access vital resources and participate fully in finding solutions to the problems that climate change brings.

Mainstreaming gender by carrying out gender analyses to inform critical stages in programme, project and policy development will ensure that the needs of all groups are considered as a matter of course, ultimately leading to resilient communities that are empowered to face the future. The following modules show you how to do this, in different climate-sensitive development sectors.


Source:SPC-GIZ,2013

# Module 2.1 : Food security, climate change and gender

## Key messages

- Women and men are both involved in food security, but have different roles and responsibilities, and therefore also different needs and priorities for managing climate and disaster risks.
- Women's contribution to subsistence food production and income generation is critical for food security, and is as important as men's contribution.
- Women and men have different skills and knowledge about food production and food security that can be used to adapt to climate change impacts.
- Gender inequality – reflected in participation in decision making, control over financial resources, land ownership, distribution of tasks within the household, and access to technology and information – poses a critical obstacle to food security and climate change adaptation.

Programmes that are aimed at strengthening food security and building resilience to climate change must allocate resources and provide services to both women and men. Information, technology, training and investments for food security must be equally accessible for women and men and customised to address their respective needs.

Tanna women drying manioc. Source: SPC-GIZ, 2013

**Introduction**

The majority of Pacific island people depend on land and marine resources for their food. These resources are already under threat from issues such as land degradation, overfishing and pollution, and climate change will exacerbate existing threats to food security. Food production will be affected all along the food chain, from primary production to consumption or sale.

Gender differences in roles and responsibilities relative to food production systems mean that climate change will impact men and women differently. Climate change may require changes in current food production systems, and the roles of men and women in these systems.

Pacific island communities have built knowledge of their land and sea resources over many generations, and this knowledge provides a sound basis for adapting to climate change. Because of their different roles, women and men have different knowledge and skills relating to food systems. It will be important to draw on all the available knowledge – that of both women and men – in developing adaptation strategies for climate change.

**Projected climate change impacts on food security in the Pacific**

- Warmer temperatures could benefit some crops, for example by extending fruiting seasons, but wetter or drier conditions may offset any gains.
- Important cash crops (for example sugar, coffee, copra and cocoa) are likely to experience production, yield and quality declines due to changed climatic conditions.
- Climate change will alter agro-biodiversity across the Pacific and change pest and disease regimes, both of which will adversely impact on agricultural production.
- Coastal fisheries harvests could be reduced by 50% by 2100. This decline is as a result of the direct effects of global warming and ocean acidification on fish and invertebrate species, and the indirect effects on their habitats (coral reefs, mangroves, seagrasses and intertidal flats) which exacerbate underlying challenges from overfishing and coastal pollution.
- Freshwater fisheries and aquaculture may benefit from warmer, wetter conditions.
- Offshore fish stocks are expected to increase in the medium term and move further east due to changing ocean currents.
- Rising sea levels are likely to affect food security, particularly in low-lying atoll countries and coastal areas of high volcanic islands through erosion of land and salinisation. Such effects are generally longer term and could have a major impact on regional food production later this century.
- Further along the food chain, climate change impacts may damage infrastructure, especially transport systems.

*Adapted from Food Security in the Pacific and East Timor and its vulnerability to climate change*

Further reading: Bell JD, Johnson JE and Hobday AJ (2011) Vulnerability of Tropical Pacific Fisheries and Aquaculture to Climate Change. Secretariat of the Pacific Community, Noumea, New Caledonia at http://www.spc.int/climate-change/fisheries/assessment/chapters/summary/1-front-end.pdf

**About this module**

Designing and implementing effective adaptation responses to climate change and its impact on food security requires:

1. A good understanding the scientific and biophysical impacts that climate change will have on food production and distribution systems.
2. A social assessment that analyses the underlying gender roles, responsibilities and access to resources within the food security sector and how they play a role in determining adaptive capacity and vulnerability.
3. Integrating information obtained from these assessments into programme and project planning, implementation and monitoring and evaluation frameworks.

This module aims to help practitioners with steps 2 and 3 so that they can design and implement adaptation responses in gender-sensitive ways and improve their overall effectiveness. To also help guide this process a gender checklist for food security programmes and projects may be found in the tools section at the end of this toolkit.

The module presents a series of case studies on food security in the Pacific, and applies a 'gender lens' to each case, looking at gender aspects of the problem and the possible solutions, and recommending gender-sensitive approaches and indicators that could be used in similar situations and similar projects. These projects do not necessarily represent best practices -but have been shared to illustrate how gender considerations can be taken into account. The tables used to analyse the gender perspective can be used as tools to support screening programme and project design and implementation (Tool 5). It is important to remember that vulnerability and adaptation assessments and gender analyses are context specific. These case study examples should be used as guidance only.

Source: SPC-GIZ, 2013

**Case Study 1. Improving resilience of food systems through a 'land-to-sea' approach in Palau**

As part of the Pacific Adaptation to Climate Change (PACC) Project in Palau, communities in Ngatpang State are looking at different options for addressing saltwater intrusion and flooding in taro patches to be able to sustain the supply of this important crop. These options include growing saltwater-tolerant 'wetland taro' varieties and improving dyke designs in low-lying areas.

In Palau, taro is traditionally cultivated and managed by women, who are also the landowners.

The project carried out a socio-economic assessment survey to obtain baseline information on current sources of vulnerabilities, livelihood and coping strategies. The survey targeted the head of the household and therefore men were more likely to be the primary respondents. In some instances, women chose not to respond.

This raises important questions about the results of the survey and its usefulness in informing design – did it truly represent the skills and knowledge of the entire community? Did it adequately represent the different priorities and vulnerabilities of women as well as men?

The project found other ways (e.g. focus groups) of trying to ensure that the knowledge and skills of the taro farmers were captured to inform project design, but by thinking about gender earlier in the process, tools can be designed to capture all the information needed to develop robust adaptation options.

In the focus groups we discovered that women had in-depth knowledge of the hydrological systems of their taro patches and had mechanisms to deal with drainage and to manage risks from high rainfall events. However, over time, some farmers had moved to more 'introduced' technologies and approaches on the recommendations of agricultural specialists which had contributed to some of the problems they are now facing. This provided evidence that we need to draw on and build on the traditional knowledge of the experts – in this case, women – to maximise the chances of designing effective adaptation responses. We therefore need to think closely about the methods we use to gather information and existing barriers to women contributing their skills and knowledge.

*Madelsar Ngiraingas,*
*PACC Steering Committee Member*
*Palau*

**Table 1. Applying a gender lens to Case Study 1: Palau**

| **Climate change impact: Salt water intrusion resulting in reduced availability of good quality agricultural land for taro production (subsistence and commercial)** | | | | | |
|---|---|---|---|---|---|
| **Applying a gender lens to the problem** | | **Applying a gender lens to possible adaptations options** | | **Recommended gender-sensitive approach** | **Gender-sensitive indicators** |
| Men | Women | Men | Women | | |
| **Problem: Salt-water intrusion causing reduction in taro productivity** | | **Solution: Introduction of salt-tolerant crops, improved dykes and drainage** | | | |
| Men do not traditionally have a role in taro production. | Palauan women are the traditional taro cultivators.<br><br>Reduced yields would mean a loss in their cultural identity and status, a loss in a source of food and loss of income if crops are sold.<br><br>Reduced crop yields may require women to spend more time planting in order to maintain food supply. | Palauan men do not traditionally grow taro.<br><br>This adaptation option may present an opportunity to engage local men in supporting taro production. | Women are the traditional planters of the crops and therefore have traditional knowledge of their crops and the properties of the land.<br><br>Women may be required to adjust planting and preparation methods for new crop varieties. | Attention should be paid to the active and genuine participation (in consultations, training, decision making processes etc) of groups that hold specific knowledge and skills to ensure that the project design and implementation is well informed. In Palau, women have specific hydrological knowledge about production systems that could contribute to identifying feasible adaptation options.<br><br>Ensure equal access to consultations, training, decision making, information and technology for both women and men, regardless of their current role in taro production. The project may provide an opportunity to enhance men's roles in taro production. | Number of men and women taking part in agricultural activities (subsistence and commercial) – with particular attention to any changes in the number of men participating in taro production.<br><br>Number of men and women participating (genuinely) in consultations/decision making processes.<br><br>Number of responses obtained from men and women during consultations. |

| | | | | | |
|---|---|---|---|---|---|
| | | **Solution: Increase number of migrant workers to compensate for reduced yields** | | | |
| | | Most migrant workers are men. They do not necessarily have expert knowledge of appropriate taro production practices and may introduce inappropriate practices exacerbating climate change impacts.<br><br>Increased household costs will need to be met – this could put a greater pressure on men to meet household income requirements. | The use of migrant workers allows Palauan women to meet their traditional obligations and use that time to reduce their overall workload or engage in other employment opportunities.<br><br>Increased household costs will need to be met through alternative income generation activities. | Migrants workers have taken an increasing role in taro production and should be engaged in consultations and trainings. | Taro yields and income received by women and men for taro production. |
| | | **Solution: Relocation of gardens** | | | |
| | | May reduce pressure on Palauan men to support taro production. | Women may be required to adjust planting methods. | Care should be taken that relocating gardens does not result in additional workloads for women and migrant men. This should be recognised and discussed to minimise any potential negative consequences. | Number of men and women owning and using land.<br><br>Number of hours worked by women and men (including migrant workers) on taro production. |

**Case Study 2. Strengthening food security on Totoya Island, Fiji**

Climate change impacts such as coastal flooding and erosion are exacerbating existing challenges to food security on the remote island of Totoya.

Coupled with unsustainable land use management practices these impacts have led to a reduction in arable land available and crop productivity. Many men have emigrated to the mainland which also reduces production.

These factors have contributed to an increased reliance on imported foodstuffs; these are not only low in nutrition, but also expensive. Traditional knowledge about how to produce local nutritious food is also being lost.

In order to address these issues community members now living in Suva, including Dr Jimaima Lako a professor at the University of the South Pacific, are assisting their community through the support of a UNDP-GEF small grants project. The project is promoting traditional knowledge and modern technology to improve food security.

The project works with the local women's group (Sosogo Vakamarama) to promote sustainable practices such as the planting of peanuts, cabbage and tomatoes in small vegetable gardens near their houses and the production of virgin coconut oil to substitute the use of imported soya bean oil.

In the past, these communities used to conserve food to use in times of shortage, by smoking, direct sun drying and salting. The project seeks to draw upon women's role and knowledge in processing and conserving foods, while factoring in the convenience of modern technology. Two solar dryers have been shipped to the island, and women are being taught how to make flour from cassava and breadfruit, to replace costly imported wheat flour. The dryers will also be used for drying other crops such as sweet potato, mango and eventually for drying seafood as well.

Initially, the main usage of the dryer was for yaqona, (kava) which is grown and sold by the men, but is unrelated to the food security objectives of the project. When alerted to this issue facilitators held a community meeting to reaffirm the food security aims of the project and reaffirm community support.

Traditional gender roles on this Polynesian island are that men plant and cultivate the crops while women are in charge of the food processing and conservation once the crops are harvested. There is a common perception that "you are not a man until you plant yams," yam being a particularly prestigious crop.

One observer noted, "if a women goes out to plant, the husband will never hear the end of it until the day he dies." There is even a popular local song on this topic. Dr Lako believes "If men are not planting, we have to encourage women to plant. This requires attitudinal change however, as it implies significant social stigma".

