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CAMBODIA

RICE SECTOR REVIEW

TURNING CAMBODIAN RICE INTO WHITE GOLD

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December 15, 2012

Agriculture Global Practice

East Asia and Pacific Region

Contents

Acknowledgments

The Cambodia rice sector review Turning Cambodian Rice into White Gold was prepared by consultants Tom Slayton, who has followed the world rice market for 35 years, and Sok Muniroth, a close observer of the Cambodia's agriculture sector.

The study was prepared under guidance of Alassane Saw (country manager, World Bank), Paavo Eliste (senior agricultural economist, World Bank), and Brett Ballard (advisor, Australian Aid).

Valuable comments were received from Julian Clarke (senior economist, World Bank), Enrique Aldaz-Carroll (senior country economist, World Bank), Munichan Kung (operations officer, World Bank) and Annaka Carvalho (program officer, Oxfam).

The research was conducted in July15 - August 4, 2012.

This report was commissioned by World Bank and the AusAID under the Cambodia Food Crisis Capacity Support Partnership (FCCSP) Trust Fund, funded by AusAID. The FCCSP is a joint AusAID - World Bank initiative to support Royal Government of Cambodia and stakeholders to address the constraints in smallholder agriculture and social protection that have been identified in the context of the food and financial crises.

សេចក្ដីសង្ខេបបែរួម

ការវិនិយោគលើរោងម៉ាស៊ីនកិនសណ្ដែក បានធ្វើឱ្យការនាំចេញអង្ករទាំងផ្លូវការ ទាំងមិនផ្លូវការរបស់បន្ទះសេ កើនឡើងបីដង

ទីផ្សារអង្ករនៅកម្ពុជា
កំពុងឆ្លងកាត់បម្លាស់បដ្ដូរគួរឱ្យកត់សម្គាល់។ **របាយការណ៍នេះធ្វើការវិភាគលើទិន្នាការចុងក្រោយ នៅក្នុងទីផ្សារនៅកម្ពុជា ដោយផ្ដោតលើការវិនិយោគលើរោងម៉ាស៊ីនកិនសណ្ដែក រោងចក្រសិតអង្ករ តម្លៃនៃការកិនសណ្ដែក ភាំសង្កត់ និងនិន្នាការនៃការនាំចេញ និងកំណត់ពី គោលនយោបាយរយៈពេលខ្លី ដែលអាចជួយដល់អ្នកផលិតអង្ករនៅកម្ពុជា
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ការវិនិយោគសំខាន់ៗលើរោងម៉ាស៊ីនកិនសណ្ដែធំៗ និងរោងចក្រសិតអង្ករ នៅតែបន្ដមាន។ **នៅក្នុងរយៈពេលបីឆ្នាំ (២០០៩-២០១១) ចុងក្រោយនេះ មានការវិនិយោគដ៏ច្រើន លើការសាងសង់រោងម៉ាស៊ីនកិនសណ្ដែ
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កិនស្រូវរបស់រោងម៉ាស៊ីនកិនស្រូវធំៗបានកើនឡើងជិត ៤ ដង ចាប់តាំងពីពាក់កណ្ដាលឆ្នាំ ២០០៩ មក ជិតដល់ប្រមាណជា ៣៥០ តោន ក្នុងមួយម៉ោង។ សមត្ថភាពរបស់អនុវិស័យនេះ អាចកើនឡើងទ្វេដងទៀត នៅក្នុងរយៈពេល ១៨ ខែខាងមុខនេះ។ មិនត្រឹមតែសមត្ថភាពរួមរបស់អនុវិស័យនេះ តែប៉ុណ្ណោះទេ ដែលមានការកើនឡើង រោងម៉ាស៊ីនកិនស្រូវថ្មីៗក៏មានទំហំកាន់តែធំជាងមុនផងដែរ។ នៅក្នុងឆ្នាំ ២០០៩ មានក្រុមហ៊ុនកិនស្រូវតែពីរប៉ុណ្ណោះ ដែលមានសមត្ថភាពកិនបានចាប់ពី ២០ តោនក្នុង មួយម៉ោងឡើងទៅ ខណៈពេលដែលក្រុមហ៊ុនធំៗភាគច្រើនមានសមត្ថភាពចន្លោះពី ១០ ទៅ ១២ តោន ក្នុងមួយម៉ោង។ បច្ចុប្បន្ននេះ មានក្រុមហ៊ុនចំនួន ៧ ដែលមានសមត្ថភាពកិនបានយ៉ាងហោចណាស់ ២០ តោន ក្នុងមួយម៉ោង ក្នុងនោះមាន ៣ ក្រុមហ៊ុន ដែលអាចកិនស្រូវបានរហូតដល់ ៣០ តោន ក្នុងមួយម៉ោង។ ប៉ុន្តែ សមត្ថភាពរបស់រោងម៉ាស៊ីនកិនស្រូវចាស់ៗ នៅមានកម្រិតទាបនៅឡើយ។

ភាពប្រកួតប្រជែងនៃអង្កររបស់កម្ពុជា ចាំបាច់ត្រូវកែលំអបន្ថែមទៀត ដើម្បីសម្រេចទៅតាមចំណុចដៅនៃការនាំចេញ

អង្ករមិនក្រអូបរបស់កម្ពុជា បានបាត់បង់ភាពប្រកួតប្រជែងរបស់ខ្លួន នៅក្នុងឆ្នាំ ២០១២។ ជាមួយនឹងការចូលរបស់ប្រទេសឥណ្ឌាមកក្នុងទីផ្សារអង្ករពិភពលោក ក្នុងនាំជាអ្នកនាំចេញដ៏ធំមួយ តម្លៃអង្ករនៅក្នុងពិភពលោកមានការថយចុះ ខណៈពេលដែលតម្លៃ FOB របស់កម្ពុជា មានការកើនឡើង។ តម្លៃនៃការនាំចេញខ្ពស់របស់កម្ពុជា កំពុងមានផលប៉ះពាល់មកលើប្រយោជន៍ ដែលទទួលបានពីភាពអនុគ្រោះលើពន្ធនាំចូល នៅសហភាពអឺរ៉ុប និងរុស្ស៊ី ជាពិសេស សម្រាប់អង្ករស។ (ខណៈពេលដែលអង្ករសមានប្រមាណជា ៧៥% នៃការនាំចេញកាលពីឆ្នាំមុន នៅសហភាពអឺរ៉ុប នៃបរិមាណជិត ១៣០០០០ តោន នៅឆ្នាំនេះអង្ករសដែលលក់ទៅកាន់សហភាពអឺរ៉ុបមានបរិមាណតិចតួច ដោយសារតែតម្លៃមិនអាចប្រកួតប្រជែងនឹងគបោនរបស់កម្ពុជា)។

កនៃ្លងមក មានការបង្កើនថ្លៃសេវារបស់ពន្ធ និងកាំកុងតឺន័រ ក៏ដូចជាថ្លៃសេវាកាន់តែខ្ពស់ជាងមុន ដែលមានភាពពាក់ព័ន្ធជាអវិជ្ជមានមកលើការនាំចេញផ្លូវការ។ ផលប៉ះពាល់នេះ គឺជាអ្វីដែលកើតឡើងពិតប្រាកដ ដោយហេតុថានៅត្រឹមចំណាច់ឆ្នាំនេះ សហភាពអឺរ៉ុប នឹងផ្ដល់ភាពអនុគ្រោះខាងពន្ធដូចគ្នានេះដល់ប្រទេសមីយ៉ាន់ម៉ា ដែលជាអ្នកនាំចេញដែលមានថ្លៃដើមទាបរួចទៅហើយ។ តម្លៃចាំបាច់ត្រូវតែមានភាពប្រកួតប្រជែងជាងនេះ ដើម្បីជ្រៀតចូលទៅក្នុងទីផ្សារសំខាន់ៗផ្សេងទៀត ដូចជា ប្រទេសតណ្ហូនស៊ី និងហ្វីលីពីន ជាដើម។ ចំណុចល្អមួយ គឺការបើកចំហទីផ្សារចិន កាលពីពេលថ្មីៗនេះសម្រាប់អង្ករកម្ពុជា ជាមួយនឹងការដឹកសាកល្បង ៦០០ តោន នៅក្នុងចន្លោះពីខែ មិថុនា ដល់ខែ កក្កដា។ ដោយសារតែមានការកើនឡើងផ្ទួនៗនូវតម្លៃកៅទ្រពីរខ្ទង់ នៅក្នុងរយៈពេលជាច្រើនឆ្នាំចុងក្រោយនេះ ក្រុមហ៊ុននាំចូលឯកជនរបស់ចិនគិតថា ការបង្កើនការនាំចូលរបស់ពួកគេជាងទ្វេដងនៅឆ្នាំនេះរហូតដល់ជាងមួយលានតោន ដោយ ១០% ជាអង្ករក្រអូប នាំឱ្យមានការសន្សំសំចៃជាង។ ខណៈពេលដែលតម្លៃអង្ករសរបស់កម្ពុជា បច្ចុប្បន្ននេះ នៅមិនអាចប្រកួតប្រជែងបានសម្រាប់ប្រទេសចិន អង្ករក្រអូបរបស់កម្ពុជាគឺជារឿងមួយផ្សេងទៀត។ ការដឹកចេញទៅកាន់ប្រទេសម៉ាឡេស៊ី បានបង្ហាញពីកំណើនខ្ពស់ នៅឆ្នាំនេះ ហើយស្ទើរតែទាំងអស់គឺជាអង្ករក្រអូប។

ដោយសារតែទំហំនៃចំណែកទីផ្សារអង្ករផ្សេងៗគ្នាក្នុងពិភពលោក ប្រទេសកម្ពុជាចាំបាច់ត្រូវតែផ្ដោតការនាំចេញលើអង្ករក្រអូបផង និងអង្ករមិនក្រអូបផង ដើម្បីសម្រេចទៅតាមគោលដៅនៃការ នាំចេញរបស់ខ្លួន។ ស្រដៀងគ្នានេះដែរ ចាំបាច់ត្រូវតែមានការផ្លាស់ប្ដូរពីការពឹងអាស្រ័យទាំងស្រុង លើការនាំចេញដាក់កុងទីន័រ ទៅជាការនាំចេញមិនដាក់ក្នុងកុងទីន័រ (បំពេញដាក់កញ្ចប់ធំៗ) ដោយហេតុថា ពាណិជ្ជកម្មអង្ករក្នុងពិភពលោកភាគច្រើននៃអង្ករមិនក្រអូប ត្រូវបានដាក់ដោយបំពេញដាក់កញ្ចប់ធំៗ។ លើសពីនេះ

ប្រទេសកម្ពុជាក៏ខ្វះខាតក្នុងទីនំរដែលមានគុណភាពសម្រាប់ដាក់ផលិតផលអាហារ មានឡានសណ្ដោងមិនគ្រប់ដើម្បីដឹកក្នុងទីនំរក្នុងចំណោមច្រើន និង (ដោយសារតែទំហំនៃទីផ្សារនាំចូល) តែងតែចាញ់ប្រៀបក្នុងការប្រកួតប្រជែងថ្លៃដឹកជញ្ជូនតាមក្នុងទីនំរ *បើប្រៀបជាមួយនឹង* ប្រទេសថៃ និងប្រទេសវៀតណាម។

កំណើតយឺតយ៉ាវនៃការនាំចេញអង្ករជាផ្លូវការ កើតឡើង បើទោះបីជាមានការប្រមូលផលខ្ពស់មិនធ្លាប់មាន និងការបន្ដការពង្រីក និងការធ្វើទំនើបកម្មម៉ាស៊ីនកិនស្រូវក៏ដោយ។ ប៉ុន្ដែ ការនាំចេញអង្ករទៅកាន់ប្រទេសថៃ នៅក្នុងរយៈពេល ៧ ខែដំបូងនៃឆ្នាំ ២០១២ មានការកើនឡើងខ្ពស់។ បើទោះបីជាមានគ្រោះទឹកជំនន់នៅឆ្នាំនេះក៏ដោយ ផលិតកម្មអង្ករត្រូវបានប៉ាន់ប្រមាណផ្លូវការថា មានការកើន ឡើង ៦% រហូតដល់ ៨,៨ លានតោន ដែលជាកម្រិតខ្ពស់មិនធ្លាប់មាន ដោយសារតែការបង្កើនការដាំដុះ និងការទទួលផលខ្ពស់ជាងមុន។ អតិរេកដែលអាចនាំចេញបាននៅឆ្នាំនេះ នឹងមានលើសពី ៤,៣ លានតោនស្រូវ នេះបើតាមការប៉ាន់ប្រមាណរបស់ក្រសួងកសិកម្ម រុក្ខាប្រមាញ់ និងនេសាទ ពោលគឺកើន ១០% ពីឆ្នាំមុន។