*Karen Bernard, UNDP Pacific Centre and Katarina Atalifo, GEF Small Grants Programme*

**Table 2: Applying a gender lens to Case Study 2: Totoya Island, Fiji**

| Climate change impact: Coastal flooding and erosion leading to reduced arable land availability and crop productivity declines | | | | | |
|---|---|---|---|---|---|
| **Applying a gender lens to the problem** | | **Applying a gender lens to possible adaptation options** | | **Recommended gender-sensitive approach** | **Gender-sensitive indicators** |
| Men | Women | Men | Women | | |
| **Problem: Coastal flooding and erosion have led to a loss in productive land and reduction in crop productivity** | | **Solution: Encourage food preservation, value adding and diversification to promote income generation and compensate for reduced crop production** | | | |
| Men are traditionally responsible for agriculture. The loss in available land and crop productivity may increase their workload and contribute to the high emigration rates from the island to secure employment elsewhere. | Women are not traditionally involved in agricultural production. Any reduction in agricultural yields will affect household food security. | It is important to also involve men so as to gain full community support and avoid equipment being used for other purposes. | Care must be taken not to add to women's workload with the introduction of new income generating activities.<br><br>Women have traditional knowledge of food preparation techniques that can contribute to adaptation strategies. | When introducing adaptation solutions it is important to look at existing roles in the community and ensure that the project is not adding to existing workloads. Opportunities to involve all community members and share responsibilities for activities, even where these do not align with traditional roles, should be taken.<br><br>Participatory monitoring of project activities is important to ensure that equipment is used for its intended purpose. | Number of men and women participating in agricultural activities, including production and value-addition.<br><br>Crop yields and income generated by men and women.<br><br>Amount of time spent involved in agricultural activities (men and women). |

**Case Study 3. Coastal fisheries management in Yap, FSM**

In the Federated States of Micronesia fish provide the main source of protein and communities have noticed a decline in their fisheries catch.

Over-fishing and unsustainable land management practices are key contributing factors to this decline. Climate change projections indicate that sea surface temperature increases and ocean acidification will place additional pressures on already degraded coastal zones.

One of the measures being taken to address current and future pressures is the implementation of a 'ridge to reef approach' to resource management. That involves looking at behavioural practices in the sea and on land. Ensuring that coastal fisheries are healthy and well-managed is vital to their ability to cope with future climatic stresses.

During initial consultations, men in Yap stressed that fishing is primarily their responsibility and therefore women in the community did not have to be involved in the discussions.

Women, however, are responsible for agriculture and one of the impacts on the reefs is increased sedimentation from the land. Therefore, in order to holistically address the problems on the reef it is also important to address land use practices which necessitate the active participation of women. Future activities will focus on ensuring genuine participation from the whole community to ensure everyone's needs and priorities are identified and addressed and that the project can address the threats to fisheries effectively.

*Fenno Brunken*
*Technical Adviser- Climate Change*
*SPC/GIZ Coping with Climate Change in the Pacific Region Programme*
*Northern Pacific*

Source: SPC-GIZ, 2013

**Table 3. Applying a gender lens to Case Study 3: Yap, Federated States of Micronesia**

| **Climate change impact: Coastal flooding and erosion leading to reduced arable land availability and crop productivity declines** | | | | | |
|---|---|---|---|---|---|
| **Applying a gender lens to the problem** | | **Applying a gender lens to possible adaptations options** | | **Recommended gender-sensitive approach** | **Gender-sensitive indicators** |
| Men | Women | Men | Women | | |
| **Problem: Declining coastal fisheries catches** | | **Solution : Introduction of Fish Aggregation Devices (FADs) to reduce pressure on coastal fisheries** | | | |
| Men are traditionally responsible for fishing. Declining fish stocks may result in an increase in their workload to maintain catches. | Women may face pressure to find ways to supplement diets and incomes due to declining fish catches.<br><br>Women are traditionally responsible for agriculture. Their land use practices are having a downstream impact on fisheries. | Men are traditionally responsible for fisheries activities. They didn't see a reason to discuss this adaptation option with women. | Women were not included in the process to identify this option. The health of fisheries resources, the associated costs and the time that men spend fishing are all things that women may have strong views about. | All community members should be included in consultations. Participatory approaches should be used which include separate focus group discussions. Use facilitators that are trained and can deal with any barriers to inclusive approaches sensitively.<br><br>Conducting a community gender analysis provides an overview of the different roles and responsibilities of men and women to ensure that we better understand these dynamics ahead of planning adaptation options. | Volume of fish catch and time spent fishing by men and women before and after the introduction of FADs<br><br>Number of men and women participating in consultations and implementation of project activities. |
| | | **Solution: Introduction of sustainable land use management practices.** | | Use of alternative methods to increase awareness such as the use of three-dimensional participatory models to illustrate ridge to reef concepts may help community members to visualise the interdependence of their activities. | Number of men and women aware and practicing sustainable land use management practices. |
| | | Men should be included in the discussions of how to improve land use management as it may present an opportunity for them to increase their involvement. | Women are the traditional landowners.Their knowledge of agricultural practices and land use management is vital to ensure approaches are feasible and appropriate. | | |

Capper

# Module 2.2: Water, climate change and gender

## Key messages

- Women and men are both involved in managing and using water resources, but they may have different needs and priorities for managing and using these resources.
- To effectively reduce vulnerability to climate change through the improved management of water resources in Pacific island countries programmes should be designed and implemented to meet the needs of all members of the community, including women, men, and people living with disabilities.
- Water management policies, plans and actions should consider how the proposed interventions provide benefits to different members of society, and the ways in which the different members can contribute to reducing vulnerability.
- Information, technology, training and investment in water resources management must be equally accessible for women and men, and customised to address their respective needs and abilities.
- Gender inequality is likely to be reflected in the distribution of tasks within the household; in participation in decision-making; in control over financial resources; in land and resource ownership; and in access to technology, training, knowledge, and information. All of these factors are important for water resources management, and should be taken into account when designing policies, plans and programmes.

## Introduction

Under most climate change scenarios, water resources on small islands in the Pacific will be seriously compromised (IPCC, 2007). Several Pacific island countries have no significant surface water resources and limited groundwater sources making them extremely vulnerable to changes in rainfall patterns (UNEP 2012). Climate changes will exacerbate existing challenges affecting water availability, such as increasing population densities and improper water management practices.

While there is still uncertainty about how rainfall patterns will change for the Pacific region (Bureau of Meterology, CSIRO - Climate Change in the Pacific: Scientific Assessment and New Research, 2011), it is likely that the impacts of climate change will affect the quality and quantity of safe drinkable water. For example, a 10% reduction in average rainfall would reduce the freshwater lens on Tarawa (Kiribati) by 20%, and that this would be further compounded by sea-level rise potentially reducing the lens a further 29% (IPCC 2007).

There is often a clear division of labour between men and women in water resources management. These different roles and responsibilities vary within and between Pacific Island countries. Understanding the needs and responsibilities of men and women within their specific context is very important in identifying and addressing climate change impacts on all community members.

Some progress has been made in the region to include both women and men in water management and sanitation plans and projects. However, a critical issue that needs to be addressed is the under-representation of women in decision-making for water management, development, and productive use.

Women have critical skills and knowledge, which, if used effectively, can contribute to the development of more effective water management plans, policies and programmes. Their contributions to developing effective solutions can help governments and other stakeholders improve the social benefits and economic returns from their investments.

Tuvalu's Te Kumete: Sustainable and Integrated Water and Sanitation Policy 2012-2021 notes that women are excluded from decision-making about local water and sanitation issues. It recognises the important role that women have in the management of water and sanitation, and encourages women's participation in local planning and decision-making. It also refers to the participation of women and people with disabilities in awareness activities.

### Projected climate change impacts on water resources in the Pacific

- Increased rainfall variability is very likely, and will lead to unpredictable water availability.
- More frequent and/or more intense floods are very likely, with potential to damage water infrastructure and add to pollution problems; but could also contribute to increasing water availability in areas where it is currently limited.
- There is likely to be an increase in areas affected by drought, which will contribute to reduced water availability, depleted groundwater, reduced water quality and increased risk of water-borne diseases.
- More intense tropical cyclones are also likely, which will damage water systems as well as power systems affecting water supply, and will contribute to water pollution and increase in water-borne diseases.
- Sea level rise will cause saltwater intrusion in coastal areas and salinisation of groundwater, as well as possible damage to water systems.
- Changes in river flow and discharge may lead to changes in seasonal water availability, cause increased risk of flash floods, have impact on groundwater recharge, and may affect hydropower generation where used.

*Adapted from IPCC Fourth Assessment Report , 2007*

### About this module

The key steps in designing and implementing gender-sensitive adaptation responses in the water resources sector are:

1. Understand the scientific and environmental impacts that climate change will have on water resources and water systems.
2. Carry out a gender assessment that analyses underlying gender roles and responsibilities, access to resources within the water resources sector, and how these factors determine adaptive capacity and vulnerability for different people.
3. Integrate information obtained from these initial assessments into project planning objectives, work plans and monitoring and evaluation frameworks.

This module aims to help practitioners with 2 and 3, so that they can design and implement adaptation responses in gender-sensitive ways and improve their overall effectiveness. To also help guide this process a gender checklist for water programmes and projects may be found in the tools section at the end of this toolkit.

The module presents a series of case studies on water resources management in the Pacific, and then applies a 'gender lens' to each case, looking at gender aspects of the problem and the possible solutions, and offering gender-sensitive approaches and gender-sensitive indicators that could be used in similar situations and similar projects. These projects do not necessarily represent best practices -but have been shared to illustrate how gender considerations can be taken into account. The tables used to analyse the gender perspective can be used as tools to support screening programme and project design and implementation (Tool 5).

It is important to remember that vulnerability and adaptation assessments and gender analyses are context specific. These case study examples should be used as guidance only.

### Case Study 1. Improving water storage systems in Tuvalu

With limited groundwater, people of Funafuti atoll depend heavily on rainfall to supply all their water needs. A period of 2 to 3 weeks of no rainfall can cause serious water shortages, affecting livelihoods, fishing, and agricultural production.

The Pacific Adaptation to Climate Change (PACC) project in Tuvalu focuses on improving water infrastructure to assist men and women to better cope with droughts. The initial project assessments showed that it is men's role to collect water from the main government cisterns. In times of drought however, men, women and children collect and buy water desalinised water from water collection centres. The assessments also showed that women take a larger share of responsibilities that involve the use of water, for example preparing and cooking food, preparing salt fish, gardening, cleaning, preparing children for school and caring for the elderly. Key activities that men require the use of water for are drinking, cooking and washing whilst out fishing in the ocean and lagoon, working at pulaka pits, building and maintenance, and cleaning rain gutters.

The PACC project installed a 700,000 litre cistern to supply freshwater to the community of Lofeagai, which has 97 households. The design did not, however, consider the different physical abilities of men, women, people with disabilities, and the elderly. There was an assumption that that the cistern would be accessed almost entirely by men, and it was not taken into account that there are many female-headed households in Lofeagai, for example there are many widows in the community, as well as families where the husband or father is away from the island working. In these households, women must take on the role of fetching water, in addition to their usual jobs. The cistern lid was too heavy for many people to lift, and they needed help from men to collect the water once the lid was off, as it had to be pulled up from the cistern.

Source PACC, 2012

For the second phase of the project, it has been proposed that a solar pump be installed and members of the water committee (who are predominantly men) trained in its operation. The pump will allow easy access to water for all members of the community, including vulnerable groups such as children, the elderly, and people with physical disabilities.

This example shows the importance of appreciating not just the differences of roles and responsibilities between genders, but also for specific families and households. A gender analysis should take into account the needs of all specific households and individuals, to ensure that no person or family is excluded and the project delivers the intended benefit of reducing vulnerability to drought events.

*Peniamina Leavai, and Sarah Whitfield, Pacific Adaptation to Climate Change (PACC) Project, Climate Change Division, SPREP*

**Table 1. Applying a gender lens to Case Study 1: Lofeagai Cistern, Tuvalu**

| Climate change impact: Increased intensity of drought periods and rainfall variability contributing to increased water scarcity | | | | | |
|---|---|---|---|---|---|
| **Applying a gender lens to the problem** | | **Applying a gender lens to possible adaptations options** | | **Recommended gender-sensitive approach** | **Gender-sensitive indicators** |
| Men | Women | Men | Women | | |
| **Problem: Reduced water availability for household activities during drought periods** | | **Solution: Increase water access through a community cistern with solar pump** | | | |
| Less water available for livestock and gardening activities, which will result in decreased yields and food availability<br><br>Increased household income spent on imported food and on desalinated water could lead to increased stress and conflict at the household level. | Long periods waiting for water supplies adds to existing workloads<br><br>Increase in water-borne diseases will increase time needed caring for the sick<br><br>Increased mental and physical stress, especially when caring for babies and elderly.<br><br>Additional stress and conflict may exacerbate domestic violence and result in a increase in cases | May decrease workload collecting water as women can now collect water too<br><br>More likely to receive training for use of solar pump<br><br>Men may have a higher migration rate and are more likely to leave a skills gap in a household/ community if only men are responsible for specific tasks | Women will be able to collect water; this may give them more flexibility, but will also increase their workload.<br><br>Less likely to receive training to operate the solar pump<br><br>Women may have a lower migration rate, therefore knowledge and skills are more likely to be retained in the community | Conduct gender analysis of water use and management patterns<br><br>Ensure men and women are informed and receive training on the use and maintenance of solar pumps<br><br>Facilitate open dialogue about water priorities and gender imbalances of water collection and water-related tasks<br><br>Facilitate open dialogue about gender dimensions of participation and decision-making in water governing structures<br><br>Encourage the inclusion of women in water management committees<br><br>Provide technical training to women and men in community management structures and ensure that skills, and opportunities to increases them, are not limited by sex | Number of men and women involved in village water management committee<br><br>Number of men and women who express satisfaction with the solar pump and cistern<br><br>Percentage change in the number of women and men accessing water from the cistern<br><br>Number of men and women who have been trained in operating and maintaining the solar pump and monitoring water levels.<br><br>Number of men and women successfully carrying out tasks they have been trained for, e.g. monitoring of water levels |

### Case study 2: Tuvalu IWRM Demonstration Project: Demonstrating women's participation in governance and planning

The Global Environmental Facility (GEF) Pacific Integrated Water Resources Management (IWRM) demonstration project implemented in Tuvalu aims to improve sanitation technology and practices that can provide protection of primary and secondary water resources, marine biodiversity, livelihood and food security. Rainfall and rainwater harvesting is the primary source of water supply in Tuvalu but this was not always the case, groundwater was mostly utilised until the introduction of western technologies.

When considering vulnerability; the natural hazards that can affect Tuvalu include cyclones (not common but highly destructive when they do occur) and drought, both of which could be exacerbated by climate variability and change and sea-level rise.

Human activities/practices also contribute to vulnerability to climate and disaster risk most notably in water supply and waste management practises: Due to high rainfall, water supply is usually adequate but quickly becomes an issue during dry spells because of insufficient capacity and storage and poor construction and maintenance of rainwater harvesting. The community then relies on the government tanker to transport water from the national reserves.

Inadequate waste disposal management methods are common on Funafuti, including dumping of chemicals and used oil. Pollution of groundwater and marine waters from inappropriate sanitation systems and animal waste (especially pigs) is contributing to deteriorating public health and environmental degradation. On Funafuti groundwater is no longer a viable secondary source for human use, and groundwater is being similarly threatened in the outer islands.

Led by the Tuvalu Public Works Department, the Tuvalu IWRM Demonstration Project demonstrated the use of compost toilets, with the aim to significantly reduce household water use, increase security for women and children and water availability during drought periods.

Gender mainstreaming training, conducted at the request of the project manager, exposed a number of key concerns for women. Women's groups initially had strong objections to use of human compost for agriculture and home gardens. This was resolved through training in gender mainstreaming and awareness workshops with a range of women's groups on Funafuti. During this training findings from further testing of compost were shared and as a result, many issues were explored and misunderstandings on the use of composting toilets or Falevatie resolved. The Falevatie was strongly recommended, however women recommended constructing the toilets inside the house (also incorporated in the Water Policy now).

Compost toilet, Tuvalu Source: SPC

One of the key lessons learned from the Tuvalu IWRM demonstration project was that engaging with women's groups lead to different perspectives on the use of compost toilets. It is very important to consider gender and vulnerable groups at the start of any project to ensure a balanced perspective on activities being implemented. Failure to do this can result in limited uptake of proposed measures.

*Integrated Water Resource Management (IWRM) project staff, Secretariat of the Pacific Community (SPC)*

**Table 2 Applying a gender lens to case study 2: Integrated Water Resource Management (IWRM), Tuvalu**

| **Climate change impact: Increased intensity of drought periods contributing to increased water scarcity** | | | | | |
|---|---|---|---|---|---|
| **Applying a gender lens to the problem** | | **Applying a gender lens to possible adaptations options** | | **Recommended gender-sensitive approach** | **Gender-sensitive indicators** |
| Men | Women | Men | Women | | |
| **Problem: Reduction of water availability during drought periods** | | **Solution: Introduction of compost toilets** | | | |
| Less water available for livestock and gardening activities, which will result in decreased yields and food availability<br><br>Increased household income spent on imported food and on desalinated water could lead to increased stress and conflict at the household level. | Primary responsibility for household sanitation practices and systems. | Men expected to provide labour to assist with construction. | Objected to the use of human compost for agriculture and home gardens.<br><br>Expressed preference for having toilet systems built within or connected to their homes. | Facilitate open discussion with all stakeholders (men, women, youth, people living with disabilities), on the the design and use of demonstration compost toilet systems.<br><br>Conduct training and awareness workshops on the design and use of compost toilets and compost with all stakeholders.<br><br>Adjust the design of the toilet system to account for community concerns and include in water policies as required.<br><br>Capture lessons learnt and recommendations to encourage replication which accounts for concerns raised within the community. | Number of men and women from the community present at project consultations.<br><br>Numbers of men and women included in WASH training and awareness workshops.<br><br>Numbers of men and women satisfied with compost toilet design based on demand for installations.<br><br>Percentage change in the numbers of women and men satisfied with compost toilet design after implementation. |

# Module 2.3: Energy, climate change, and gender

## Key messages

- Everyone (women and men, youth and elders and people with disabilities) uses energy, but energy needs are different among different groups because of differences in roles, responsibilities and daily activities.
- Depending on energy sources used, energy generation and use can have negative impacts on the natural environment, and on people. Men and women may use different energy sources and therefore face different impacts.
- Developing new sustainable energy sources is vital for Pacific island countries. Women can contribute to developing new energy sources and determining how they are used, and their contributions are as important as those of men.
- Gender inequality reflected in participation in decision-making, control over and access to energy, distribution of tasks within the household and community, and access to technology, training and information means that energy projects often benefit men more than women.
- While women and youths use a lot of energy, they are often excluded from the development of energy policy, planning, and development. Understanding their needs is crucial to designing programmes that are gender-sensitive.
- Information, technology, training and investments for energy must be equally accessible to women and men, elders and youth and people living with disabilities.

Women in Kadavu Fiji are being trained as solar engineers (Case study 1) Source: UN Women, 2012

## Introduction

Access to energy is a critical issue in the Pacific region. Most countries and territories are remote and isolated, and made up of scattered islands with small populations. Electricity and transport costs are high in relation to the number of people who need access, which makes providing electricity to rural and remote populations difficult and expensive. Most countries rely heavily on imported and highly polluting energy sources such as diesel, motor spirit, dual purpose kerosene and liquefied petroleum gas, which are carbon-intensive and contribute to greenhouse gas emissions. Energy supply is vulnerable, because there is often little space to store fuel, which is expensive to ship and takes a long time to arrive. Rising fuel costs have a significant impact on Pacific economies.

The proportion of the population with access to electricity in the Pacific is on average 70%, but this varies between countries: there is nearly 95% access in Niue, compared to 10–15% in Papua New Guinea. There is growing demand for access to energy in the region, but many governments are not able to meet this demand.

Pacific island ecosystems are fragile, and the environmental damage from the use of energy sources can have significant negative impacts, particularly in marine environments. Reducing these environment impacts and the carbon-intensity of energy systems is a key priority. There are opportunities to develop sustainable energy sources, like wind, hydro, solar power and biomass; and efforts at mitigation also look at using energy more efficiently.

Women and men use energy for many of their daily activities, but because of their different roles and tasks they have different energy needs. Governments often focus on energy at the national level, such as large-scale production of energy to increase economic development, rather than small-scale needs such as daily household needs for lighting and cooking. Yet access to affordable and reliable energy at the household level is also important for economic development, and for poverty reduction. These issues should not be overlooked when planning at national level if policies are to meet the needs of all citizens.

When modern forms of energy supply are not available or are too expensive to access, women will often use natural resources such as wood from mangroves for cooking fuel. This type of use is generally not sustainable, and has negative impacts on the local environment. Women are usually responsible for fuelwood collection, and this can take a long time, especially as they may have to travel long distances. In rural areas, cooking with fuelwood in open fires is still widely practiced, and women breathe in the smoke and suffer negative health effects. Women often have to do their household chores with poor quality lighting, including improvised hurricane lamps. Children cannot easily study at home without proper lighting, and this also limits opportunities for adults to do further study, for example literacy classes. Many rural health clinics cannot provide basic health services due to lack of refrigeration units for vaccines, and lack of lighting.

There are some successful renewable energy lighting projects in the Pacific which have brought some access to good-quality lighting. However, decision making about where the lights are located in the house usually rest with the men, and in many instances the kitchen is not a high priority for them. While women and youths use a lot of energy, they are often excluded from the development of energy policy, planning, and development.

**Renewable Energy Commitments of Pacific Island Countries**

| | |
|---|---|
| **Cook Islands** | 50% of inhabited islands electricity needs to be provided by renewable energy in 2015, and 100% by 2020 |
| **Federated States of Micronesia** | Decrease the import and use of imported petroleum fuels by 50% by 2020.<br>• 10% of electricity in urban centres and 50% in rural areas will be generated using renewable energy sources by 2020. |
| **Fiji** | • Increase the share of renewable energy in electricity production, higher than its current level of (60%)<br>• Promote energy conservation and efficiency in all sectors of the economy. Utilisation of Biofuels in Fiji's transport sector by 2015. |
| **Kiribati** | Fuel reduction target for electricity generation in Kiribati by 2025:<br>• South Tarawa: 45%<br>• Kiritimati: 60%<br>• Rural public infrastructure: 60%<br>• 4. Rural public and private institutions: 100% |
| **Nauru** | 50% of electricity generation to by provided by renewable energy by 2020. |
| **Niue** | 100 % of electricity generation from renewables by 2020. |
| **Palau** | 20% contribution of renewable energy to the energy mix by 2020.<br>30% reduction in energy consumption though energy efficiency and conservation |
| **Papua New Guinea** | Decrease GHG emissions at least 50% before 2030 while becoming carbon neutral before 2050. |
| **Republic of the Marshall Islands** | 40% reduction in CO2 emissions below 2009 levels by 2020;<br>Provision of 20% of energy through indigenous renewable resources by 2020; |
| **Samoa** | Increase the contribution of renewable energy to total energy consumption by 10% by 2016 |
| **Solomon Islands** | Replace current use of imported fossil fuel for electricity generation by 100% by Year 2030<br>50% of electricity generation from renewables by 2015. |
| **Tonga** | 50% renewable energy mix by 2020 |
| **Tuvalu** | Power Generation – 100% renewable energy between 2013 and 2020 |
| **Vanuatu** | 100% of energy from renewables.<br>40% of power generation through renewables by 2015<br>65% of power generation through renewables by 2020 |

Adapted from Majuro Declaration for Climate Leadership (2013) at *http://www.majurodeclaration.org/commitments <http://www.majurodeclaration.org/commitments>* and Barbados Declaration on Achieving Sustainable Energy for All in Small Island Developing States (SIDS) (2012) at *http://www.undp.org/content/dam/undp/library/Environment%20and%20Energy/Climate%20Change/Barbados-Declaration-2012.pdf <http://www.undp.org/content/dam/undp/library/Environment%20and%20Energy/Climate%20Change/Barbados-Declaration-2012.pdf>* (5th Sept 2013)

**About this module**

The keys steps in designing and implementing gender-sensitive sustainable energy projects and programmes are:

1. Understand the specific country context of the energy sector, including social structures, current energy practices and opportunities to reduce reliance on fossil fuels through sustainable and affordable alternatives and energy efficiency measures.
2. Conduct an assessment that looks at how men and women use energy, what kinds of energy sources and services they use, their different energy needs, and roles and responsibilities. This analysis should not just focus on 'traditional' energy sources but also examine energy sources for practical uses such as lighting, cooking, refrigeration, drying and cleaning. It should also examine strategic uses such as for telecommunications, TV and radio and transportation needs. The assessments should also examine the environmental impacts of the different ways that people use energy.
3. Integrate information obtained from this assessment into project and programme planning, policy and strategy priorities, and monitoring and evaluation frameworks.