ការបន្ដធ្វើទំនើបកម្មម៉ាស៊ីនកិនស្រូវរបស់ប្រទេសកម្ពុជា បំពេញតួនាទីយ៉ាងសំខាន់ ក្នុងការកំណត់ថាតើអតិរេកផលិតកម្មរបស់ព្រះរាជាណាចក្រកម្ពុជា នឹងធ្វើចរាចរណ៍ក្រៅផ្លូវការជាស្រូវ ឆ្លងតាមព្រំដែនទៅប្រទេសថៃ និងវៀតណាម ឬបានទៅដល់អតិថិជននៅក្រៅប្រទេស ជាអង្ករ ទោះផ្លូវការក្ដី ឬក្រៅផ្លូវការក្ដី។

បញ្ហាប្រឈម នៅក្នុងការបម្លែងអតិរេកស្រូវ ទៅជាអង្ករដែលមានតម្លៃបន្ថែមខ្ពស់ សម្រាប់ នាំចេញ

១. បើទោះបីជាមានការផ្ដល់កម្ចីច្រើនជាងមុនក៏ដោយ សមត្ថភាពប្រតិបត្តិការរបស់រោងម៉ាស៊ីនកិនស្រូវ នៅតែជួបប្រទះនឹងការរាំងស្ទះ ដោយសារតែដើមទុននៅមានកម្រិត។ **ការបង្កើនការផ្ដល់កម្ចីបន្ថែមទៀត**

នឹងធ្វើឱ្យមានឥទ្ធិពលផធងេមកលើសមត្ថភាពរបស់រោងម៉ាស៊ីនកិនស្រូវ ដើម្បីពង្រីកវិស័យកិនស្រូវឱ្យកាន់តែទំនើប និងប្រកួតប្រជែងអ្នកទិញមកពីថៃ និងវៀតណាម ដែលមកទិញស្រូវ ពីកម្ពុជា។

ខណៈពេលដែលមានការរាយការណ៍ពីការកើនឡើងនូវការប្រាក់លើកម្ចីដែលធនាគារ ផ្ដល់ដល់រោងកិនស្រូវ ការពង្រីកសមត្ថភាពកិនស្រូវនៅតាមរោងម៉ាស៊ីនកិនស្រូវដែលមានស្រាប់ ភាគច្រើន នឹងធ្វើឡើងដោយប្រើប្រាស់ដើមទុនផ្ទាល់ខ្លួន។

២. បើទោះបីជាមានការវិនិយោគច្រើនលើការបង្កើតឃ្លាំងក៏ដោយ សមត្ថភាពប្រតិបត្តិការរបស់រោងម៉ាស៊ីនកិនស្រូវភាគច្រើន នៅតែជួបប្រទះនឹងការរាំងស្ទះ ដោយសារតែពុំមានឃ្លាំងគ្រប់គ្រាន់។ រោងម៉ាស៊ីនកិនស្រូវជាច្រើន ជាពិសេស នៅក្នុងខេត្តបាត់ដំបង បានបង្កើនទំហំ និងធ្វើទំនើបកម្មឃ្លាំង របស់ខ្លួន ប៉ុន្តែចាំបាច់ត្រូវធ្វើការងារជាច្រើនថែមទៀត ប្រសិនបើរោងម៉ាស៊ីនកិនស្រូវទាំងនេះចង់ អាចក្ដោប និងរក្សាទុកអតិរេកស្រូវដែលនៅសល់យ៉ាងច្រើនសម្រាប់នាំចេញរបស់ប្រទេសនេះ និង ធានាឱ្យមានការប្រើប្រាស់វិស័យកិនស្រូវរបស់ព្រះរាជាណាចក្រនេះឱ្យកាន់តែមានប្រសិទ្ធភាពមួយ កម្រិតទៀតនោះ។

៣.

សមត្ថភាពប្រតិបត្តិការរបស់រោងម៉ាស៊ីនកិនស្រូវមិនត្រូវបានប្រើប្រាស់ឱ្យបានពេញលេញ ដែលនាំ ឱ្យមានការកំហិតទំហំនៃការបញ្ជាទិញសម្រាប់ការនាំចេញ ដែលក្រុមហ៊ុនណាក៏អាចរ៉ាប់រងបាន។ ប៉ុន្តែ សមត្ថភាពនេះអាចចាប់ផ្ដើមធ្វើការផ្លាស់ប្ដូរ នៅពេលដែលចំនួនរោងម៉ាស៊ីនកិនស្រូវថ្មីៗ ដែលនឹងត្រូវបានបង្កើតឡើង នៅក្នុងរយៈពេល ១២-១៨ ខែទៀតនេះ នឹងទទួលបានដើមទុនច្រើន ហើយគ្រោងនឹងធ្វើការងារបីវេន និងពេញមួយឆ្នាំនោះ។ បច្ចុប្បន្ននេះ រោងម៉ាស៊ីនកិនស្រូវនៅកម្ពុជាភាគច្រើន ដំណើរការតែមួយវេន ដែលមានរយៈពេល ៨-១០ ម៉ោងក្នុងមួយថ្ងៃប៉ុណ្ណោះ ហើយ

មិនដំណើរការនៅកម្រិតនេះពេញមួយឆ្នាំនោះឡើយ។ ផ្ទុយទៅវិញ ក្រុមហ៊ុនថៃ ដែលមានទំហំប្រហាក់ប្រហែលគ្នានេះ កំពុងធ្វើការងារ ៣ វេន ពេញមួយថ្ងៃ សម្រាប់រយៈពេលស្ទើរតែមួយឆ្នាំតែម្ដង។ មូលហេតុសំខាន់មួយ ដែលនាំឱ្យមានការប្រើប្រាស់រោងម៉ាស៊ីនកិនស្រូវក្នុងកម្រិតទាបបែបនេះ គឺដោយសាររោងម៉ាស៊ីនកិនស្រូវទាំងនោះពុំមានដើមទុនការងារគ្រប់គ្រាន់។

៤. សក្ដានុពលក្នុងការនាំចេញរបស់ប្រទេសកម្ពុជា តាមច្រកកំពង់ផែព្រះសីហនុ នៅបន្ដជួបប្រទះ ឧបសគ្គ នៅក្នុងរយៈពេលខ្លី ដោយសារតែធ្លោយគោលនយោបាយសម្រាប់ដឹកជញ្ជូននៅមានកម្រិត។ ដូច្នេះ អង្ករស្ទើរតែទាំងអស់ ដែលត្រូវបាននាំចេញ គិតរហូតមកដល់ខែ សីហា ឆ្នាំ ២០១១ គឺធ្វើឡើងតាម កុងទីន័រ ជាមធ្យោបាយមួយ ដែលនាំឱ្យប្រទេសកម្ពុជាតែងចាញ់ប្រៀបខាងតម្លៃសេវាដឹកជញ្ជូន ដោយសារតែទំហំនៃផ្សារទំនិញនាំចូលក្នុងស្រុករបស់ប្រទេសនេះ។ លើសពីនេះ ការកើនឡើងយ៉ាងឆាប់រហ័សនៃការនាំចេញបានដាក់បន្ទុកមកលើសមត្ថភាពកំស្ដុករបស់ប្រទេសនេះ ក្នុងការ ឆ្លើយតបទៅនឹងចំនួនកុងទីន័រដ៏ច្រើនបែបនេះ។ ប៉ុន្ដែ កាលពីឆ្នាំមុននេះ មានអង្ករសក្នុងបរិមាណតិចតួចត្រូវបាននាំចេញតាមសាឡង់តាមទន្លេមេគង្គ។ គួរឱ្យសោកស្ដាយ ការថមថយនូវភាពប្រកួតប្រជែងក្នុងនាំចេញអង្ករសរបស់ប្រទេសកម្ពុជា នាំឱ្យលែងមានការដឹកអង្ករតាមសាឡង់ តាមទន្លេ បែបនេះទៀតនៅក្នុងរយៈពេល ៦ ខែដំបូងឆ្នាំនេះ។ ប៉ុន្ដែ កាលពីខែ កក្កដា ចរាចរណ៍តាមទន្លេបានចាប់ផ្ដើមឡើងវិញ ជាមួយនឹងការដឹកអង្ករក្រអូប ទៅអាហ្វ្រិចខាងលិច។

៥. ការបន្ដកំណើននៃការនាំចេញអង្ករជាផ្លូវការ ត្រូវការជាចាំបាច់នូវការបន្ដកែលំអបែបទសម្រាប់ ការនាំចេញ ដើម្បីឱ្យគេអាចសម្រេចបាននូវសក្ដានុពលពេញលេញនូវការនាំចេញអង្ករបស់ប្រទេស កម្ពុជា។ **អ្វីដែលគួរឱ្យសោកស្ដាយ ចំណាយ**

ដើម្បីទទួលបានការអនុញ្ញាតនាំចេញ មានការកើនឡើងពីកម្រិតទាបត្រឹម ៩ ដុល្លារ កន្លងមួយតោន នៅកន្លងឆមាសទី ២ កាលពីឆ្នាំមុន ដល់ ១២ ដុល្លារ បច្ចុប្បន្ននេះ។ កាលពីពេលថ្មីៗនេះ ការិយាល័យ “ចុងចេញចូលតម្លៃ” ត្រូវបានបើកឱ្យដំណើរការ នៅកន្លែមបង្រឹកសារអភិវឌ្ឍន៍កម្ពុជា ប៉ុន្តែមិនទាន់បានដំណើរការ ដូចការគ្រោងទុកនោះទេ។ ដំបូង កន្លែមហ៊ុននាំចេញត្រូវធ្វើដំណើរទៅកាន់ការិយាល័យរដ្ឋាភិបាលដូចគ្នាបែបនេះទាំងអស់សិន ដើម្បីទទួលបានការឯកភាពលើឯកសារនានា។ ក្រោយពីការតំរារបស់អ្នកនាំចេញ ឥឡូវនេះ គអោចទទួលបានឯកសារចំនួនពីរនៅការិយាល័យនោះតែម្តង នោះគឺវិញ្ញាបនបត្របង្ហាញដើម និងវិញ្ញាបនត្រអនាម័យ និងភូតគាមអនាម័យ។ អ្នកនាំចេញ នៅតែត្រូវទៅការិយាល័យគយដដែល ហើយមិនអាចទទួលបានវិញ្ញាបនបត្របញ្ជាក់ពីការគ្មានកំងត្រួល និងវិញ្ញាបនបត្រត្រួតពិនិត្យជំងឺ និងសត្វលន់អិត (fumigation) ឡើយ នៅការិយាល័យនេះបានឡើយ។