This module aims to help practitioners with steps 2 and 3, so that they can design and implement energy projects, programmes and policies in gender-sensitive ways and improve their overall effectiveness for different types of energy end-users. To also help guide this process a gender checklist for energy programmes and projects may be found in the tools section at the end of this toolkit.

The module presents a series of energy case studies in the Pacific, and then applies a 'gender lens' to each case, looking at gender aspects of the problem and the possible solutions, and offering gender-sensitive approaches and gender-sensitive indicators that could be used in similar situations and similar projects. These projects do not necessarily represent best practices -but have been shared to illustrate how gender considerations can be taken into account. The tables used to analyse the gender perspective can be used as tools to support screening programme and project design and implementation (Tool 5). It is important to remember and gender analyses are context specific. These case study examples should be used as guidance only.

**Case Study 1. Solar engineering in Kadavu, Fiji**

Kadavu is a relatively isolated island group of Fiji. Communities in these islands are not connected to the national power grid, and are highly dependent on costly and polluting fuels such as diesel and kerosene for their energy needs. Low cash income in these communities severely limits access to these fuels, and places a burden on families to meet energy costs. Most villagers do not have any lighting which limits opportunities for work, study, meetings, and other activities after sunset.

Through a sustainable energy programme working in six Pacific Island countries, community members from villages in Kadavu have been trained as solar engineers. They have set up solar workshops - run from solar electricity - where they assemble and install solar panels for households in their community. The engineers also provide maintenance and repairs, and train others to do the same work.

Women have been involved in the programme from the beginning, and are encouraged to work together with men to manage community electricity. Both men and women are involved in selecting the community members who train as solar engineers. A solar committee is set up, comprised of five community members, three of which are women. Every household pays a small amount of money into a fund which is managed by the committee. These funds are used to pay the engineers, and for maintenance of the equipment. This ensures that decisions about how the money is used, and where and how the panels and lights are installed, are made jointly by men and women.

The solar engineers include grandmothers, and illiterate or semi-literate women, which challenges expectations about what women can do and shows what older and less educated women can achieve.

*Laura Cleary*
*UN Women Regional partnerships and M&E Officer for Gender, Climate Change, and DRM*
*UN Women / UNDP (GEF-SGP) Rural Women Light up the Pacific program*
*Fiji, Kiribati, Samoa, Nauru, Solomon Islands, Vanuatu*

UN Women

**Applying a gender lens to case study 1: Solar engineering in Kadavu, Fiji**

| Climate change issue: Reliance on carbon-based fuels that contribute to climate change | | | | | |
|---|---|---|---|---|---|
| **Applying a gender lens to the problem** | | **Applying a gender lens to possible adaptations options** | | **Recommended gender-sensitive approach** | **Gender-sensitive indicators** |
| Men | Women | Men | Women | | |
| **Problem : Heavy reliance on expensive carbon-intensive fuels that contribute tot climate change** | | **Solution : Introduction of a community-run solar energy system** | | | |
| Less time to do productive activities after dark – for example having community meetings, studying, or making products to sell | Less time to do productive activities after dark – for example having community meetings, studying, or making products to sell<br><br>Reduced safety and security after dark | Are often seen as responsible for energy needs and that it is their role to manage this.<br><br>May feel that energy is not something which women should be involved.<br><br>Men must be involved in new energy technologies, and lend their support to initiatives led by women. | Women may be excluded from decision making about energy<br><br>May require the support of people who are influential in the community in order to be involved in energy programmes.<br><br>Women may have a lower migration rate therefore knowledge and skills are more likely to be retained in the community. | Ensure men and women are involved in decision making from the beginning, to identify both household and community needs and in the management of technologies<br><br>Work with men and women to make decisions about where technology will be installed, and their preference for fittings and accessories.<br><br>Do not exclude men from the project, or make them feel that this is a 'women's project'. Work to gain the support of people in positions of power in the village.<br><br>Encourage participation of women in new training opportunities, and allow them to contribute their skills to the community.<br><br>Ensure structures are in place to support access for vulnerable groups, such as financial assistance or subsidised costs.<br><br>Work within existing decision making structures to strengthen support for women's inclusion in energy programmes | Percentage change in income generating opportunities for men and women as a result of introduced technology<br><br>Number of men and women involved in village decision-making structures, e.g. the energy committee<br><br>Percentage change in men and women accessing financing for energy infrastructure<br><br>Number of men and women who express satisfaction with the new technology – where it is located, accessories and fittings<br><br>Number of men and women who have been trained in new energy technologies (such as assembly, installation and maintenance of solar panels)<br><br>Number of men and women utilising skills obtained from training in community activities |

**Case Study 2. Hydroelectric project on Maewo Island, Vanuatu**

Maewo Island in Penama Province, Vanuatu, is not connected to the national power grid and about 95% of households do not have access to electricity. Some households, schools, and other community facilities have access to electricity through use of diesel- and petrol-run generators. Kerosene lamps are used for lighting.

The villages of Talise, Narovorovo and Nasawa are pilot sites to trial a hydro-electric system. The hydro-power system will provide electricity for households as well as community facilities such as health centers, schools, and churches. All households will be supplied with two lights and one power point. The project will support income-generating activities as lights and power tools will be available for making handicrafts, and freezers will enable fish to be frozen and then transported to the mainland to be sold. The reduced use of biomass for cooking should have health benefits for women, who are responsible for food preparation, by reducing smoke inhalation. Electric lights should reduce use of kerosene, which is also polluting and has negative health effects.

Project coordinators carried out household and community surveys, to examine the different roles of women and men, their different electricity needs, the different types of electricity used, and also to find out who made the decisions in households, especially about electricity use. They found that women and men had different energy needs. For example, women collect biomass (such as firewood) for cooking, and would prioritise electricity for cooking if it was available. Men who are involved in fishing activities would prioritise using electricity to freeze fish and make ice.

The surveys found that women played key roles in the community through a number of women's groups operational in the three villages. Women were involved in decision making through representation on the village council, and were involved in generating income for their families through membership of the Cooperative Agricol, which was then spent on household needs. Managing family affairs was a shared responsibility and women had some access to decision making within their households. As a result of the surveys, programme managers established that the Agricol scheme could be used to also generate income for the maintenance of the hydro-electric system or other expenses related to the energy intervention, and keep the project sustainable.

*Anare Matakiviti, Energy Programme Coordinator, IUCN*
*IUCN / SPC Vanuatu Renewable Energy Project (2011 – 2013, pilot still in progress)*

Biomass is still a main source of fuel in many Pacific communities and is used for different activities by men and women. Source: SPC/GIZ, 2013

**Table 2: Applying a gender lens to case study 2; Maewo Island, Vanuatu**

| **Climate change issue: Reliance on carbon-based fuels that contribute to climate change** | | | | | |
|---|---|---|---|---|---|
| **Applying a gender lens to the problem** | | **Applying a gender lens to possible adaptations options** | | **Recommended gender-sensitive approach** | **Gender-sensitive indicators** |
| Men | Women | Men | Women | | |
| **Problem : Heavy reliance on expensive carbon based fuels because the community has no access to cleaner sources of energy** | | **Solution : Introduction of hydro-electric power as a sustainable energy source** | | | |
| LMen carry out most of the fishing, but access to local markets to support livelihoods is restricted as they have no energy for refrigeration needed to store the fish. This limits their potential income. | Women and children collect firewood for cooking, which reduces the time they have available to do other tasks<br><br>Women do most of the cooking, and suffer negative health impacts from inhaling smoke from cooking fires | Access to lighting in the evening could have positive impacts by allowing community members to get together more easily in the evening to discuss and undertake community and social activities.<br><br>Men may be targeted for the construction work and training on maintenance of the system | Access to lighting in the evening could have positive impacts by allowing community members to get together more easily in the evening to discuss and undertake community and social activities.<br><br>May be excluded from opportunities for employment in the construction and maintenance of the hydro system.<br><br>May be excluded from decision making on the type of electricity system to be developed, and how the electricity will be managed and installed. | Conduct a gender analysis which looks at the effects the project might have on men and women.<br><br>Ensure both men and women are consulted in the design of the hydro system and the location and type of power points and lights in the homes<br><br>Ensure men and women have equal access to training and employment which results from the hydro project<br><br>Use existing community groups or structures to support the sustainability of project<br><br>Support the community to identify ways in which electricity can support community development, including provision of training to men and women on new types of income generating activities now possible with electricity | Number of men and women who have access to electricity, including in communal buildings<br><br>Number of men and women who express satisfaction with the new electricity sources<br><br>Number of men and women involved and employed in construction and maintenance<br><br>Number of men and women who participate in training in the use and maintenance of the hydro system<br><br>Change in activities and income generated by men and women related to the hydro system<br><br>Change in time that men, women, girls, and boys spend for collection of other energy sources, such as firewood<br><br>Change in the number of men, women, boys, girls with respiratory problems<br><br>Percentage change in the number of women involved in decision making structures |

**Case Study 3. Bio-fuel feasibility study in Kiritimati island, Kiribati**

Lack of reliable power is one of the biggest challenges to economic development on Kiritimati island in Kiribati. Power is currently provided by generators run on imported diesel. There is limited storage space for fuel, and regular supplies are needed.

A feasibility study was done as part of a climate change project aiming to support the development of renewable energy sources in Kiribati. The aim of the study was to find out the availability of coconut resources on the three islands of Kiritimati, Tabuaeran, and Teraina and see whether it would be possible to produce enough coconut oil to use as bio-fuel for power generation on Kiritimati island. Copra (dried coconut kernels, from which oil is made) is the main source of income for the three main islands, however the copra price is heavily subsidised by government.

The feasibility study found that coconut oil could be produced as a bio-fuel, which would reduce reliance on imported fuels and reduce greenhouse gas emissions. However, this would require a reorientation of the coconut/copra industry, and more research on the best way to do this.

A gender analysis of the feasibility study was carried out to ensure that gender issues were considered, and that everyone in the community could benefit from the programme. The analysis found that the feasibility study had not adequately consulted men and women to consider how changes in copra farming and production for biofuels would affect different community members. Positive and negative impacts and opportunities had not been sufficiently examined to enable the project coordinator to define activities that would support equal access to training and ensure that increased farming, income generation and access to energy benefitted everyone equally. Further study is also needed to examine the roles and responsibilities of men, women, boys and girls in farming copra as the quality of copra is important for biofuel production.

This case demonstrates the importance of building in gender analysis from the beginning of programme and project planning. When conducting feasibility studies, it is important to look not just at whether renewable energy production is technically possible, but whether the programme will benefit all members of the community. Social impact assessments, which include gender considerations, are an important way to ensure that energy programmes are meeting the needs of people.

*Koin Etuati, Energy Policy Officer, SPC*
*Kiritimati bio-fuel feasibility study, Pacific Islands Greenhouse Gas Abatement and Renewable Energy Project (PIGGAREP), SPREP*

**Table 3. Applying a gender lens to Case Study 3; Kiritimati Island, Kiribati**

| Climate change issue: Reliance on carbon-based fuels that contribute to climate change | | | | | |
|---|---|---|---|---|---|
| **Applying a gender lens to the problem** | | **Applying a gender lens to possible adaptations options** | | **Recommended gender-sensitive approach** | **Gender-sensitive indicators** |
| Men | Women | Men | Women | | |
| **Problem: Lack of access to clean and reliable energy sources** | | **Solution : Introduction of hydro-electric power as a sustainable energy source** | | | |
| May be targeted as key stakeholders due to their visible roles in cutting copra.<br><br>Limited opportunities for employment in the energy sector because fuel sources are imported, and no processing is done locally. | May be excluded from consultations because their roles are less visible.<br><br>Limited opportunities for employment in the energy sector because fuel sources are imported, and no processing is done locally. | Have specific roles and responsibilities, knowledge, and skills for farming and processing copra.<br><br>May be targeted for training and employment opportunities.<br><br>Production of local fuel may have unintended environmental impacts e.g. fisheries, through poor waste management. | May not be consulted about their specific needs for electricity use.<br><br>May have less access to opportunities for employment and training.<br><br>Production of local fuel may have unintended environmental impacts e.g. on water sources, through poor waste management | Conduct an energy survey to better understand the energy needs of different groups.<br><br>Analyse the division of labour – who (men or women, age groups, social groups) collects, dries and checks the quality of coconuts/ copra – use this information to inform training opportunities taking care not to reinforce existing gender imbalances.<br><br>Ensure that men and women's skills and knowledge in copra production are used in planning the project to ensure high quality bio-fuel production.<br><br>Identify existing groups e.g. local groups or cooperatives that could be supported to process the coconut Oil (CNO).<br><br>Conduct an environmental impact assessment to consider impacts on the livelihoods of men and women. | Numbers of men and women, including farmers, consulted during the feasibility study.<br><br>Number of men and women who receive training on increasing quality of copra yield and income generating activities.<br><br>Percentage change in cash income for men and women<br><br>Number of men and women employed in processing CNO from copra.<br><br>Percentage change in the use of household appliances and equipment used by women and men, and what they use them for. |

# Module 2.4: Disaster risk reduction, climate change and gender

## Key messages

- Disasters happen when a hazard -- such as flood, cyclone or sea level rise – occurs in a place where people are vulnerable
- Men and women have different vulnerabilities and exposure to disasters, due to traditional roles and the specific situation or context, which we must analyse case by case
- Men and women also have a range of different capacities for anticipating and reducing the likelihood of disasters occurring
- Women's vulnerability is partly due to lack of mobility, as they are often expected to stay close to home to undertake household work and attend to family members
- Men tend to have greater access to resources, such as income and vehicles, and due to social roles generally have more mobility which makes them less vulnerable to disasters
- To effectively reduce disaster risk programmes and projects must identify and acknowledge the various capacities and skills that both women and men can contribute to risk reduction, such as traditional knowledge and practices
- Initiatives for disaster risk reduction must also build the capacities of both men and women equitably, by training both in the use of new technologies, such as early warning systems
- To be successful, investments in disaster risk reduction, such as local infrastructure projects or community activities and plans, must consult both men and women extensively, to learn about their ideas and preferences
- Leadership by both men and women at the community and national level is essential for effective disaster risk reduction

Source: SPC-GIZ.

**Introduction**

Extreme weather events are frequent in the Pacific and these impacts all sectors of society and the overall well-being of people. However, due to climate change it is expected that the intensity and magnitude of floods, tropical cyclones and droughts will increase in the coming years, and given the Pacific's reliance on natural resources, this will require people to change and adapt accordingly.

There are two compelling reasons why gender consideration should be taken into account in disaster risk reduction. Firstly, it is inclusive and fair to everyone if all people in a particular community or country can actively engage in planning and implementing suitable measures for disaster risk reduction.

Secondly, taking into account gender considerations will make our work on disaster reduction more effective. Disaster managers in every country have as their main objective to preserve lives, and as a secondary objective to protect property. In order to meet these objectives, disaster managers and other practitioners must be familiar with the people they are responsible to protect – who these people are, how they live their daily lives, what kind of work they do, and what kind of property they own or the community owns.

Hazards [1] that relate to climate such as floods, cyclones, sea level rise can become a disaster if they take place where there are vulnerable people exposed to this hazard. In order to understand how best to reduce vulnerability we need to understand who is exposed to these hazards, their roles and responsibilities, their access to resources and information. To the extent that people have capacities which allow them to anticipate and reduce the risks associated with different hazards, they can prevent it from causing a disaster, or they can minimize the disaster.

In the Pacific, it is common to find significant differences between men and women, in terms of roles and responsibilities, daily activities, and control over household income. Understanding these differences is critical for ensuring that disaster managers can do their work effectively.

As a result of these differences, men and women often have different priorities, needs, perspectives and access to information and resources. In some communities, younger men in particular may have greater access than women to mobile phones and computers, so will obtain more accurate details about when a cyclone will make landfall for example. We need to understand these gender differences in order to effectively target risk reduction activities.

Families tend to work together to minimise risks associated with hazards. For example, men are generally expected to secure property and infrastructure, which may mean that they risk their own lives to do this in a precarious situation such as flood waters or high winds. Women on the other hand, are expected to prepare the home and attend to children and sick family members. Different people within a community may therefore be differently vulnerable to disasters.

Elderly men and women living on their own may have limited mobility and require the support of others in the community. People living with disabilities may also require additional time and support to be able to respond to incoming hazards. As women tend to have less access to resources such as cash income and vehicles, they have fewer options in addressing disasters. Recognising and addressing these differing needs can effectively contribute to reducing peoples' vulnerability to hazards.

At the same time, both men and women bring a range of skills and talents to disaster risk reduction. Their skills may be due to traditional roles and responsibilities (see Case Study 2), or they may come from individual talents and skills. In small islands it is vital to identify and leverage all of these skills and talents which are available.

Hazards can be classed as hydro-meteorological (related to climate) or geo-morphological (related to movement of the ground or earth

**Projected climate change impacts on disasters**

- Tropical cyclone intensities could increase 5 to 10% by about 2020
- Peak rainfall rates are likely to increase by 25% in response to increases in maximum and mean tropical cyclone intensities, causing more frequent and severe floods
- Between 1990 and 2100 global mean sea level is projected to rise significantly. Small islands could experience a rise in sea level as much as 9mm per year, leading to loss of coastal land area. In the South Pacific region, since 1950, mean sea level has risen at a rate of approximately 3.5 mm/yr, and could rise of 25 to 58 cm by the middle of this century
- Water resources are likely to be increasingly stressed in the future. In atoll countries, a 50 cm rise in sea level and a reduction in rainfall of 25% would reduce the freshwater lens (floating freshwater store) by 65%, leading to more frequents and severe droughts
- In 2080, flood risk is expected to be in the order of 200 times greater than at present for Pacific atoll countries.
- Sea-level rise and increased sea water temperatures will accelerate coastal erosion, and cause degradation of natural coastal defences
- Airports, main roads, schools and hospitals are often located within a few kilometres of the coast. Much of infrastructure in South Pacific region would be at serious risk at the projected mean sea level rise of 25 to 58 cm

*Adapted from various sources including IPCC (2007)*

**About this module**

The key steps in designing and implementing gender-sensitive disaster risk reduction programmes and projects are:

1. Understanding the scientific and biophysical impacts that climate change will have on the frequency, intensity and characteristics of climate-related (hydro-meteorological) hazards
2. Conducting an assessment that analyses the underlying gender roles, responsibilities and access to resources within a given community that is exposed to climate-related hazards, to determine the vulnerabilities and capacities of various people and groups to prevent and handle disasters.
3. Integrating information obtained from initial assessments (2) into project planning objectives, work plans and monitoring and evaluation frameworks.

This toolkit is designed to help practitioners with (2 & 3) such that they can design and implement climate adaptation responses in gender-sensitive ways, thereby improving their overall effectiveness. To also help guide this process a gender checklist for disaster risk reduction programmes and projects may be found in the tools section at the end of this toolkit.

The module presents a series of disaster risk reduction case studies and applies a 'gender lens' to each case, looking at gender aspects of the problem and the possible solutions, and offering gender-sensitive approaches and gender-sensitive indicators that could be used in similar situations and projects. These projects do not necessarily represent best practices -but have been shared to illustrate how gender considerations can be taken into account. The tables used to analyse the gender perspective can be used as tools to support screening programme and project design and implementation (Tool 5). It is important to remember that vulnerability and adaptation assessments and gender analyses are context specific. These case study examples should be used as guidance only.

**Case study 1: Flood early warning system in Navua, Fiji**

Navua town is situated on the flood plain of the Navua River, Fiji's third largest, which drains a catchment area of 1070 cubic kilometres. Floods in 2003 and April 2004 caused wide-ranging and serious damage to crops, livestock, houses, roads and bridges. Hundreds of people lost their homes and belongings. The 2004 floods caused FJD 90 million in damage to medical supplies and equipment from Navua hospital, which is situated immediately next to the river banks. The way that human settlements around the flood plain have developed helped transform a climate-related hazard into a disaster. Flooding of the Navua River is associated with prolonged and intense rainfall, which is common during the wet season, from November to April. However, increased flooding of the area has also been attributed to build-up of sediment at the mouth of the Navua River, which raises the riverbed and increases the river's potential to burst its banks. Studies and field surveys suggest that several development processes are exacerbating flood risk: abandoned irrigation channels built in the 1990s; unsustainable land usage; deforestation of land around the upper catchment of the Navua River; aggregate mining in the river and; dredging of the river for mining and to control flooding.

All of these factors contribute in varying degrees to bank erosion, deforestation and sediment build-up on the riverbed. The project addresses these problems using the locally-based risk management approach. Disaster risk reduction is more likely to be sustainable when projects start by addressing local development issues, and integrating risk management into existing development initiatives. Locally-based risk management supports communities to manage and reduce disaster risk, as well as foresee and control the emergence of new risks. This is done through work on local governance, and community planning and preparedness, as well as through individual participation and motivation. First, through using Vulnerability and Capacity Assessment (VCA) methodology, communities identified their development priorities, with particular attention to how gender roles can contribute to vulnerability. Based on this, action plans were developed with villagers, and priorities were identified. Community development needs were then channelled up through discussion with local government representatives, who also take part in the assessment process. District Officers at the local government level then submitted proposals to national counterpart ministries, which has led to allocation of national-level funds for the project. As the National Disaster Management Office is one of the project partners, information regarding major development and disaster issues is constantly shared and discussed at the national level. Two project management mechanisms were set up: (1) a Steering Committee for the project was appointed with the assistance and advice of the Provincial Administrator, to provide guidance and oversight, and was made up of focal points from local government and civil society organisations and (2) the project implementation group was responsible for conducting activities and was required to report back to the Steering Committee regularly.

*Stephanie Zoll, Secretariat of the Pacific Community*

**Table 1: Applying a gender lens to case study 1; Navua, Fiji**

| **Climate change impact: increasing severity of floods, which affects the livelihoods and safety of people living in flood-prone areas** | | | | | |
|---|---|---|---|---|---|
| **Applying a gender lens to the problem** | | **Applying a gender lens to possible adaptations options** | | **Recommended gender-sensitive approach** | **Gender-sensitive indicators** |
| Men | Women | Men | Women | | |
| **Problem: Damage caused to homes and livelihoods by floods** | | **Solution : Introduction of early warning system (EWS)** | | | |
| Homes and belongings lost due to flood damage.<br><br>Crops and livestock destroyed, leading to lost income sources. | Homes and belongings lost due to flood damage.<br><br>Unpaid domestic work increased to clean homes and in caring for displaced family members. | Men can be trained to install, operate and maintain flood EWS.<br><br>Men tend to have greater access to mobile phones for receiving warnings but many work in Suva and take their mobiles with them. | Women can be trained to install, operate and maintain flood EWS.<br><br>Women tend to work at home or close to Navua but have less access to mobile phones in order to receive and disseminate warnings. | Ensure that equal numbers of men and women are trained and have access to the EWS technology and protocols<br><br>Map out the planned local coverage of warnings to track whether all men and women receive the warnings<br><br>Debrief with community discussions after each flood, on the effectiveness of the EWS operation, with extensive feedback and suggestions for improvement gathered from both women and men | Numbers of men and women trained to install and operate EWS equipment<br><br>Numbers of men and women with access to mobile phones and other technology relevant to EWS<br><br>Percentage of male and female local population who receive the warning on time (based on pre-event simulations and post-event reports)v |
| | | **Solution: Better locally-driven community planning and preparedness** | | | |
| | | Men tend to be more represented and have easier access to decision-making structures and processes. | Women may have different perspectives but are often excluded from consultative and decision-making processes. | Establish mechanisms and practices which ensure that both men and women can voice their concerns and perspectives and have these recorded. | Number of men and women represented on EWS steering committee<br><br>Planning documents separately identify priorities and issues of concern raised by men and women |

**Case study 2: Traditional food preservation for cyclone season in Solomon Islands**

As a result of climate change, hazards such as storm surge and cyclones are becoming more intense. Most Pacific islands are located in the cyclone belt so are quite vulnerable to these impacts, and devastation in the outer islands is compounded by their remote locations. When a cyclone strikes, it may take days before emergency food supplies can be delivered or dropped, even using military airplanes from neighbouring countries. However, in parts of the Solomon Islands communities have maintained traditional food preservation practices to ensure food security during these disasters. Women and men play an active role in maintaining this traditional knowledge and in undertaking these preparations to protect their communities from hardship.