អនុសាសន៍ សម្រាប់វិធានការគោលនយោបាយ

១. បន្ថយបំបាត់ឧបសគ្គការិយាធិបតេយ្យ និងកាត់ចំណាយលើនីតិវិធីសម្រាប់នាំចេញ។ អ្នកនាំចេញនៅកម្ពុជាត្រូវបង់ថ្លៃសៃវោ (ទាំងផ្លូវការ ទាំងក្រៅផ្លូវការ) បន្ទាប់ពី ១១ ដុល្លារ កន្លងមួយតោន ខណៈពេលដែលអ្នកនាំចេញថៃ ត្រូវបង់តែ ១០-១៥ សេន កន្លងមួយតោន និង វៀតណាម ត្រឹមតែ ៥ សេន កន្លងមួយតោន។ ដើម្បីកាត់បន្ថយចំណាយទាំងនេះ របាយការណ៍ នេះសូនើ ៖ (i) បញ្ចូលចំណាយសម្រាប់នីតិវិធីនាំចេញទាំងអស់ឱ្យក្លាយជាចំណាយតម្លៃ (ii) លុបចោលការបង់ក្រៃថ្លៃសៃវោកាលពីពេលថ្មីៗនេះរបស់កំងតួល និងអគ្គនាយកដ្ឋានគយ និងរដ្ឋាករ (iii) សម្រួលចំនួនទីភ្នាក់ងារ ដែលពាក់ព័ន្ធនឹងដំណើរការផ្តល់ការឯកភាពដល់ការនាំចេញ និង (iv) ធ្វើឱ្យកាន់តែប្រសើរនូវដំណើរការរបស់ការិយាល័យ “ចុងចេញចូលតម្លៃ” ដែលទើបនឹងបើកថ្មីនេះ ដោយធ្វើយ៉ាងណាឱ្យមានការ

ចេញរាល់វិញ្ញាបនបត្រដែលតម្រូវដោយរដ្ឋាភិបាលទាំងអស់ នៅការិយាល័យ "ច្រកចេញចូលតែមួយ" នេះតែម្ដង។ ការិយាល័យ "ច្រកចេញចូលតែមួយ" បន្ថែមទៀតអាចបើកនៅក្នុងក្រុងព្រះសីហនុ ជាអាទិភាពទីមួយ និងនៅតំបន់ផ្សេងទៀត អាស្រ័យទៅតាមតម្រូវការនៃការនាំចេញ។ គួរមានការពិចារណាច្របាច់បញ្ចូលការិយាល័យរបស់ក្រសួងពាណិជ្ជកម្ម និងក្រសួងសេដ្ឋកិច្ច និងហិរញ្ញវត្ថុ ដែលពាក់ព័ន្ធនឹងការផ្ដល់ការអនុវត្តដល់ការនាំចេញពី ៣ ការិយាល័យបច្ចុប្បន្ន មកនៅត្រឹម ២ ការិយាល័យ ឬត្រឹមតែ ១ ការិយាល័យ រឹតតែល្អ។ ក្នុងករណីដែលពុំមានការផ្លាស់ប្ដូរបែបនេះ កាំកុងត្រូលគួរពង្រាយមន្ដ្រីត្រួតពិនិត្យអង្ករ នៅការិយាល័យរបស់ខ្លួន នៅក្នុងខេត្តបាត់ដំបង និងខេត្តដែលមានរោងម៉ាស៊ីនកិនស្រូវធំៗផ្សេងទៀត ដើម្បីបង្កលក្ខណៈងាយស្រួលដល់ការត្រួតពិនិត្យអង្ករពីកន្លែងផ្សេងទៀត។

២. ក្រសួងកសិកម្ម រុក្ខាប្រមាញ់ និងនេសាទ អាចធ្វើការសិក្សាមួយលើអត្ដមាននៃអង្ករ GMO នៅក្នុងប្រទេសនេះ ហើយបន្ទាប់មក ចេញវិញ្ញាបនបត្រមួយ ដែលបញ្ជាក់ថា អង្ករកម្ពុជា គឺជាអង្ករ ដែលពុំមានសារធាតុ GMO។ សហភាពអឺរ៉ុបយកចិត្តទុកដាក់ខ្ពស់ ចំពោះការនាំចូលផលិតផលអាហារដែលពុំមានសារធាតុ GMO ហើយពុំមានមន្ទីរពិសោធន៍ នៅក្នុងប្រទេសកម្ពុជា ដើម្បីធ្វើតេស្តទំនិញបែបនេះទេ។ បច្ចុប្បន្ននេះ អ្នកនាំចេញត្រូវបញ្ជូនសំណាកគំរូ ទៅកាន់ប្រទេសវៀតណាម ដើម្បីធ្វើតេស្ត ដែលចំណាយបានកើនឡើងដល់ ២១០ ដុល្លារ សម្រាប់ការធ្វើតេស្តម្ដង ហើយត្រូវការពេលជាច្រើនថ្ងៃ។ ក្រោយពេលដែលការសិក្សានេះត្រូវបានពិនិត្យឡើងវិញ និងបញ្ចូលជាឯកសារយោង ទៅក្នុងឯកសារបោះពុម្ពផ្សាយជាលក្ខណៈវិទ្យាសាស្ត្រ ដែលត្រូវបានគេទទួលស្គាល់

ក្រសួងកសិកម្ម រុក្ខាប្រមាញ់ និងនេសាទ អាចចេញវិញ្ញាបនបត្ររួមមួយ ដើម្បីបញ្ជាក់ថាអង្កររបស់កម្ពុជា គឺជាអង្ករដែលពុំមានសារធាតុ GMO ដែលនាំឱ្យមានការលុបចោលលក្ខខណ្ឌតម្រូវឱ្យមានការធ្វើតេស្តបែបនេះ។

៣. ផ្ដួចផ្ដើមឱ្យមានការចរចាទ្វេភាគី ជាមួយនឹងប្រទេសវៀតណាម និងប្រទេសថៃ ដើម្បីធានា យ៉ាងណាឱ្យអង្ករកម្ពុជា ទទួលបានជម្រើសសម្រាប់នាំចេញ ដែលមានភាពទាក់ទាញ ក្រៅតែពីការដឹកតាមកុងទឺន័រ តាមច្រកកំពង់ផែភ្នំពេញ និងក្រុងព្រះសីហនុ។ នៅក្នុងករណីប្រទេសវៀតណាម ប្រទេសកម្ពុជាចាំបាច់ត្រូវបន្តជាមួយនឹងការផ្លាស់ប្ដូរក្រៅផ្លូវការកាលពីពេលថ្មីៗនេះ ដែលផ្ដល់លទ្ធភាពឱ្យមានការដឹកអង្ករ (និងចំណិតដំឡូង) តាមសាឡង់ តាមទន្លេមេគង្គ។ ដោយប្រើប្រាស់កិច្ចព្រមព្រៀងឆ្លងកាត់រវាងប្រទេសថៃ និងឡាវ ជាគំរូប្រទេសកម្ពុជា អាចចរចាកិច្ចព្រមព្រៀងឆ្លងកាត់បែបនេះដែរ ដើម្បីអនុញ្ញាតឱ្យមានការនាំចេញអង្ករពីខេត្តបាត់ដំបង និងបន្ទាយមានជ័យ តាមកំពង់ផែថៃ។ ការធ្វើបែបនេះអាចនាំឱ្យមានការសន្សំសំចៃរហូតដល់ ១៨,៥០ ដុល្លារ ក្នុងមួយតោន។ ខណៈពេលដែលមានភាពស្ទាក់ស្ទើរមួយចំនួន ក្នុងការអនុវត្តតាមជម្រើសនេះ តាមរយៈការចរចាទ្វេភាគី ជម្រើសនេះអាចទៅមុខបាន តែតាមរយៈការប្រើប្រាស់រយៈពេលពីរបីឆ្នាំ ជាមួយនឹងការបង្កើតសហគមន៍សេដ្ឋកិច្ចអាស៊ាន នៅក្នុងឆ្នាំ ២០១៥ ហើយដែលនឹងកាត់បន្ថយសម្ពាធមួយចំនួនពីបរិមាណអង្ករកម្ពុជាដ៏ច្រើនសម្បើម ដែលនាំចូលក្រៅផ្លូវការដោយប្រទេសថៃ។

៤. បន្ដកាត់បន្ថយថ្លៃសេវាកំពង់ផែ
តាមរយៈការលើកទឹកចិត្ដឱ្យមានការប្រកួតប្រជែងពីអ្នកវិនិយោគវិស័យឯកជន លើហេដ្ឋារចនាសម្ព័ន្ធកំពង់ផែ។ នេះត្រូវការពេលយូរ ដើម្បីកាត់ បន្ថយថ្លៃសេវាកំពង់ផែ (ជាពិសេស ថ្លៃសេវាក្រៅផ្លូវការ)។ ដើម្បីជួយបង្កើនភាពប្រកួត ប្រជែងនៃអង្ករកម្ពុជា ថ្លៃសេវាកំពង់ផែផ្លូវការគួរកាត់បន្ថយឱ្យបានយ៉ាងហោចណាស់ ២ ដុល្លារ ក្នុងមួយតោន។ ក្រៅពីកាត់បន្ថយថ្លៃសេវា នៅកំពង់ផែភ្នំពេញ និងព្រះសីហនុ សម្រាប់ការដឹកទំនិញតាមកុងទីន័រ គេក៏អាចកាត់បន្ថយថ្លៃសេវាផ្លូវការ សម្រាប់ទំនិញមិនដឹកតាមកុងទីន័រ ថ្លៃសេវាសាកល្បង និងថ្លៃសេវាដែកគិតដោយក្រុមហ៊ុនកាំសាបផងដែរ។[1]

៥. បន្ដលើកទឹកចិត្ដ និងស្វែងរកការវិនិយោគឯកជនលើរោងម៉ាស៊ីនកិនស្រូវ និងរោងចក្រសម្ងួត អង្ករ ដែលមានសមត្ថភាពយ៉ាងហោចណាស់ ៣០ តោន ក្នុងមួយម៉ោង។ រោងចក្រទាំងនេះ នឹងផ្ដល់ឱកាសល្អបំផុត ដើម្បីបង្កើនការនាំចេញអង្ករ នៅក្នុងរយៈពេលខ្លីខាងមុខនេះ។ ប្រើប្រាស់ ការលើកទឹកចិត្ដខាងពន្ធ ប្រសិនបើចាំបាច់ ដើម្បីលើកទឹកចិត្ដឱ្យមានការវិនិយោគពីបរទេស ឬក្នុងស្រុក ក្នុងវិស័យកិនស្រូវ ដើម្បីបំពេញទៅតាមតម្រូវការនៃការនាំចេញ។ នេះ អាចរួមមានការលើកលែងចំណាយសម្រាប់សុំការអនុញ្ញាតនាំចេញ ជាផ្លូវការ រហូតដល់ ៥ ឆ្នាំ សម្រាប់ក្រុមហ៊ុនបរទេស និងក្នុងស្រុក ដែលបំពេញទៅតាមលក្ខណៈវិនិច្ឆ័យ។

៦. បន្ដបង្កើតអនុស្សរណៈនៃការយោគយល់គ្នា ជាមួយនឹងប្រទេសដែលជាទិសដៅសម្រាប់នាំចេញ ប៉ុន្ដែត្រូវធានាឱ្យមានការចុះកិច្ចសន្យា សម្រាប់បរិមាណ ដែលអាចបំពេញបាន ដោយអ្នកផ្គត់ផ្គង់ដែលអាចជឿទុកចិត្ដបាន។ ជាការសំខាន់ណាស់ ដែលប្រទេសកម្ពុជាត្រូវកសាង

កេរ្តិ៍ឈ្មោះខ្លួនឯងឱ្យក្លាយជាអ្នកផ្គត់ផ្គង់ដែលអាចជឿទុកចិត្តបាន ដើម្បីកុំឱ្យត្រូវលក់បញ្ចុះតម្លៃទៅប្រទេសជិតខាង។ រដ្ឋាភិបាលក៏គួររក្សាភាពបត់បែននៅក្នុងការជ្រើសរើសស្ថាប័នសម្រាប់អនុវត្តកិច្ចសន្យាទាំងនេះផងដែរ។ ដូចនៅក្នុងប្រទេសវៀតណាម រដ្ឋាភិបាល អនុញ្ញាតឱ្យមានការអនុវត្តតាមកិច្ចសន្យាដែលបានចុះហត្ថលេខាហើយជាក់ស្ដែង ដោយសមាជិករបស់សមាគមអ្នកនាំចេញអង្ករ។

៧. ពិចារណារៀបចំឡើងវិញនូវសមាជិកភាពរបស់វិស័យឯកជនក្នុងក្រុមការងារបច្ចេកទេស អង្ករ **(RTWG)** ដើម្បីបញ្ចូលក្រុមហ៊ុននាំចេញធំៗជាងគេទាំង ៥ និងរៀបចំកិច្ចប្រជុំឱ្យបាន ញឹកញាប់។ សមាជិកភាពរបស់ក្រុមនេះអាចផ្អែកទៅតាមបរិមាណនៃការនាំចេញកាលពីពេលថ្មីៗនេះ ទៅតាមការកត់ត្រារបស់អគ្គនាយកដ្ឋានគយ និងរដ្ឋាករ ឬកាំកុងត្រូល។ ក្រុម ការងារបច្ចេកទេសអង្ករនេះត្រូវមានការចូលរួមពីតួអង្គចម្រុះនៅក្នុងវិស័យអង្កររបស់កម្ពុជា ដូចជា រោងម៉ាស៊ីនកិនស្រូវ រោងចក្រសម្រិតអង្ករ និងអ្នកនាំចេញ ដែលគ្មានរោងចក្រ ជាដើម។ សមាជិកភាពរបស់វិស័យឯកជនអាចផ្លាស់ប្ដូររៀងរាល់ពីរឆ្នាំម្ដង ផ្អែកទៅតាមលទ្ធផលនៃ ការនាំចេញចុងក្រោយបំផុត។ ក្រុមការងារបច្ចេកទេសអង្ករដែលរៀបចំឡើងវិញនេះ អាច ជួយរដ្ឋាភិបាលក្នុងការកំណត់ពីឧបសគ្គដែលកំពុងមាន និងជំនះបញ្ហានានា ដែលកើតឡើង។

Executive Summary

Investments in mills tripled Cambodia's formal and informal rice exports

The Cambodian rice market is experiencing significant changes. This report analyzes the latest trends in the Cambodian market, focusing on investments in rice mills and polishing factories, milling costs, logistics and export trends, and identifies short term policies that could assist Cambodian rice producers to boost exports further.