In the remote Temotu province of Solomon Islands, the communities undertake traditional food preservation prior to the onslaught of cyclone season. On Tikopia island women are mainly in charge of preparing masi, which is made of cassava that is peeled, chopped up, softened in water and then buried in underground pits about 3 meters wide and one meter deep, which should ideally be located on higher ground to avoid saltwater from the water table. Preparation of this food is a laborious process which requires six or seven layers of leaves to properly cover the pit, and the women pass on their traditional knowledge on critical details such as the fact that rantea leaves are more durable than banana leaves for this purpose. There is substantial work required also to maintain the pit, keep it clean and change the leaves. Women take on this task as well, with the result that about 100 kilos of masi as staple food is conserved for up to 5 years. These women are playing an essential role in ensuring food security and self-reliance for their communities in the aftermath of devastating cyclones. One woman notes, “because income is low and the population getting higher, it is hard for us to cope when disasters come.”

Men assist in the masi preparation by digging the deep pits. They also grate the coconut for the milk that is mixed with the masi when it is cooked.

On Santa Cruz Island, also in Temotu province, the local women prepare a “disaster food” known as nambo. Men harvest the breadfruit from tall trees, then the women slice it into small chips and roast it on the open fire, or dry it with nets or air dryers. Another “disaster food” called lekdo is prepared from wild yams. One local resident notes, “when the cyclone ruins all of the crops on land, the yam is still safe underground.”

*Karen Bernard, UNDP with permission from Solomon Islands NDMO*

**Table 2: Applying a gender lens to case study 2; Temotu Province, Solomon Islands**

| **Climate change impact: Greater intensity of cyclones causing food shortages on remote islands** | | | | | |
|---|---|---|---|---|---|
| **Applying a gender lens to the problem** | | **Applying a gender lens to possible adaptations options** | | **Recommended gender-sensitive approach** | **Gender-sensitive indicators** |
| Men | Women | Men | Women | | |
| **Problem: Food crops are destroyed during cyclones** | | **Solution: Harvest crops prior to cyclone season, as much as possible.** | | | |
| Food shortages and hardships for men and their families. | Food shortages and hardships for women and their families. | In Santa Cruz, men harvest breadfruit from tall trees | Women harvest cassava and wild yams | Ensure that women and men are both actively involved in harvesting food crops for cyclone season, bringing their respective and complementary skills to this task | Amount of crops harvested by men and women.<br><br>Amount of time spent on food preparation by men and women. |
| | | **Solution: Utilise traditional knowledge to prepare and preserve local food supply for post-disaster scenario.** | | Document and acknowledge the vital roles of both men and women in traditional food preparation for cyclone season<br><br>Ensure that traditional knowledge of food preservation is passed on to boys and girls<br><br>Consider variations and new roles for men and women in this collective activity, as per individual interest and talents | Amount of household income spent on imported food.<br><br>Number of young men and women involved in new areas |
| | | Men dig the pits to store the masi as food reserves | Women know the details of how to prepare disaster foods such as masi, lekdo and nambo | | |

# Module 3: Integrating gender as part of the climate risk main streaming process

## Introduction

Climate change mainstreaming is about integrating climate risks into development planning processes and decision making (see Box 2). Gender mainstreaming follows a similar process by systematically integrating gender into every step of the process from defining the problem to identifying potential solutions; in the methodology and approach to implementing the project; in stakeholder analysis and the choice of partners; in defining the objective, outcomes, outputs, and activities; in the composition of the implementation and management team; through the budgeting process; in monitoring and evaluation (M&E); and in policy dialogue.

**Box 1:** A gender responsive climate change programme recognises that women's roles are as important as men's in addressing environmental and development issues. It acknowledges that, because they have different roles, women and men may have different needs, which must be addressed in order to achieve sustainable development.

This guide targets climate change practitioners and seeks to support them to recognise where and how gender considerations should be taken into account as part of the process of mainstreaming climate risk in policies, plans, and on-the-ground activities.

When considered and planned at the start of any process the integration of gender considerations is not an additional step, but simply becomes part of all stages in planning, development, and implementation. In this way it is very similar to the process of climate risk mainstreaming which therefore provides a good entry point for also addressing gender issues.

This section has been aligned to the programme / project cycle used in "Mainstreaming Climate Change Adaptation in the Pacific: A Practical Guide" (SPREP and UNDP, 2013). This should assist users in identifying entry points for gender at every stage in the cycle.

**Box 2:** Climate change mainstreaming is about integrating climate risks into development planning processes and decision-making. This means incorporating climate risk considerations into every aspect of the policy and project development process. This applies to all key Government agencies and sectors (e.g. Finance, Planning, Health, Agriculture, and Environment), and all levels of government (i.e. national and sub-national).

This can be thought of as applying a 'climate lens' to the work the Government is already doing. That is, analysing each stage of policy and project formulation from a climate risk perspective, so that the policy or project under consideration is more effective at reaching its original objectives, do not create or increases vulnerability and sustainable.

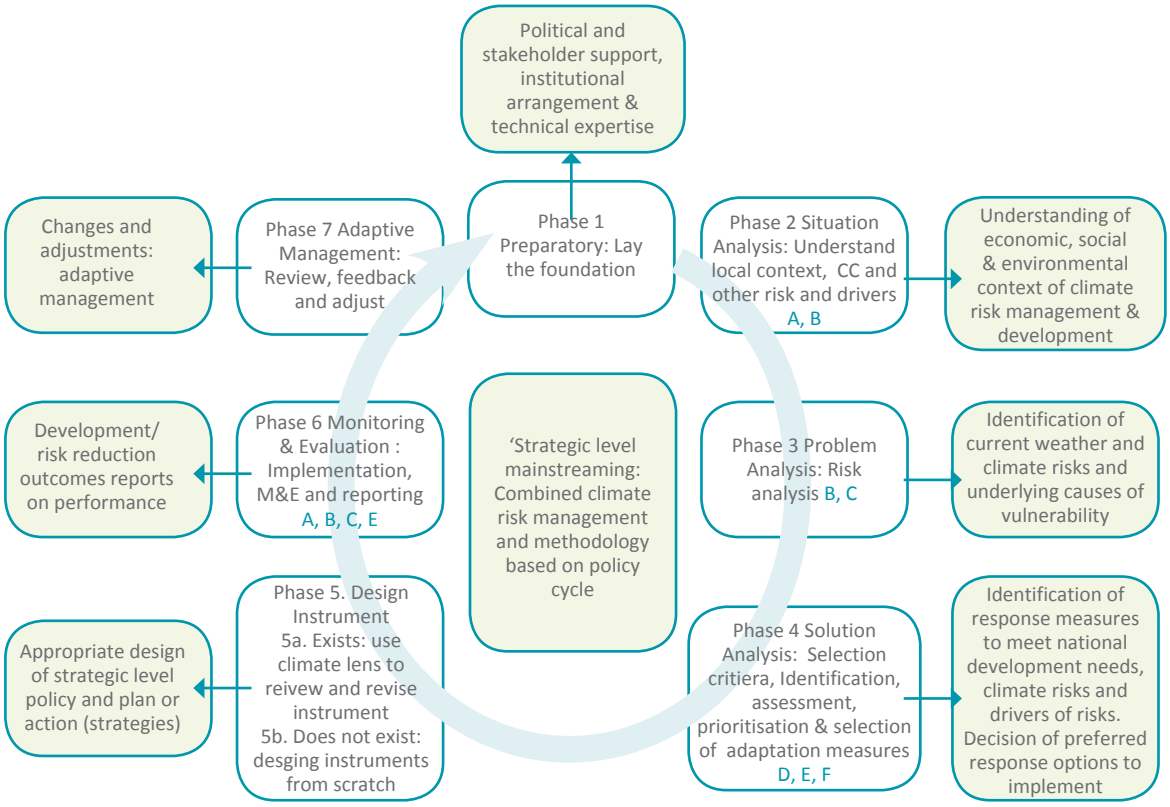
### Integrating gender throughout the policy / programme / project cycle

Integrating gender throughout the policy, programme or project cycle is about asking at each step;

- How have men and women fed into the decision making and priority setting process?
- Do men and women have equal access and control of resources necessary to participate and benefit fully?
- Are their different needs and priorities being met?
- Do men and women have specific knowledge and skills and are these being utilised to contribute to better outcomes?

Fig 1 is taken from "Mainstreaming Climate Change Adaptation in the Pacific: A Practical Guide "(SPREP and UNDP 2013). The red letters represent various technical tools that can be used as part of the climate change mainstreaming process.

A. Weather and climate hazard assessment
B. Vulnerability assessment
C. Disaster risk analysis
D. Identification of climate change adaptation and disaster risk reduction strategies and measures
E. Risk reduction analysis
F. Evaluation and selection of preferred measures.



We can apply a gender lens to each stage of the above cycle and to each of the technical tools described. This module supports practitioners to do that.

In the following sections each phase of the programme cycle is discussed in turn. The steps and key outputs of each phase are described and gender considerations of each of these steps identified.

Within the tools section entry points for incorporating gender considerations in climate risk mainstreaming tools are given. Other standalone tools which specifically address gender considerations, for example guiding questions to include in a gender analysis checklist at each stage, are also included. A generic gender analysis checklist for programme, project and policy cycles is also provided along with specific sectoral checklists from Module 2.

A gender analysis is a process of examining the roles, knowledge, capacity and assets of women and men to inform the design of actions and policy decisions.


Source: SPC, 2013

### Phase 1: Preparatory phase

The preparatory phase helps to lay the political, organisational, and institutional foundation to integrate climate risk management into policies, plans and on-the ground actions.

Integrating gender in climate change initiatives is not just about the participation of women in consultations, meetings or committees. The institutions responsible for coordinating and steering the programme should be able to support the integrations of gender throughout the cycle. Partners should be chosen that can provide that support. If necessary, additional training should be provided to stakeholders involved to ensure that the effectiveness of programmes is not undermined by a failure to address gender issues crucial to its success.

| Preparatory steps | Key outputs | Gender perspective |
|---|---|---|
| Raise awareness | Improved understanding and secured political support | Ensure from the beginning that awareness material produced explains that climate change affects everybody but women and men are differently affected because of their roles, responsibilities and status in the household and society. |
| Establish stakeholder support, including political support | Secured cross-agency and other stakeholders' engagement and support | Institutional arrangements for coordination of climate change programmes should include the ministry responsible for women, civil society organisations, and non-governmental organisations responsible for human rights / women's rights. |
| Establish appropriate institutional arrangements | Interagency committees and stakeholders groups established to guide and support mainstreaming | |
| Identify types of scientific information, analysis and expert support that may be relevant | Technical committee to help access and analyse data and provide technical inputs | This must also include the identification of the types of social information and analysis required; and where it already exists. |
| Identify desired level of mainstreaming. Different levels of mainstreaming include national (e.g. NSDS , Joint National Action Plans, national climate change policy), sector, subnational, and on-the-ground initiatives. Levels here also refer to whether mainstreaming intends to 'climate-proof' an already existing policy that has a development focus, or whether it is aiming to create a new policy which has climate change risk reduction as its primary focus. | Products of mainstreaming exercise objectively identifiedt | Once the type of climate change mainstreaming is defined, define the appropriate entry points for also mainstreaming gender as part of this process. This could include integrating gender sessions into workshops and training sessions, or contracting gender experts to conduct a<br>A specific gender action plan can be a useful tool for identifying entry points and ensuring gender doesn't get overlooked. |
| Establish a decision-making process to ensure community members are integrally involved in each of the cycle stages – to calibrate their knowledge against scientific analysis; and help select adaptation measures that reflect their risk preferences and absorptive capacity. | Decision-making processes that encourage active engagement of community members and sharing of their experiential knowledge | Communities are not homogenous groups, where every individual is the same and equal. Ensure that different groups, such as men, women, elders, youth, those with disabilities, are included in the decision making processes. Take steps to ensure that all community members (not just people who leaders or powerful in the community) can express their opinions. This may mean you need to run separate focus groups for different groups. |

**Phase 1: Preparatory - Gender analysis checklist**

**Institutions and Governance**

- Describe the current bodies or committees that deal with climate change coordination. Is there gender balance within these bodies? How gender-sensitive are the people/groups represented? Describe the mechanisms that exist to ensure balanced representation of different groups and organisations that represent them (men, women, youth, elders, people with disabilities) within these structures.
- Document the experience, skills and capacity that members have had in addressing gender issues. Are there specific people (men and women) that can act as gender champions within these structures?
- Describe the mechanisms that will be used to raise awareness and share information equally about the impacts of climate change and the different impacts on men and women.
- Identify the scientific information and socio-economic analysis needed to inform the programme or project. Describe the strategies that will be used (e.g. contracting a gender specialists, developing a gender action plan) to ensure that gender considerations are adequately addressed.
- Identify how existing social structures (traditions, governance, religion, rights, status of groups) promote or impede men and women's ability to access resources and decision-making processes necessary to support climate change adaptation and mitigation.

**Common Pitfall:** There is often a tendency to think about gender only in relation to on on-the ground initiatives and not reflect how gender perspectives can be addressed in policy, planning, institutional, and governance arrangements. Addressing gender in a holistic way requires thinking about how governance mechanisms, policies and plans frame the way in which initiatives are undertaken.

Ensuring that gender issues are highlighted in key policy documents helps to frame the way in which all climate change initiatives are undertaken.

*In recognizing that men and women face different social economic and environmental situations gender issues are to be considered in all planning and implementation processes. A better understanding of the vulnerabilities and capacities of different gender groups to deal with climate change is to be promoted. Fiji Climate Change Policy – Policy Principle 10*


SPC

### Phase 2: Situation analysis

The purpose of this phase is to understand the development situation, current weather and climate risks, and projected climate change scenarios.

| Situation analysis steps | Key outputs | Gender perspective |
|---|---|---|
| Understand national development context. If mainstreaming in community based activities understand the community development context, vulnerability of different groups, and drivers of vulnerability (A) | A status report on:<br>- economic, social and environmental context; - institutional and political environment;<br>- current weather and climate context;<br>- projected climate change scenarios; and<br>- for on-the-ground mainstreaming, community vulnerability, including drivers of vulnerability | A gender analysis must form a key component of any situation analysis and be included in the status report.<br><br>Gender roles, within the broader socio-economic context, may be a driver of vulnerability as they influence roles and responsibilities, access and control over resources and information, and constraints to involvement in decision making processes. These factors affect how climate change impacts on different groups. |
| Understand current weather and climate risks (B) | | Different people may highlight different risks and impacts of weather and climate risks based on their particular roles, **knowledge, and experiences. It is important to consider and** include these different perspectives.<br><br>Local knowledge in addition to scientific information must be drawn on in assessing climate risks. |
| Understand projected climate change scenarios (B) | | |

The initial analysis of the situation will often start by examining the relevant climate change scenarios, their impact on physical infrastructure and ecosystems, and the resulting consequences for people and communities. It is also likely to include a stocktake of existing policies, strategies, institutional arrangements, and already identified priority actions to deal with these impacts.

As part of this initial analysis it is important to include an assessment of the roles of men and women in society in general and specifically the roles, knowledge, capacity, and assets of men and women where a program will be implemented. This contributes to a better understanding of the social dimensions of climate change impacts by identifying the social inequalities and gaps which contribute to individual vulnerability, as well as the assets and capacities which will help them to cope with environmental stresses.

**Common Pitfall:** It is often the case that a gender analysis is not conducted at the beginning of the project and, if done, is tagged on as an afterthought. This misses a good opportunity to gather information and knowledge to help strengthen project design and make outcomes more effective. This analysis is less useful when done after project implementation begins.

### Phase 3: Problem Analysis

The purpose of this phase is to undertake a detailed risk assessment using current and projected climate conditions, and identify gaps in risk management. This helps to better understand the nature and extent of the climate risk and to provide a foundation for decision making.

| Problem analysis steps | Key Outputs | Gender Perspective |
|---|---|---|
| 3.1 Analyse current weather and climate risks, and other drivers of risks, including root causes (B, C) | A status report on:<br>• current weather and climate risks and other drivers of risk and root causes | Existing social inequalities may be an underlying driver of risk and should be highlighted as part of a vulnerability assessment. |
| 3.2 Assess gaps in current disaster risk management and development needs | • gaps in disaster risk management and development needs | Attention should be paid to ensuring that all relevant stakeholders feed into the process of identifying gaps, assessing risks and documenting existing coping strategies. Different people may identify and prioritise different gaps and risks and may have different knowledge and skills that relate to dealing with climate risks. A gender analysis can help to uncover these differences. |
| 3.3 Assess projected weather and climate risks, and other drivers of risks (B, C) | • projected climate risks and vulnerability<br><br>Decisions about:<br>• priority risks to target | |
| 3.4 Document community experiences with climate hazards and knowledge in coping with disasters (B, C) | | In documenting community experiences it is important to create space for marginalised and less powerful groups to contribute their thoughts and ideas. A community is composed of people with different needs, capacities, and interests; and people in a dominant situation (often older men, traditional leaders, or wealthy individuals) may impose their priorities. Sex and age disaggregated information about community experiences and priorities will provide detailed information about current coping strategies. |

Source: SPC-GIZ, 2013

**Phase 2: Situation analysis and Phase 3: Problem analysis – gender analysis checklist**

*Policies, plans and strategies*

- Are gender issues in relation to climate change clearly identified and addressed in current policies, programmes and institutional arrangements? How?
- What existin g measures exist to promote equitable access to resources from existing policies, programmes, and institutional arrangements (e.g. gender equality policies, micro-finance for agriculture targeting women, rural electrification schemes that emphasise women's participation)?

*Roles and responsibilities – who is doing what?*

- Identify the participation and roles of men and women in relation to key sectors that relate to climate change adaptation and mitigation. How do these roles influence differences in vulnerability to climate change impacts?

*Knowledge and skills – who knows what and who can do what?*

- Identify existing knowledge and skills held by men and women that can contribute to managing climate change impacts.

*Access to (use rights) and control (decision-making rights) over resources – who controls what?*

- Describe who has access and control over relevant resources (land, physical and biophysical assets, finance, training and information) necessary to support climate change adaptation and mitigation.

*Climate change risks*

- Identify differences in risks faced and priortised by men and women. Identify how women's social status (including existing inequalities, discrimination, different rights, exclusion from decision making processes) influences these risks? Describe how these factors may influence approaches to strengthen resilience to climate change.

*Knowledge gaps*

- Are sex disaggregated data or indicators available in the area of interest (e.g. coastal fisheries, energy, land use planning etc)? If so, what information do they provide?
- What information needed to support a complete gender analysis is missing? How might we fill some of these information gaps within the planning phase?

**Common Pitfall:** Assessing vulnerability to climate risks is not just about assessing scientific information. The underlying causes of vulnerability may be rooted in social issues such as a lack of access to information arising from exclusion from decision-making processes. A detailed situation and problem analysis that examines social structures can help to identify these underlying causes. In this case the issue to address would be why certain groups are excluded from accessing information – how can we devise strategies to ensure the information reaches them?

### Phase 4 Solution Analysis

The purpose of this phase is to identify different options to reduce the identified climate risks. The options identified will correspond to the level of mainstreaming (national strategy, sector policy, 'on-the-ground' initiative). There is more than one way to solve a climate or development problem. It is important that all possible options are identified and properly considered in order to allow for the most effective option to be selected.

| Identification of options | Key Outputs | Gender Perspective |
|---|---|---|
| 4.1 Identify adaptation, risk reduction and/or climate compatible development measures, including through research of options and experience implemented in other parts of the country, within different sectors, other PICTs, and other regions. (D, E) | Brief report outlining process followed and basis for identifying main options<br><br>Key adaptation and development measures identified for further analysis | Ensure that both men and women's knowledge and skills are drawn on in the identification of risk reduction options<br><br>Ensure that there are suitable opportunities for the genuine participation of all members of society in identifying and prioritising options<br><br>Ensure appropriate attention is paid to social context (in addition to physical science) in identifying feasible options<br><br>Avoid reinforcing stereotypes by assuming that men and women will be doing specific roles that relate to their traditional gender roles. Actively seek new opportunities for both men and women that may challenge these stereotypes.<br><br>Reinforcing traditional roles will likely reinforce unequal power relationships, which is an important cause of women's vulnerability. |

**Box 3: Selecting options to adapt to coastal erosion and sea level rise in Lifuka Island (Tonga)**

Traditionally in Lifuka, men tend to dominate community consultations. The project Assessing Vulnerability and Adaptation to Sea-Level Rise Lifuka Island implemented by the Ministry of Environment and SPC, used a participatory approach to conduct a social assessment in Lifuka. To ensure women's genuine participation, separate focus group discussions were held with women and with men, each group discussions using the same tools and questions. This provided a space where women felt safe to freely discuss issues related to coastal erosion and what they think should be done. In the past, when women were invited to participle in community meetings, few attended, and those that did come to the meeting rarely participate or said anything. Women did share many of the same concerns as men, and observed the same changes due to coastal erosion and sea level rise. However, they also talked about other issues such as safety, sustainability, and health issues; and recognised that many environmental issues were caused by people's unsustainable use of natural resources such as sand mining and tree cutting on the coastal zone. They also showed more willingness to find solutions where they can play a role such as stopping sand mining and replanting trees to replenish the coastal biodiversity which is important for their livelihood.

**Common Pitfall:** When considering options it is important to reflect on who has inputted into the initial selection of options. Have all stakeholders had the opportunity to provide input? As individuals we often approach a problem with pre-conceived ideas about what the solutions should be. It is therefore important to get a wide range of views into this stage to ensure valid options are not overlooked.

### Selection of preferred options

This phase helps to inform which of the identified options will be most worthwhile for addressing the problems at hand and should be selected for implementation.

| Problem analysis steps | Key Outputs | Gender Perspective |
|---|---|---|
| Identify criteria to decide which of the identified options will be most worthwhile | Key decision-making criteria for selecting options chosen and weighted | Include equitable distribution of costs and benefits of proposed measures as criteria to guide decision making. For example, ensuring that options do not place additional burdens unfairly on certain groups of people or individuals.<br><br>Tools in Module 2 and annexed to this module provide examples of tools that can be used to screen potential options using a gender lens. |
| Conduct a cost-benefit analysis and/or other appraisal assessments (F) | Cost-benefit analysis or other assessment report of alternative options<br><br>Preferred option(s) selected, and selection process documented | Costs and benefits should be disaggregated according to various social groups where possible<br><br>Attention should be paid to recording any qualitative information about the distribution of costs and benefits across social groups<br><br>Clear documentation should be provided regarding the process of selecting the preferred option including whether there were any gender-based differences in priorities expressed by stakeholders, and how they were taken into account. |

**Box 4: Choiseul Province, Solomon Islands Vulnerability and Adaptation assessment**

During a vulnerability and adaptation assessment in Choiseul Province, Solomon Islands (2011)attention was paid to ensuring that men, women, and youth had adequate time and space to contribute to the identification and prioritisation of adaptation options. One way in which this was achieved was to split the groups into male and female groups, with same-sex facilitators, and to keep the participants in the same room. Participants were able to see their family (spouses, mothers, fathers, daughters, sons) working on the same issues which helped to ensure that when the priorities of different groups were presented back to the whole group they were taken seriously.