Reflecting import duty preferences and new investments in modern rice mills and polishing factories, Cambodia's recorded rice exports more than tripled in both 2010 and 2011. The exports in 2011 were just slightly short of 175,000 tons, up from a record 51,000 tons in 2010. Formal exports are officially targeted to reach 250,000 tons in 2012, but overseas sales have encountered strong head winds as local non-aromatic rice prices increased to uncompetitive levels in sympathy with large increases in Thai values and container freight costs.

Major investments in larger rice mills and polishing factories continue to be made. During the last three years (2009-2011) there have been significant investments in building new mills and rice polishing factories and the upgrading of existing mills. The milling capacity of the larger mills has nearly quadrupled since mid 2009, reaching an estimated 350 tons/hr. This subsector's capacity may double over the next eighteen months. Not only has the overall capacity of the subsector risen dramatically, so has the size of the new mills. In 2009, only two rice milling companies had a capacity of 20 tons/hr or higher, while most of the larger companies had capacities of 10-12 tons/hr. Today there are seven firms that have a capacity of at least 20 tons/hr, including three capable of milling 30 tons of paddy in a single hour. The capacity of older mills, however, is quite small.

Competitiveness of Cambodian milled rice needs to be improved in order to meet export targets

Cambodian non-aromatic rice has lost its competitiveness in 2012. With India's re-entry into the world rice market as a major exporter, world prices have declined while Cambodian FOB values have risen. Cambodia's higher export prices are negating the benefits of its import duty preferences in the EU and Russia, especially for white rice. (Where white rice accounted for about 75% of last year's exports to the E.U. of almost 130,000 tons, a much smaller quantity of white rice has been sold this year to the E.U. because of Cambodia's uncompetitive prices.) There have been recent increases in the fees levied by Customs and CamControl, as well as higher port charges, which have negative implications on formal exports. This is particularly true because the EU is expected by year's end to extend the same duty preferences to

Myanmar, which is already a lower cost exporter. More competitive prices will be needed to penetrate other key markets such as Indonesia and the Philippines. A bright spot is the recent opening of the Chinese market for Cambodian rice with trial shipments of 600 tons made during June-July. Because of repeated double-digit support price increases over the last several years, private Chinese importers have found it economic to more than double their imports this year to over one million tons with about 10% of it aromatic rice. While Cambodian white rice prices are currently uncompetitive for China, its aromatic rice is likely another story. Shipments to Malaysia have shown good growth this year and virtually all of it fragrant rice.

Given the size of the different segments of the world rice market, Cambodia needs to concentrate on exports of both aromatic and non-aromatic rice in order to achieve its export targets. Similarly, there is a need to diversify from almost exclusive reliance on containerized exports to non-containerized (break bulk) exports, because most of the world's rice trade in non-aromatic rice is shipped break bulk. Additionally, Cambodia experiences a lack of food quality containers, has an insufficient number of semi-trailer trucks to transport such a large number of containers, and (given the size of its import market) will always be at a competitive disadvantage *vis-à-vis* Thailand and Vietnam for container freight.

Slowing growth of formal exports of milled rice is occurring notwithstanding a record harvest and the continued expansion and modernization of the rice milling sector. However, there has been a significant growth of informal milled rice exports to Thailand during the first 7 months of 2012. Despite this year's floods, production is officially estimated to have increased by 6% to a record 8.8 million tons on stepped-up plantings and higher field yields. This year's exportable surplus will exceed 4.3 million tons of paddy, according to MAFF estimates, up 10% from last year.

Continued modernization of Cambodia's milling sector plays a pivotal role in whether the Kingdom’s production surplus moves informally as paddy over the borders into Thailand and Vietnam or reaches overseas clients as milled rice - either formally or informally.

Challenges of converting surplus paddy into higher value added milled rice exports

1. **Despite improvements in lending, the operating capacity of the mills is still curtailed due to capital limitations.** Further improvement in lending would have a significant impact on millers’ capacity to further expand the modern milling sector and compete with Thai and Vietnamese buyers of Cambodian paddy. While stepped-up interest in bank lending to rice mills is reported, most of the existing expansion in milling capacity has been self-financed.

2. **Despite significant investments in warehousing, the operating capacity of most millers remains curtailed due to inadequate storage facilities**. Many millers, especially in Battambang, have increased the size and modernized their warehouses, but much more needs to be done if the mills are to be able to capture and store a larger share of the country's huge exportable surplus and to ensure a more efficient utilization of the Kingdom's milling sector.

3. **The operating capacity of the mills is not fully utilized, limiting the size of the export order that any one firm can handle**. This, however, may begin to change as a number of the new mills which will come on stream over the next 12-18 months will be well-capitalized and intend to work three shifts and year-round. Currently most Cambodian millers operate only a single 8-10 hr/day shift and do not operate at this level throughout the year. In contrast, comparable-sized Thai firms are working three shifts around the clock for almost the entire year. A key reason for the low capacity utilization of Cambodian mills is that they do not have enough working capital.

4. **Cambodia's export potential through Sihanoukville port remains constrained in the near term due to draft limitations**. As a result, virtually all of the rice exported up until August 2011 was via containers - a mode for which Cambodia will always have a relative disadvantage in freight rates given the size of its domestic market for imported goods. Additionally, the rapid rise in exports has been taxing the Kingdom's logistical abilities to handle so many containers. During the last year, however, limited quantities of white rice were exported via barges down the Mekong River. Unfortunately, Cambodia's deterioration in export competitiveness of white rice resulted in the absence of any rice being similarly barged down the river during the first six months of this year. In July, however, river traffic resumed with the shipment of fragrant rice, which is intended for West Africa.

5. **Continued growth of formal milled rice exports needs further improvements in export formalities so that Cambodia's full rice export potential can be realized**. Unfortunately, the cost of obtaining export clearances has risen from a low of $9/ton during the second half of last year to $12 at present. Recently a "one stop" office was opened at the Council for Development of Cambodia, but it does not yet work as planned. Initially, exporters still had to travel to all of the same government offices to obtain document approvals. Following complaints by exporters, two of the documents can now be obtained there - the Certificate of Origin and the Sanitary and Phytosanitary Certificate. Exporters must still separately visit Customs and cannot get the CamControl and fumigation certificates at this office.

Recommendations for policy actions

1. **Continue to remove bureaucratic hurdles and cut export procedure costs**. Cambodian exporters face fees (formal and informal) of about $11/ton, while Thai and Viet exporters face 10-15 cents/ton and 5 cents/ton, respectively. To reduce these charges, the report suggests to: (i) unify all export procedure costs into a single payment; (ii) roll back recent fee increases by CamControl and GDCE, (iii) streamline the number of agencies involved in the export approval process, and (iv) improve the functionality of the newly opened "one stop" office by having all required government certificates issued at the "one stop" office. Additional "one stop" offices could be opened in Sihanoukville as a first priority and in other areas depending on exporter needs. Consideration should be given to consolidating the number of Ministry of Commerce and

Ministry of Finance offices involved in export approvals from the current three to only two or, preferably, just one. Absent this change, CamControl should provide rice inspectors to its offices in Battambang and other major milling centers to facilitate the inspections upcountry.

2. **MAFF could undertake a study of the absence of GMO rice in the Kingdom and then issue a blanket certification that the Cambodian rice crop is GMO free.** The E.U. is very sensitive about importing GMO-free food and there are no labs in Cambodia to test the goods. Presently, the exporters must ship a sample to Vietnam for testing where costs have risen to $210 per test and which takes several days to perform. After the study is reviewed and referenced in a recognized scientific publication, MAFF could issue a blanket certification that the Cambodian rice crop is GMO free, eliminating this testing requirement.

3. **Initiate bilateral negotiations with Vietnam and Thailand to ensure Cambodian rice has attractive export alternatives to container shipments via Phnom Penh and Sihanoukville ports.** In the case of Vietnam, Cambodia needs to lock in recent informal changes, which allow uncontainerized rice (and tapioca chips) to be barged down the Mekong River. Using the Thai-Lao transit agreement as a template, Cambodia could negotiate a transit agreement to allow rice from Battambang and Banteay Meanchey be exported via Thai ports. This could save as much as $18.50/ton. While there appears to be some hesitation to pursue this option through bilateral talks, this would only advance by a few years access that should be afforded with the advent of the Asean Economic Community in 2015 and it would take some of the pressure off the massive amounts of Cambodian rice already being informally imported by Thailand.

4. **Continue to reduce port charges by encouraging competition from private sector investors into port infrastructure.** This would go a long way in reducing port (especially informal) charges. To help increase the export competitiveness of Cambodian rice, formal port charges should be reduced by at least $2/ton. Besides reducing Phnom Penh and Sihanoukville port charges for container shipments, there is a scope to reduce official charges for uncontainerized cargo, pilot charges and Kampuchea Shipping Agency and Brokers fees.[2]

5. **Continue to encourage and seek private investments in larger mills and rice polishing factories with capacities of at least 30 tph.** These facilities offer the best opportunity for increasing rice exports in the near-term. Use tax incentives if necessary to encourage overseas or domestic investments in the milling sector in order to meet export requirements. This could include an exemption to official export clearance costs for up to five years for qualifying foreign and domestic firms.

6. **Continue to establish MOUs with export destination countries, but ensure that the contracts are signed for volumes that can be reliably performed**

[2] These changes, of course, will also benefit other dry bulk exports such as tapioca chips, corn, rubber, etc.

by credible players. It is important for Cambodia to build up its reputation as a reliable supplier, so that it does not have to sell at a discount to its neighbors. It is also advisable for the Government to maintain flexibility in appointing the implementing organization for these contracts. Like in Vietnam, the Government could allow the actual execution of any signed contract to be made by members of its rice exporter association.

7. **Consider reconstituting the private sector membership of the Rice Technical Working Group (RTWG) to include the five largest rice exporters and scheduling the meetings frequently**. Membership of the group could be based on recent export volumes as recorded by either GDCE or CamControl. This RTWG would provide a cross section of the Cambodian rice sector – millers, polishers, and exporters without factories. Every two years the private sector membership could be changed based on the most recent export performance records. This reconstituted RTWG could assist the government in identifying ongoing hurdles and overcoming problems as they arise.