### Phase 5: Design

The purpose of this phase is to develop a detailed design document to guide project or programme implementation. These design documents should include objectives and outcomes, expected outputs, inputs and a budget. It should also include specific indicators and targets at all levels for inclusion in a monitoring and evaluation plan.

| Design steps | Key Outputs | Gender Perspective |
|---|---|---|
| 5.1 Prepare content of the initiative (program, policy, project)<br><br>5.1a Initiative design already exists, and needs to be revised or 'climate-proofed'.<br><br>5.1b Initiative design does not exist | Design document (5.1b), or revised design document (5.1a) | The design of the relevant initiative should be guided by the information and planning from previous steps, incorporating the results from the gender analyses.<br>Gender specialists should contribute to and review the design document. |
| 5.2 Prepare Implementation strategy | Implementation strategy | Implementation should be guided by a situation analysis that incorporates gender analysis.<br>Those involved in implementing the initiative, and the proposed implementation mechanisms (e.g. technical assistance support, procurement rules and processes, steering structures) should be gender-sensitive. If additional training and capacity building is necessary to support the implementation team this should be carried out at the beginning of the implementation process, and may need to continue throughout the life of the initiative.<br>A specific gender action plan with defined roles and responsibilities can help to ensure identified activities actually happen and are reported against.<br>Job descriptions / consultancy contracts should include responsibility and specific outputs to ensure the gender perspectives are integrated. |
| 5.3 Prepare Monitoring and Evaluation (M&E) strategy and plan | M&E plan and strategy, including targets, indicators, timeframes, and who is responsible for collecting and reporting information | Making gender explicit as part of the overall goals, objectives, and activities ensures that it will be reported on during programme implementation.<br>Indicators must be sex and age disaggregated and should not only measure the number of women participating in different activities.<br>Indicators should track impacts on women and men, for example changes in their workload, changes in access to critical resources ,the degree to which needs have been met and changes in power dynamics. |

| Design steps | Key Outputs | Gender Perspective |
|---|---|---|
| 5.4 Consolidate all of the above into a detailed (or revised) design document. | Design document | Ensure the design document is reviewed by someone with gender expertise, preferably someone with knowledge of the local context. |
| 5.5 Submit design document to Government and/or Development Partners for approval/ endorsement | Initiative approved by Government and budget allocated.<br><br>Initiative approved by Development Partners and funding allocated. | Budget allocations must reflect the principle of equal benefits. Where specific activities within the implementation strategy or a specific gender action plan have been identified these need to be resourced appropriately. This should be highlighted to Government and / or development partners. |

**Phase 4: Solution Analysis and Phase 5: Design – gender analysis checklist**

*Needs: who needs what and for what?*

- How do proposed project objectives and activities address the needs and priorities of men and women? What mechanisms were used to identify needs and priorities? Were men and women able to fully participate?
- What are the expected benefits and opportunities that the project will generate? Are some more accessible for women than men and vice versa? (e.g. training, information)
- What resources do men and women need to manage climate-related impacts? How might current differences in the ability of men and women to access these resources affect options and design?

*Knowledge and skills: who needs to know what to manage climate change impacts?*

- What capacity building needs in relation to managing climate change impacts have been identified? Who identified them?

*Inputs from social scientists*

- How and to what extent have social scientists, including gender specialists, been involved in the design process?
- Has a gender analysis of proposed policies and interventions been undertaken? How did the results of the analysis influence the design? If a gender analysis has not been conducted, when is this planned?
- What resources are allocated to ensure that gender considerations are acted upon?

**Common Pitfall:** Gender specialists are often asked to contribute late in the process of designing a project. Where specific gender expertise will be required to support project design ensure that this is planned early to provide time to meaningfully inform programme design.

### Phase 6: Implementation, and monitoring and evaluation (M&E)

The purpose of this phase is to implement, monitor, evaluate and report on progress against the stated objective of the policy and/or plan of action, or on-the-ground initiative.

| Problem analysis steps | Key Outputs | Gender Perspective |
|---|---|---|
| 6.1 Implementation | Implement activities | The involvement of both men and women at all stages of implementation is crucial to ensure the initiative is effective, and draws on all available knowledge and skills. Particular attention should be paid to ensure that women are actively involved in decision making processes, and have equal access to benefits for example, training or income generating opportunities. In some cases, interventions may need to be adapted to overcome cultural constraints that restrict women's participation, particularly in decision-making. |

### Phase 6: Implementation– gender analysis checklist

- Do the implementing partners identified already have commitments to achieving gender equity and skills and capacity to implement programmes using gender-sensitive approaches? If not, include capacity building for partners at the outset.
- Describe the mechanisms to be used to ensure the full and active participation of men and women at all stages of the implementation process.
- Describe how any specific measures to address gender issues identified during the planning phases will be resourced and their implementation tracked.

**Common Pitfall:** An organisation that is used to working with women may not necessarily be gender sensitive. In some cases, interventions can contribute to maintain women in stereotypical roles and positions, for example as caregivers and homemakers, and do not challenge the causes of their underlying vulnerability.

| M&E steps | Key Outputs | Gender Perspective |
|---|---|---|
| 6.2 Monitoring, evaluation, and reporting (A, B, C, E, and F) | Regular M&E reports across different stakeholders and all levels of government, reflecting vertical relationships between project, programme, sector, climate change policy goals, objectives and strategies and the NSDS<br><br>An evaluation report, including ex-post cost-benefit analysis and discussion about lessons learnt<br><br>A decision to change current initiative design, and/or replicate if CBA indicates the benefits outweigh the costs<br><br>Use lessons learnt to inform other climate risk management initiatives | Indicators should be sex and age disaggregated and used regularly to track progress.<br><br>A gender specialist should form part of the independent evaluation committee to assess:<br>• the roles of women and men in contributing to the achievement of the outcomes;<br>• how the programme has affected women and men, and the direct benefits;<br>• how the programme empowered women and men and challenged existing power relations and stereotypes;<br>• Identification and sharing of specific examples of women's involvement that strengthened outcomes. |

Several indicators within the overall results matrix for the SPC/GIZ Coping with Climate Change in the Pacific Island Region (CCCPIR) programme make explicit reference to men and women and/or gender equality. These ensure that everyone involved understands that addressing gender issues is central to the achievement of programme results.

- 50 % of men and women in ten rural communities in five countries indicate that they are more resilient as a result of implemented climate change adaptation measures.
- Multisectoral adaptation approaches incorporating principles of gender equality and ecosystem based adaptation are implemented in ten communities in eight countries.
- One jointly developed pilot REDD+ project incorporating the principles of gender equality is implemented in Fiji.

**Common Pitfall:** Gender and climate change monitoring and evaluation is not only about sex-disaggregated indicators. A key objective of any M&E system, particularly for climate change, must be about learning. It must provide a way to evaluate qualitatively how men and women have benefitted from the programme and provide examples of where women's involvement (or lack of) strengthened (weakened) outcomes.

### Phase 6: Monitoring and evaluation – gender analysis checklist

Through the use of sex-disaggregated indicators and specific tools the monitoring and evaluation framework should enable us to track the following issues;

- How the project/programme has addressed women's and men's needs
- How the project/programme has affected women's and men's workload
- Capacities and knowledge developed by women and men and how they are using this to strengthen resilience of their household and/or community
- Reduced gender inequalities, for example, in terms of access to or control over resources, participation in decision-making, rights, discrimination etc.
- The overall impact of the project/programme on women's and men's vulnerability to climate change

Source:SPC,2013

### Phase 7: Adaptive Management

### Disseminating findings and policy dialogue

Integrating gender is about good social science and understanding its importance in achieving programme, project and policy objectives. When all groups in society are empowered and are given the opportunity to contribute to identification and prioritisation of problems and solutions it might be difficult to attribute the difference that has had. It is, however, easy to pinpoint examples of where failing to address these issues completely undermines the achievement of results – whether that is failure to adopt a particular technology or use a specific early warning system because key stakeholders can't access the technology – or failure to adopt specific resource management practices because key groups essential to successful adoption felt excluded from the consultation processes. Integrating gender is therefore not an option but should form an essential element of any climate change programme, project or policy process.

In order to influence policy and decision makers to integrate gender perspectives in climate change programmes, communication of programme results and lessons should highlight the different impacts on women and men, and the benefits of mainstreaming gender for the success and sustainability of the outcomes of initiatives. Identifying male and female champions that are given responsibility for ensuring this happens can support this process.

Source: SPC-GIZ, 2013

# The Pacific Toolkit for integrating Gender into Climate Change Initiatives

## Annex 1 - Glossary

**Sex**

Sex refers to biological differences between women and men. These characteristics exist for reproduction purposes and are essentially fixed.

**Gender**

Gender refers to the socially constructed roles and responsibilities of women and men. The concept of gender also includes the expectations held about the characteristics, aptitudes, and behaviour of both women and men; it refers to what people believe about femininity and masculinity. These roles and expectations are learned, and are different in different cultures. They are influenced over time by, for example, changes in economics, politics, technology, education, environment, the influence of other cultures and the media, mass advocacy, crisis, and conflict.

**Equality and inequality**

Equality means that all people – whatever their sex, caste, ethnicity, religion, age, marital status, physical condition, or lifestyle – receive the same treatment, the same opportunities, the same recognition, the same respect, and have the same rights and the same status.

In most societies, gender relations are unequal. Women and men have different rights, different access to resources and information, and different decision-making powers. Women are often subordinated to men and have fewer of these rights. As a result women are usually more vulnerable to poverty, exploitation, oppression, violence – and to climate change.

**Gender stereotypes**

These are prejudices about the roles of men and women, how they should behave, and the type of relationships between them. These ideas often lead to the exclusion of women from activities related to community development **and the concealment of women's contributions.** Examples of gender stereotyping include ideas that women should be seen and not heard, women belong at home and only women can be caregivers.

**Approaches to gender and development**

The *Women in Development approach* (WID) appeared in the 1970s, and aimed at promoting women's participation in development. It did this by addressing obstacles to their participation, for example, improving education for girls and women, women's reproductive health, access to drinking water and sanitation, and the development of income-generating activities for women.

The *Gender and Development* approach (GAD) is a more recent approach that aims to go further by addressing the root causes of gender inequalities through empowering women. In this approach, interventions are based on an analysis of men's and women's roles and needs (gender analysis), in an effort to empower women to improve their position.

**Gender analysis**

Gender analysis is a process of examining the roles, knowledge, capacity and assets of women and men, as the first step in planning efficient development strategies, programmes and projects that address both men's and women's needs, and reduce existing gender and other social inequalities. Gender analysis contributes to a better understanding of the social dimension of climate change impacts, focusing on the differences and similarities in the experience and capacities of women and men. It also helps identify assets and capacities of women and men, which will help them to cope with environmental stresses; and the gaps, needs and priorities for adapting to climate change.

**Sex-disaggregated data**

Data that separate out men's and women's activities and perspectives, i.e. collecting separate data on men and women. Data can also be disaggregated by age, location, ethnic group, etc. to help understand the different experiences of different groups and target solutions effectively.

**Gender mainstreaming**

Gender mainstreaming means that the needs and interests of both women and men are taken into account systematically across all programmes and projects and in an organisation's structure and management. It means that women as well as men participate in defining objectives and planning so that development actions satisfy the priorities and needs of both women and men. Mainstreaming gender is a long-term process involving both technical and 'political' dimensions of organisational change.

**Gender sensitive**

A gender-sensitive policy or programmes recognises gender inequalities as an obstacle that may deprive women of the same opportunities as men and prevent them from getting equal benefits from development programmes. Thus it proposes measures to reduce gender inequalities and provides resources and services to address both men's and women's needs.

**Gender neutral**

Where a project or programmes is not concerned with human activities and has no effect on people, this is considered gender neutral. Examples are monitoring changes in the weather or sea level rise.

**Gender blind**

Where a project or programmes is related to human activities but does not include a gender dimension, it is described as gender blind.

# Annex 2 - additional resources

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