1. Introduction

1. Cambodia's rice harvests have been rising significantly since 2005, powered by improved and expanded irrigation and attractive farmgate prices. This year's production is officially estimated at 8.8 million tons, including a dry season crop of 2.1 million tons. Cambodia's production is primarily comprised of three types of rice: traditional non-aromatic varieties, fragrant rice, and IRRI HYV's. While official statistics are lacking, the traditional non-aromatic varieties make up the largest share of the production, accounting for more than one-third of the total harvest.[3] The IRRI varieties account for about one-fourth to one-third of the output,[4] while traders and rice millers estimate that fragrant rice production in 2011/12, which has been expanding rapidly, is about 2.6 million tons or 30% of the crop.[5]

2. The production gains have fueled a burgeoning exportable surplus which is informally shipped to Thailand and Vietnam by well-financed traders that swoop in at harvest to buy the freshly cut paddy. The relative volumes, the mix by variety, and whether it incudes milled rice depend on the price differentials in the neighboring markets in a given year. Typically, about one-third of the surplus flows west to Thailand and the balance east to Vietnam. A mix of varieties are shipped in each direction, but most of the surplus fragrant rice is usually sold ultimately to Thai rice millers located in the border areas, while the IRRI varieties are predominantly traded to Vietnam.[6] (The IRRI varieties are primarily grown in the provinces adjoining Vietnam, which also cultivates the same varieties.)

3. In 2010, the Cambodian government announced an export target of 1.0 million tons of milled rice by 2015. It should be noted that this target does not distinguish between formal and informal exports of rice. It should be noted that this target does not distinguish between formal and informal exports of rice.

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[3] The non-fragrant traditional varieties include Phkar Khney, Neang Minh, and Neang Khon. These are medium- and long-duration cultivars with growing periods of up to 120-135 days which are photoperiod sensitive, i.e. they must be grown in the rainy season.

[4] IR 66 and IR 50404, which are non-photoperiod sensitive, are the predominant IRRI varieties grown. While IR 66 has excellent grain quality and can be milled into rice with 5% brokens, IR 50404 typically can only be milled with difficulty into 15% brokens. Except for the very poor consumers, the IRRI varieties are grown for export. These varieties will also be called "white rice" in this report.

[5] The most well known fragrant varieties are Somaly, Neang Malis, Phkar Romdul, and Domaly. They are photoperiod sensitive. Recently, two non-photo period varieties have been introduced, Sen Pidao and Sen Kra-ob. Production of fragrant rice has expanded sharply in the last several years as farmers switch out of non-fragrant varieties during the rainy season and increasing acreage is being devoted to Sen Kra-ob during the dry season. The terms "aromatic rice," "Jasmine," and "fragrant rice" are used interchangedly in this report.

[6] Because the Thai border was partially closed when the wet season crop was harvested this year, most of the fragrant rice was shipped to Vietnam. Also noteworthy has been the significant shipment of milled non-fragrant rice - both from Cambodia and Vietnam - to Thailand, likely destined for the government warehouses.

4. This analysis, which updates reports prepared in 2009 and 2011, seeks to identify short-term policy measures that could assist Cambodian exporters in boosting exports in the near term.[7] As has been pointed out in our earlier analyses, the structure of the world market dictates that Cambodia may have difficulties to export 1.0 million tons of rice, whether through formal or informal channels, unless it is competitive in both fragrant and non-fragrant rice.[8] Achieving this target also requires diversifying rice exports from almost exclusive use of containers to include break bulk vessels, especially for non-aromatic rice which is the dominant type of rice traded globally.[9]

5. Over the medium term, some of the current logistical constraints will be mitigated by the rehabilitation of the railroad and the planned construction of a jetty, which will allow Sihanoukville port (SHV) to load large vessels. Cambodia's relatively high milling costs, expensive transportation charges, relatively complex and costly export procedures and uncompetitive port charges compared to neighboring countries will, however, remain as hurdles which must be overcome if Cambodia is to once again become a major rice exporting country.

6. This report examines new and expected investments in the larger rice mills and polishing factories, export trends, recent changes in milling costs, and provides a look at logistical costs and some alternatives. Additionally, import trends are examined in two current markets - the E.U. and Russia, and in three other key markets - Indonesia, the Philippines, and China. Finally, an analysis is provided of the current Thai rice policy which impacts on local prices and investment interests by Thai rice exporters.

Take Away Points

1. Given the size of the different segments of the world rice market, Cambodia would need to concentrate both on exports of aromatic and non-aromatic rice in order to achieve its export targets.

2. With the structure of the world rice market, there is a need to diversify from only exporting via containers to break bulk exports.

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[7] "A More Detailed Road for Cambodian Rice Exports," by Slayton and Muniroth. World Bank working paper, July 2011. Also, "A Road Map for Cambodian Rice Exports," by Slayton. World Bank working paper, June 2009.

[8] World trade in non-Basmati fragrant rice in 2011 was 3.0 million tons, including brokens. Thailand exported over 1.5 million tons of Jasmine rice, just under 200,000 tons of *Patum Thani* (a HYV fragrant), and almost 800,000? tons of fragrant brokens. Vietnam's exports last year included almost 440,000 tons of fragrant rice and just under 35,000 tons of fragrant brokens. See Slayton and Muniroth 2011 for a description of the world trade by quality.

[9] Only 38% of Thailand's rice exports in 2010 were via containers. *ibid.*

2. New Investments Soar

7. Modernization of Cambodia's rice milling sector plays a pivotal role in whether the Kingdom's production surplus moves informally as paddy over the borders into Thailand and Vietnam or reaches overseas clients as milled rice - either formally or informally. Following the opening of Golden Rice's mill in 2009, a growing number of modern, larger mills[10] have been built due to attractive milling margins, soaring export volumes, and the government's rice export policies which have provided investors clear policy guidance and signals the Government's commitment to the sector. Since that time, the milling capacity of Cambodia's larger rice milling companies has roughly quadrupled in size, dramatically improving the volume of rice, which would meet the quality requirements demanded for export markets. Many of the new rice mills have modern drying facilities and large warehouses to store paddy at harvest.

8. In the period of mid 2009 and 2011, over 130 tons/hr (tph) of milling capacity was added by the larger mills/milling companies bringing the capacity of this subsector to just under 225 tph. Approximately 125 tph has been added in the last year alone, bringing the Kingdom's milling capacity from the larger mills to an estimated 350 tph.[11] Equally significant, there has been a dramatic increase in the polishing capacity that upgrades the milled rice produced to that, which meets overseas standards. With many older rice mills unable to produce export quality rice, most of the new factories have been built with excess polishing capacity, which boosts the volume of high grade rice that they can produce.[12] Additionally, there have been several stand-alone rice polishing factories constructed. This follows the same path, which is being utilized by Vietnam[13] and provides an important means by which output from the smaller and older mills can be upgraded to meet overseas buyers' specifications. The combined polishing capacity of the larger rice mills and the polishers is currently estimated at 375 tph, or five times the capacity of three years ago. While stepped up interest in bank lending to rice mills is reported, most of the existing expansion has been self-financed.

9. Not only has the overall capacity of the subsector risen dramatically over the last three years, so too has the size of the new mills. In 2009, only two rice milling companies had a capacity of 20 tph or higher, while most of the larger firms had a capacity of 10-12 tph. Today there are seven milling companies that have a capacity of at least 20 tph, including three capable of milling 30 tons of paddy in a

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[10] For purposes of this report, a company with a milling capacity of 8 tons of paddy per hour is considered a "large" rice mill. These companies may have equipment in more than one location and not all of this equipment utilizes modern technology.

[11] Our survey of larger rice mills identifies a combined milling capacity of 322 tph. With the dramatic growth in the industry, it is likely that the actual capacity is at least 10% larger than this figure as we may not have been able to capture all of the new factories.

[12] Ying & Yang Rice Head Quarterz is an upgrading factory with de-stoners and machinery to separate the brokens. Unlike the rice polishing factories, it does not have whiteners and color sorters.

[13] The evolution of Vietnam's rice milling and polishing industry in our 2011 paper.

single hour. However, overall milling capacity utilization is very low. While many of Cambodia's larger mills are of comparable size with those in Thailand, the Thai factories usually operate twenty four hours per day and six days per week throughout most of the year. Virtually all of Cambodia's larger mills only work a single, typically an 8-10 hour shift and do not have the working capital to operate during the entire year. The operating capacity of the Cambodian millers is curtailed first and foremost due to working capital limitations. Additionally, relatively limited storage and drying capacities need to be expanded to allow the mills to work three shifts and throughout the year. Finally, the inefficient use of the milling equipment results in high FOB prices, which limit overseas demand. As a consequence, Cambodian millers (and exporters) must be careful in which export contracts they accept. For example, the largest mills have a capacity for processing 200-300 tons of paddy/ day when operating for 10 hours, so it would take about three months to produce even 10,000 tons of 5% rice for export.

10. Based on interviews with market participants, we expect that the capacity of the larger mills will increase by at least 260 tph and may double in the next 12-18 months. (New medium-sized mills are also being built and existing facilities upgraded.) Several of these rice mills which will come on stream in the nearby are well-capitalized companies with foreign joint venture partners and are intended to operate continuously with three shifts throughout the year. The mushrooming of this subsector's size will likely result in a high attrition among the smaller, antiquated rice mills during the next several years, unless these owners are sustained by attractive trading opportunities in Thailand.

Take Away Points

1. Due to both rice mill expansions and new factories, the milling capacity of the larger milling companies has quadrupled in the last three years to an estimated 350 tph. Equally important, rice polishing factories have also been constructed. The combined polishing capacity of the larger rice mills and polishing factories is estimated at 375 tph, five times that existing in 2009.

2. The size of the rice mills has also increased sharply during this period allowing millers (and exporters) to accept larger overseas orders.

3. Due to working capital limitations, the existing mills and polishing factories only work a single shift, in contrast to Thai firms, which work three shifts. This impacts the size of the export orders that can be accepted.

4. In the next 18 months, the capacity of both the larger milling companies and the rice polishers will probably increase by at least 250 tph and may even double. Several of these rice mills are well capitalized which should allow them to operate continuously with three shifts. This will significantly alter the size of export orders, which can be handled.

5. The mushrooming of this subsector's size will likely result in a high attrition among the small, older rice mills during the next several years.

Table 1: Cambodia: Larger Rice Mills

CAMBODIA: Larger Rice Mills (tons paddy/hr or tph)

Mill	Capacity		Location	Comment
	Milling	Polishing		
As of mid 2009	95.5	72		
As of mid 2011	244.5	201		
As of mid 2012	322.0	305		
Angkor Rice (AKK)	30	20	Near PP	In Kandal; operational 2000; expanded by 20 tph February 2012
Baitang	20	30	Battambang	Operational 2010
BVB	30	30	K. Thom	Operational June 2011
Canadia	8	5	Battam/Takeo	Ea. Mill 4 tph; operational Takeo early 2011, Battambang January 2012
Cavifood	24	12	PP	Operational April 2012 with 12 tph; capacity doubled June 2012
Chhun Thom	10	6	Prey Veng	Operational 2011
Golden Rice	20	20	Near PP	K. Speu; operational early 2009, JV Reunion
Green Trade	10	8	PP +	4 of 6 mills in PP; partner in Cavifood
Guohong	8	5	K. Chhang	Guangxi gov't; operational June 2012
Hoeur Chy	8	6	Siem Reap	Operational 2010
Lor Ngor Peng	20	20	K. Cham	Built 2009 10 tph; expanded to 20 tph & added polishing capacity 20 tph September 2011
Loran Import-Export	12.5	36	Battambang	Built 1994 & then serially expanded; includes 30 tph polishing operational February 2012
Mega Green	10.5	10	Battam/ S. Reap	Purchased existing Naga Thom mill in Siam Reap & older mill in Battambang
Men Sarun	25	24	PP +	Built 2003, also polishes rice from its other 39 mills elsewhere
Mong Reththy	10	10	SHV	Operational May 2012
Phou Poy Rice	8	6	Battambang	At two mills, built 2003
QQ Rice	12	10	Pursat	JV Malaysia
Sour Keang QC Rice	12	10	K. Cham	Built 2010
Vinh Cheang	12	15	K. Cham	Operational July 2011
Yam Leoung	15	12	Battambang	Following mill expansion, operational June 2011
You Khim Rice	8	10	K. Cham	Mill expansion, operational March 2011
White Gold	8		Battambang	2 mills; first started 2005
Under Construction/Planned	262	174		
AMRU	12		various	3 brown rice mills - K. Cham, Prey Veng & Battambang over next 3 years, ea 4-6 tph
CRK a/	20	20	Kampot	Under construction, operational July 2013; phase 2 adds 20 tph July '14
BRIC b/	30	15	Battambang	Operational May 2013
Canadia	44	8	Takeo	Operational fall 2012; brings capacity to 52 tph & polishing 13 tph
CCAD c/	20	20	Battam/Takeo	Operational September 2013
Chray Son	18	10	Battambang	Under construction; operational April 2013
Eang Heng	6	10	Battambang	Expansion of existing mill 4 tph to 10 tph; operational early 2012
Golden Rice	20	20	Near PP	Early 2013
Hak Se	15	9	K. Cham	Expansion of existing mill 6 tph to 21 tph; operational Nov 2012
KVCL d/	12	8	B.Meanchey.	Under construction; with capacity operational October 2012, parboiled by November 2012
Long Grain Co.	30	30	Near PP	K. Speu - JV UK & India; under construction, operational Jan 2013; phase 2 (incl 10 tph parboil) & phase 3 equal size in 1 yr intervals
Lor Ngor Peng	4	4	Battambang	Relocating from K. Cham, operational end 2012
Loran Import-Export	15		Battambang	Operational May 2013
Phou Poy Rice	12	14	Battambang	Constructing new mill, operational end 2012
White Gold	4	6	Battambang	Expansion existing mill, operational end 2012; brings capacity 12 tph milling
Rice Polishing				
As of mid 2011		20		
As of mid 2012		32		
AMRU		12	PP	Operational April 2012
Im Eang Kry		10	PP	Built 2010
Khmer Foods		10	PP	Built 2009; 22 tph by September 2012
Under Construction/Planned		44		
CCAD c/		20	SHV	Operational September 2013
Khmer Foods		12	PP	Under construction; operational end 2012
Mega Green		12	PP	Under construction; operational August 2012
Rice Upgrading				
Ying & Yang Rice		10	SHV	Built 2009, foreign company

a/ Crystal Rice Kampuchea, JV with Asia Golden Rice from Thailand
b/ Battambang Rice Investment Co., ; JV Loran, EMI, Forte Insurance & Singapore investor
c/ Cambodia China Agri Development, JV Soma, Sino Grain & Yunnan Pan Asia Ag Cooperation & Development Co
d/ Kamadhenu Ventures (Cambodia) Ltd

Source: Interviews by authors

3. Export Boom Weakens

11. World Rice Market Becomes Two Tier. World trade is forecast by USDA to reach a near-record 35.5 million tons, off only .7 million tons from 2011's unprecedented volumes. With support prices set substantially above the market, Thailand's exports are forecast to be slashed by over 4 million tons to 6.5 million tons as it is replaced by India as the world's largest rice exporting country. India's exports are expected to nearly double to 8 million tons. Thailand may end up as the #3 rice exporting country, with Vietnam occupying the second slot.

Table 2: World Rice Trade (MMT

World Rice Trade (MMT)	
Avg '00-04	26.0
Avg '05-09	29.8
2010	31.5
2011	36.1
2012 1/	35.5
1/ Forecast	
Source: USDA (July 2012)	

12. Prices have not returned to their pre-2008 pattern when quotes from Thailand, India, and Vietnam generally moved together, and the gaps between them were narrow. Since the 2008 spike, quotes have converged and diverged, with gaps between suppliers occasionally surpassing $200 per ton. This has been the case since May, when Thai quotes jumped while Viet and Indian quotes fell. The paddy pledging scheme in Thailand is keeping prices artificially high, while in India massive stocks are pushing prices down. Like most of the price movements since 2008, the current divergence is linked to policy rather than to changes in supply or demand."[14]

13. The world market in 2012 is a two tier market - that originating from the Western Hemisphere plus Thailand and exports from other Asian exporters. Because of rising production costs and two back-to-back reduced crops, export prices in the U.S. are largely detached from Asian values.

14. In South America, this year's harvest is off 12% due to the combination of unremunerative prices and less plentiful irrigation. As a result, Western Hemisphere export prices for high quality at the end of July ranged from $565 FOB

[14] "Grain: World Market and Grain," FAS/USDA, July 11, 2012

for 5% from Argentina and Uruguay to $592 FOB for U.S. #2/4% long grain. Because of high price supports,[15] Thai 100% B was quoted at $570 (off from its highs of $630 in mid-November 2011), but - outside of sales to Iraq - only limited trading is occurring at these elevated levels.

15. Reflecting the their expensive prices *vis-a-vis* the other origins, the combined U.S. and Mercosur exports during the first six months of 2012 declined to below 6.3 million tons, off 2.65 million tons from the same period one year earlier. Reflecting an estimated 4.0 million ton increase out of India, Asian exports (excluding Thailand),[16] in contrast, are estimated to have surged by 3.3 million tons to almost 11.2 million tons. India's decision in July 2011 to lift its three-year old export ban threw a spanner into Thailand's efforts to boost world prices. Vietnam, which initially followed Thai values higher in July, reversed course in late August as it lost sales to India. With Thailand no longer the benchmark, world prices for high quality white rice at the end of July were $408 (Viet 5%) to $420 (Indian 5% IR 64).

3.1 Cambodia Export Situation

16. With Cambodian farmers and millers benefitting from the increase in Thai values, Cambodian exporters found it more profitable to sell milled rice to Thailand during the first half of 2012, rather than to other markets. With its elevated domestic prices, formal exports of 29,000 tons were essentially even during January-March compared to one year earlier, while informal rice exports to Thailand were precluded by stiff border controls. Formal exports rose to 45,000 tons during April-June, but this trailed the year-earlier Q2 volume of 53,000 tons as Thai border controls had been relaxed as of mid-April and large scale shipments of milled rice commenced. According to MAFF estimates, this year's exportable surplus climbed to a record 4.3 million tons, up .4 million tons from 2011.[17] This translates into almost 2.5 million tons of milled rice.

17. In Cambodia, there are essentially three types of exports: (1) official (formal) exports of milled rice which are almost exclusively through SHV and Phnom Penh (PP); (2) unofficial exports of milled rice (which are largely going to Thailand via border crossing points) and (3) unofficial exports of paddy to Thailand and Vietnam through cross border trade. The relative direction that Cambodia's exportable surplus moves (and its mix by variety and type – i.e. milled rice or paddy) depends on the relative prices in Thailand and Vietnam. The movement of paddy is heaviest at harvest time. Peak harvesting for the wet season crop is November-December and for the dry season it is late February until early April. At harvest, many millers are active in this informal paddy trade. Because their cash flow and drying and storage

[15] For an analysis of Thailand's current rice policy, see "A Shinawatra Raised the Thai Rice Price Umbrella Again" in Appendix 2.

[16] Burma, China, India, Pakistan, and Vietnam.

[17] While MAFF estimates the exportable surplus this year is 4.3 million tons, alternative estimates by agricultural experts indicate post-harvest losses are twice the level estimated by MAFF (7%), reducing the surplus by almost one million tons.

capacities are limited, millers buy the paddy and sell it immediately to Vietnamese or Thai traders for cash because they need to pay the farmers so that the farmers, in turn, may repay their loans. Also, most of these millers are not able to meet the quality demanded by overseas buyers.

Table 2: Export Prices FOB (USD/ton)

Year	Mont	Fragrant					Non-Fragrant		
		Thai	Viet	Cam	Price Spread vs Camb		Viet	Cam	Price Spread
		100%	5%	5%	Thai	Viet	5%	5%	-80
2011	Oct	1,065	680	880	185	-200	570	650	-110
	Dec	960	650	900	60	-250	460	570	-64
2012	Mar	1,000	620	840	160	-220	436	500	-102
	Jun	1,020	620	920	100	-300	408	510	-87
	Jul	1,020	610	895	125	-285	408	495	-80

Note: Cambodia is Phnom Penh. Prices at end of month

Source: Live Rice Index for Thailand & Vietnam; Cambodia based on authors' survey of exporters

18. Formal Exports. Cambodia's officially recorded rice exports more than tripled in both 2010 and again in 2011. According to DGCE, milled rice exports increased dramatically from 51,000 tons in 2010 to 175,000 tons in 2011. The E.U. and, to a lesser extent, Russia remained the primary destinations, thanks to import duty preferences not enjoyed by either Thailand or Vietnam. These two destinations accounted for 86% of all exports last year, down from almost 92% in 2010. Malaysia emerged as a key market last year, lifting 14,000 tons - up from only 1,000 tons one year earlier.

19. Formal exports reached 111,000 tons through August 2012 , up 6% from the same period last year, according to CamControl. The current pace suggests that this year's volume of exports through SHV and PP could be in the range of 175-200,000 tons. The reasons for slow down in the growth of formal exports are three-fold. First, local prices early in the season rose in sympathy with higher Thai values making Cambodian FOB white rice prices uncompetitive. Second, shipping costs to the E.U. - Cambodia's #1 customer - have increased sharply and are volatile. The pattern of monthly freight tariff changes creates an element of uncertainty for exporters should delays occur in the execution of contracts. Finally, Vietnam's fragrant prices have become particularly competitive *vis-a-vis* both Thailand and Cambodia. With relatively limited remaining exportable supplies, milled rice exports to Thailand during the balance of 2012 are expected to be limited. By year's end, combined formal and informal exports of milled rice may total 325-375,000 tons.

20. Cambodia's rice exports during the first half of this year shows that exports to the EU declined 28% as the higher prices have negated the tariff

preference for white rice. Where non-aromatic rice accounted for an estimated 75% of all shipments in 2011, this plummeted to below 45% during the first half of 2012. Shipments to Russia, another key market, have been flat as demand shifted from white to fragrant rice. (Only an estimated 12% of last year's exports to Russia were fragrant rice, while virtually all of the 2012 rice shipments have been aromatic rice.). However, shipments to Africa and Malaysia have shown good growth this year. Virtually all of this year's exports to Malaysia have been fragrant rice - repeating last year's pattern.

Table 3: Cambodia: Export by destinations (TMT)

Market	2009	2010	2011	January-June		
				2011	2012	% CHG
U.S.	*	.8	2.2	.9	.8	-11
E.U. 1/	11.9	45.1	97.8	69.8	50.1	-28
Russia	0	1.8	21.3	4.5	4.5	0
Africa	.5	0.4	2	.2	6.5	**
Asia	3.6	3.1	19.5	7.1	12.4	75
of which:						
Malavsia	1.2	1.1	14.1	5.1	8.2	61
Total	16.0	51.2	174.5	82.6	75.3	-9

* = less than 50 tons. ** = Greater than 100%

1/ Includes Reunion

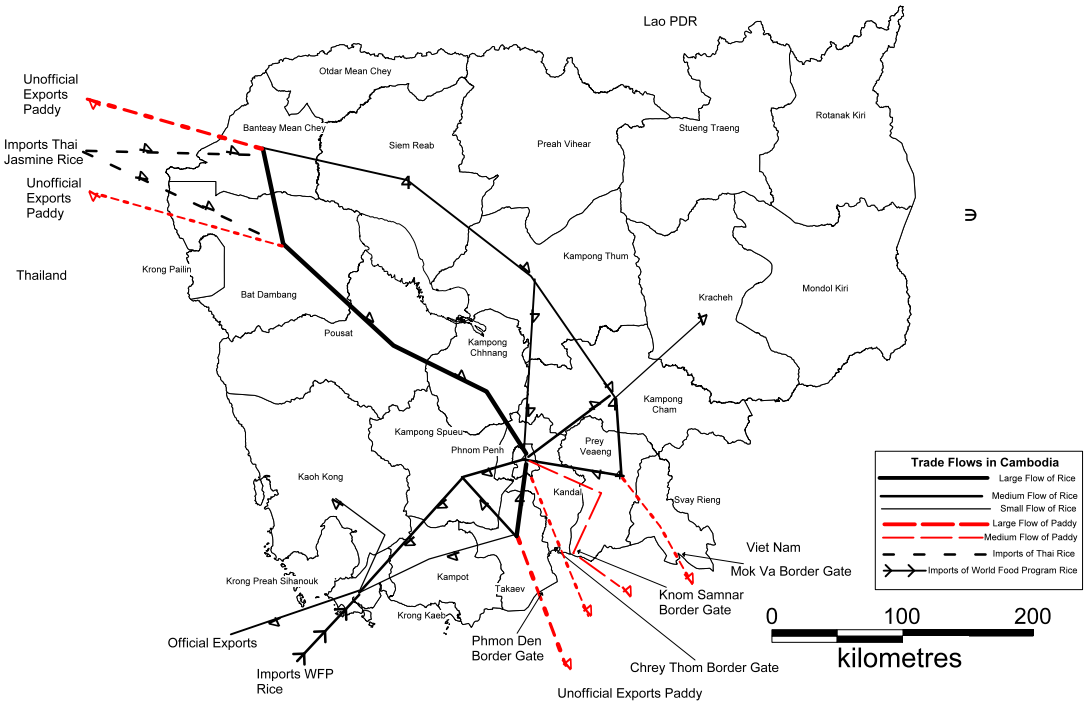
Source: GDCE

21. Informal exports. In the current marketing year, the composition of the informal exports has changed significantly from the norm. While Thailand, once again, was the destination for roughly one-third of the volume moving without official documents, it included unusually large volumes of milled rice which were continuing in late July during our mission.[18]

22. Because of the "stop-and-go" pattern of the Thai border enforcement, the majority of the Cambodian fragrant surplus ended up in Vietnam. The paddy and milled rice exported to Thailand goes in three different border routes - Ou Anlouk in Battambang and Ou Bey Chean and Boeng Trakoun in Banteay Meanchey. In most years, Cambodian paddy moves across the border to Vietnam primarily from the dry season crop. The paddy going to Vietnam passes through numerous gates which are located in descending order of importance in Takeo, Prey Veng, Kandal, and, Svay Rieng provinces.

[18] Actual expenses, including facilitating payments, total $7-8/ton for Cambodian traders involved in the informal shipments. This does not include payments to the Thai authorities which are the responsibility of the Thai trader. Source: authors' interview.

Map 1: Cambodia Rice and Paddy Movement Map



23. In an effort to minimize the entry of Cambodian rice into the Thai paddy mortgage scheme, Thai border authorities closed the border beginning in October, but initially it was not particularly effective with an estimated 600,000 tons of Cambodian paddy crossing the border during the last quarter of 2011. This had the effect of boosting Cambodian fragrant 5% to a high of over $900/ton FOB in late November, driven largely by increased paddy prices. During the first three and half months of 2012, however, the trade reports that the Thai border was completely closed to both paddy and milled rice. This depressed Cambodian fragrant prices (which reached a low of $840 in late March) and sent larger than normal quantities of fragrant paddy to Vietnam.

24. From mid-April (following the Thai and Khmer New Year celebrations), the Thai authorities relaxed their interdiction efforts. Thai demand for paddy, however, was limited and was replaced by interest in milled white rice. According to both a senior Cambodian official's estimate and interviews with a prominent trader at the border, an estimated 200,000 tons of milled rice was shipped across the border during January-July – some of which originated in Vietnam. The milled rice shipments were 25-35% brokens and broken rice with the rice believed destined for Thai government warehouses. According to traders interviewed, this year's informal shipments to Thailand of paddy were significantly below year earlier volumes, while the volume of milled rice was sharply higher.

25. The Viet Food Association estimates this year's informal trade with Cambodia rose to 1.6 million tons through mid-year, up 200,000 tons from last year, according to the traiders. With Cambodian prices for IR 66 and IR 50404 above Vietnamese levels during the first several months of the year, it was mostly Cambodian fragrant paddy which was traded during Q1.

3.2 The players

26. Competition has intensified due to all the mill expansions and new investments in rice milling and polishing factories. One miller reported that he now has to give his domestic customers credit of one month, up from only 1-2 weeks last year. This heightened competition is especially apparent among the ranks of the new specialized exporters, with several becoming increasingly professional. With the large number of newcomers, the top exporting ranks are volatile and account for a smaller percentage of the growing export volume. At the end of June, Golden Rice had regained its #1 rank, the position held in both 2009 and 2010. Fueled in large measure by its fragrant rice sales to Malaysia, Baitang (which only began operations in 2010) occupied the #2 slot, up from #5 in 2011. Reportedly concentrating more on informal sales to Thailand, Mega Green Imex, Amru, Khmer Foods, and Mekong Oryza saw their official export volumes slashed. Of note, both Mega Green and Amru have invested, respectively, in their own rice mills and polishing factories in the last year so as to better control the quality of the rice they ship.

27. The rice export environment in S. E. Asia is competitive and can be best summed up as the tale of four tigers. Like the U.S. before it, Thailand is the aged tiger. Its best days are past: its claws are no longer sharp (because of rising costs of production and the populists policies employed as democracy deepens) and its teeth are getting loose. Its daily fare is increasingly being snatched away by Vietnam, the aggressive male challenger. No longer is Vietnam the exporter of only low quality rice that it once was when it captured the rice world's attention beginning in 1988. During the last three years, Vietnam's high quality rice exports have averaged 2.45 million tons or 37% of that country's total exports. This includes soaring volumes of fragrant rice. Combined exports of fragrant rice and brokens are likely to hit 500,000 tons this year, more than double that shipped in 2011 and more than three times the volume exported in both 2009 and 2010. Cambodian rice exporters and policy makers should not only position Cambodian fragrant relative to Thailand, but focus also on the competitive threat from Vietnam.

Table 4: Cambodia: Exports by leading firms (TMT)

	2009	2010	2011	January-June		
				2011	2012	% CHG
Mega Green Imex 1/	3.7	1.4	26.3	13.3	5.4	-59
Khmer Foods	1.0	7.7	24.3	10.7	8.7	-18
Amru/Amret RRG	.3	1.5	20.8	12.6	5.9	-54
Mekong Orvza	0	0	17.5	6.4	.2	-97
Baitang	0	2.3	16.2	5.4	9.0	68
Golden Rice	3.0	10.1	16.1	8.0	15.2	89
Loran	.1	1.8	7.5	2.5	5.1	**
Angkor Rice	.5	3.0	7.3	4.7	3.1	-34
Indochina Rice	0	.1	6.6	3.1	2.0	-37
Ky Thav	.4	3.2	5.6	3.2	.7	-79
OC Rice	1.2	.1	2.7	2.1	.1	-94
Anduriz SARL	2.0	2.6	.6	.2	.3	37
Int'l Rice Tdg 2/	0	3.3	0	0	6.3	**
Top Five Firms 3/	10.4	27.3	105.1	51.0	45.1	-12
(% of Total)	65.0	53.3	63.0	61.7	59.9	-3
Top Ten Firms 3/	11.8	33.5	147.8	69.9	62.1	-11
(% of Total)	73.8	65.4	84.1	84.6	82.5	-2
Total Exports	16.0	51.2	174.5	82.6	75.3	-9

1/ Includes Mekong Crown

2/ Includes Gold Rice Mill & Im Eang Kry Rice Reprocessing

3/ In the given year.

Source: GDCE

28. Myanmar could be a major competitive threat to Cambodian white rice exports in medium- and long term as its export prices for low quality rice are already among the cheapest in the world.[19] If the prices spreads between 5% and 25% in Vietnam or India prevailing at the end of July were replicated with the modernization of Myanmar's rice industry, Myanmar's 5% would roughly equate to $390 FOB or about $100/ton below then prevailing Cambodian price levels. Rice exporters and the Royal Government of Cambodia cannot just assume that the future

[19] While published data on Myanmar's export prices is lacking, a leading international trader which is active in this origin advises that 25% prices were only $360 FOB at the end of July - at least $10/ton cheaper than export prices for the same grade in Vietnam and India.

belongs to Cambodia. Rather, thoughtful policies to increase the competitiveness of Cambodian non-fragrant rice and aggressive marketing must be employed before its competitor comes of age by attracting new investments in modern rice mills which are its single biggest disadvantage.

3.3 Key Markets

29. The European Union. The EU annually imports 1.2 - 1.5 million tons, primarily brown regular milled and parboiled rice because of the progressive duty structure.[20] E.U. imports climbed 20% last year to 1.48 million tons. Benefiting from a zero import duty under the EBA policy,[21] imports from Cambodia in 2011 tripled to 122,000 tons or 8% of all imports. (Thailand and Vietnam do not receive an import duty reduction.) Last year's large imports resulted in a build up in carry over stocks with the result that overall deliveries in the first four months of 2012 declined almost one-third to 321,000 tons. Cambodian arrivals, however, rose 10% to 30,000 tons as buyers rushed to avoid announced container freight increases.

30. Russia. Russia's imports declined to 176,000 tons in 2011, off 40% from that averaged during 2005-09 and down over one-fifth from that arriving in 2010. Deliveries from Cambodia, in contrast, soared tenfold to 16,000 tons. Total Russian imports during the first four months of this year were 61,000 tons, up 26% from the very light year-earlier arrivals. Deliveries from Cambodia topped 7,000 tons, up from a mere 696 tons during January-April 2011. Because of the switch from Cambodia to India by Russia's largest importer, Cambodian imports are unlikely to match last year's peak volume. Rice imports from Thailand and Vietnam receive a duty preference of 25%, while imports of Cambodian (and Burmese) rice are duty free.[22]

31. China. China's rice prices are currently above world prices as a result of two years of double-digit support price increases in an effort to narrow the rural-urban income gap. Local wholesale prices for medium quality rice are presently at around $580/ton, compared with Viet 10% values of $403 FOB. This considerable gap has resulted in commercial imports rising sharply this year with most of this rice primarily destined for urban markets in southern China. Notwithstanding expectations of a normal harvest, imports through June approached 1.2 million tons, compared to 578,000 tons arriving during all of 2011. Over half of the imports are 5%, while deliveries of fragrant rice represent about 10% of the total. With existing connections with local importers, Thai exporters and Singapore-based traders have played a significant role selling the Vietnamese, Pakistani, and even Uruguayan rice to China this year. Reportedly some of the white rice is being blended for industrial usage.

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[20] Brown rice is a partially milled rice where the pericarp or hull has been removed, but the bran remains.

[21] The EBA waiver at the current exchange rate is worth $217/ton (€ 175).

[22] While the E.U. duty waiver is unchanged from last year, Russia, Kazakhstan, and Belarus will reduce their import duty on August 27, 2012 from $77/ton to $56 (€ 95 and € 45) as part of a scheduled change in its GSP schedule which will decline to a little as € 30/ton by 2015.

BOX 1: Myanmar's Rice Industry Poised for Revival?

Prior to World War II, Myanmar was the world's largest rice exporter. It is endowed with large areas of arable land, a low population density, and the Irrawaddy River and its delta for cheap inland transportation. With the advent of the "Burmese way to socialism" which was inaugurated with the 1962 military coup d'état, its rice sector, like the rest of the economy, has stagnated.

Saddled with unreliable production statistics and non-existent notions of stocks, Myanmar's successive military governments, which value domestic tranquility over all else, have pursued erratic, stop-go rice policies, which have impeded orderly rice exports.

After reaching a low of only 118,000 tons of exports averaged during the five-year period ending in 2000, overseas shipments have gone through several boom-bust periods in which large carry over stocks were built up, followed by overseas shipments of 1 million tons (2002 and 2009) only to be followed by steep drops in the following years. Over the last four years, Myanmar's exports have ranged from 445,000 tons and 1.05 million tons.

Due to the lack of investment in large, modern rice mills during the last 25 years (20 mills were built in 1984-85 using OECF and ADB loans, but recent investments have been in smaller factories), 90% of Myanmar's exports over the last three years have been 25% brokens. Africa accounted for 75% of all rice shipped during this period, with Bangladesh accounting for a further 17%.

Myanmar, like Cambodia, is eligible for import duty reductions from Russia. By the end of 2012, it is also expected to be granted EBA treatment by the E.U. - which over time will put it in direct competition with Cambodian white rice as several Thai rice exporters (C.P. and Chia Meng) have expressed interest in investing in Myanmar's milling sector.

Port modernization is dearly needed in Rangoon. It can currently accommodate rice vessels loading as much as 24,000 tons and it slows down significantly during rainy seasons.

32. China Certificate and Inspection Company (CCIC) signaled traders in May that Cambodian milled rice could now be imported into China. Imports are subject to a 14.13% import tariff, local transportation costs of $6/ton, and large margins for the importers. In addition, an inspection certificate by CCIC is required for Cambodian rice which costs $6/ton. As such, export prospects for Cambodian rice are brightest for fragrant rice. According to CCIC, trial shipments of 600 tons were made in June-July and at least one exporter reported that its rice had been admitted into China, albeit with a considerable delay as "birthing pangs" were experienced on these trial shipments.

Table 6: China: Early Rice Crop Support Price

Year	$/ton paddy
2009	264
2010	275
2011	319
2012	380

Source: USDA, March 2, 2012

33. Indonesia. With carry over stocks off 350,000 tons and government purchases of local rice curtailed because of a disappointing harvest, Indonesia's imports last year are estimated to have topped 3.0 million tons, up from .9 million tons in 2010. Where private importers handle the vast bulk of the rice imported into China, Bulog, a state-owned enterprise, has a monopoly on all rice imports except specialty rice, e.g. glutinous rice, glutinous brokens, and white brokens.[23] The latter require permits and are subject to an import duty of $57/ton (Rp 450/kg). As a matter of policy, Bulog is generally not allowed to import rice during the period one month prior to the main harvest in March-April and in the two months after the harvest. Notwithstanding the announced policy concerning the timing of imports, Bulog's imports during periods of large imports are spread throughout the year. Generally, though, imports primarily occur during the August-February window.With a crop that is officially forecast to increase by over 4%, Bulog's stocks are currently comfortable as its purchases are running at almost twice last year's pace and second only to that secured locally in 2009. While an objective case could be made that Bulog will avoid importing any more rice in the current year, informed sources indicate that the government will "over-import" in the current season so as to avoid any purchases in the year leading up to the 2014 presidential election. Bulog normally buys 15% brokens, but it sometimes also books 5%. In its recent buying efforts, Bulog has used a combination of public tenders and Government to Government (G-to-G) negotiations. In recent years, its tenders for Thai and Indian rice have been limited to invited local exporters from those origins. Bulog normally does not import rice via containers.

34. Indonesia has a number of MOU's covering rice imports, but these are loose, multi-year accords which are subject to the offered prices being competitive. Its MOU with Vietnam was increased last year to 1.5 million tons, where its agreement with Thailand is for annual purchases of 1 million tons, and its recent framework agreement with Myanmar is for 200,000 tons. Cambodia's MOU for up to 100,000 tons was signed in August 2012. The current MOU last for four years and is subject to being amended. In all future MOU's we would suggest that government retain full flexibility on

35. Philippines. Like Indonesia, domestic rice prices in the Philippines are far above world levels, imports are restricted and smuggling is a problem. The National Food Authority (NFA), the Filipino food authority, has been the primary rice importer. Overall import totals are decided by an inter-agency committee, but the method of buying varies by year. In some years, NFA is the sole buyer and it may buy via tender or through G-to-G negotiations. In other years, the private sector is allocated a varying share of the business with actual import licenses ostensibly allocated via tenders. Under the Arroyo regime, the quantity of licensed imports by private firms was limited, but under the Aquino administration NFA's share of overall imports was only 27% in 2011 and may be as little as 12% in 2012. Private sector imports are subject to a 40% tariff, but in recent years the import licenses have been awarded by NFA subject to the payment of a "service fee." Typically NFA buys 25% brokens, but sometimes it also buys 5% and 15%. Purchases by private importers, on the other hand, more prominently feature 5%, and to a lesser extent, 15%. To avoid

[23] *Op cit.* Slayton & Muniroth for a long term series on Bulog's share of overall Indonesian imports.

criticism for the seasonal decline in domestic prices, rice imports typically occur during the first six months of the calendar year. NFA only imports using break bulk vessels. Due to large stocks held by NFA, recorded imports were slashed by about 60% to around 1 million tons in 2011. While publicly announced imports are to total 500,000 tons, 900,000 tons of licensed purchases have been made and by year's end overall official imports may be unchanged from last year.

36. The Philippines and Vietnam have a multi-year MOU whereby Hanoi agrees to supply up to 1.5 million tons annually through 2013. Vietnam is by far the largest supplier to this market. Thailand this year signed an MOU for 1 million tons. Only countries with MOU's are allowed to participate in G-to-G negotiations. While the Philippines has been enjoying production gains, public announcements of self-sufficiency in 2013 should be treated with great skepticism. The Philippines has a long history of issuing "low ball" and deliberately misleading public announcements of its import needs.

37. Given the chill in Cambodia's bilateral relations with the Philippines in the aftermath of the July Asean summit, any efforts to pursue an MOU are unrealisic at this time. Should relations be normalized, however, this effort should be revived. In the interim, Cambodian rice exporters should explore the idea that NFA declare that Cambodia is an eligible origin for purposes of NFA tenders.

38. Cambodian exporters will be unable to penetrate the Indonesian and Filipino markets unless CNF prices are driven sharply lower. While the government buyers in both Jakarta and Manila are interested in diversifying their purchases to include Cambodia, they will buy from this origin only if it is competitively priced. Until Cambodia builds up its reputation as a reliable supplier, this means that it will have to sell at a discount to its neighbors.

Take Away Points

1. The rapid growth in exports since 2009 is due to import duty preferences granted by the E.U. and, to a lesser extent, Russia. Lower prices will be needed to penetrate other key markets such as Indonesia and the Philippines.

2. With export prices in Thailand uncompetitive with rice from other origins, Cambodian exporters must also focus on prices quoted in Vietnam.

3. Myanmar represents a major competitive threat to Cambodian exports should it modernize its rice milling sector. It receives the same import preference from Russia as Cambodia and is expected to obtain EBA treatment before year's end. It is already a relatively important exporter of low quality white rice.

4. China has opened its market to imports from Cambodia with the best trade prospects occurring for fragrant rice.

5. MOU's should be pursued with the Philippines when bilateral relations improve. The accord should be structured so that the Government has flexibility on who it should appoint to negotiate and execute any contracts.

4. Exporters Face Rising Costs

39. There continues to be significant improvements in the timelines of getting export documents approved, but Cambodian export procedures remain overly complex and subject to large formal and informal fees, which may be reflected in increasing informal rice exports which do not need to follow such procedures. All exporters, for example, must annually register with the Ministry of Commerce's GFP office.[24] When a new exporter receives an overseas order, it must be registered with MEF's GDCE to obtain an ASYCUDA number (which takes three visits) and an export license (a fourth trip). In addition to GDCE's export license, the following certificates must be obtained:

- Sanitary and Phytosanitary Certificate (SPS) is issued by MAFF. This document is required by importing countries to ensure that the rice meets the importing country's standards as being safe for human consumption and free from pests.
- Fumigation Certificate (issued by one of two private companies) indicates preventative measures have been taken to prevent pest infestations from occurring during shipment.
- CamControl Certificate verifies that the quantity of rice is accurate as shown on the invoice and packing list. This certificate is only required by the MoC to process the Certificate of Origin. It is redundant and is not needed by the buyers.
- Certificate of Origin (CO) is issued by MoC/GFP office, if destined to E.U or Russia. This document attests that the rice was grown in Cambodia, allowing the exporter to benefit from GSP or MFN treatments. In the case of the E.U. and Russia, the rice is imported with a preferential duty.
- GMO Certificate (if destined E.U.) attests that the rice is not from genetically modified seed. Testing is done in Vietnam because Cambodia does not have the necessary lab for GMO analysis.

40. Despite improvements in recent years, Cambodian export procedures remain costly. The informal fees are negotiable and the increase in export volumes has apparently allowed the unit costs incurred to decline over the last several years. As of mid-2011, formal and informal charges for export documents were estimated at $17/ton. Last fall the government reduced the charges for the CO certificate from $250 per shipment to $150 currently. While there is no formal charge for SPS certificate, informal costs reportedly fell from $150 per shipment to $30-40 at present. At more or less the same time, fumigation costs were reduced from $40/container to $20-30 at present. This brought overall export approval costs to only $9/ton.

[24] Ostensibly the location certification is a "one time" event, but exporters indicate that they find it advisable to annually make "sentimental" payment to stay in good graces with the local officials.

41. Recently, however, export procedure costs have increased by approximately $2-3/ton due to fee increases by CamControl and GDCE (which were effective July 1, 2012), higher GMO testing costs, and an apparent rise in informal costs. Where previously there was no formal charge, GDCE now requires a formal payment of $15 per container. While CamControl continues to charge $60 per shipment for its certificate, it now also requires an inspection fee to be paid of $50 for the first container and $15 for each subsequent container. Previously there was no formal charge for inspections. Finally, labratory testing costs for GMO increased to $210 per sample, , up from $150 one year ago. As a result, estimated overall export document costs rose to $12/ton.[25]

Table 7: Export documents formal costs ($/ton)

Certificate	Issuing Agency	Cost		Comment
		Jul-12	Jul-11	
Export License	MEF/GDCE	.63	0	$15/container; does not include costs outside of business hours, any travel expenses, or container scanning; takes 1 day
SPS	MAFF/GDA	0	0	informal charges $30-50/certificate, down from $150 mid 2011; takes 2 days
CamControl	MoC/CamControl	1.42	.50	$50 inspection for first container & $15 for each fllwg container + $60 per shipment for certificate; takes 2-3 days
Origin	MoC/GFP	1.25	2.08	$150/shipment including $50 for EQMC form A; takes 1 day
GMO	NA	1.75	1.25	Cost per sample by private lab in either Vietnam or Thailand; takes 3-4 days
Fumigation	NA	1.04	1.67	$20-30/container vs $40 previously; takes 1 day
Sales Tax	MEF	.82	.52	.1% of value; $821 June '12 & $524 July '11 (as per Customs data); takes 1 day
Total		6.90	6.02	Takes about 5-6 days

Note: Basis 5 containers of 24 tons each.

[25] Precise estimates are not possible for two reasons. First, the size of informal costs depend on the volume shipped by the exporter and the negotiating power of the freight forwarder working on the exporter's behalf. Second, the freight forwarders usually do not separately break out the informal fees to the exporter.

42. Overall export costs for container shipments ex-SHV declined from an estimated $35/ton beginning in early 2011 to a low of $27 beginning in the second half of the year. With the new fees levied by CamControl and GDCE, and the higher GMO testing costs, they have risen to as high as $30/ton. In addition, the trade reports that Phnom Penh Autonomous Port (PPAP) has doubled its service charge for loading and unloading containers to $50 per teu effective August 1. It is also reported that effective June 15, 2012 Maersk shiping line increased its terminal fee by $10/teu to $100 and other container shipping lines are also expected to follow suit.

4.1 Heavy competition

43. Cambodian government export document processing charges are in sharp contrast to its chief competitors - Thailand and Vietnam. In contrast to the Cambodian exporter's cost of $11/ton,[26] its Thai competitor pays 15 cents for fragrant rice and only 10 cents for non-aromatic rice exports. (Licensed Thai exporters are also required to hold at all times 500 tons, but we are advised "Officials come once in a blue moon to inspect stock."[27]) There are no official export fees levied on Vietnamese rice exports, but USDA reports that unofficial payments of 5 cents per ton are paid to customs officials.[28] Effective October 1, 2012 under Decree 109, Vietnamese exporters will be required to export at least 10,000 tons each year. In addition, they must own a warehouse and either a rice mill or polishing factory. (The warehouse must be capable of storing 5,000 tons and the mill have a capacity of 15 tons of paddy per hour or a polishing factory of 10 tph.[29]).

Table 8: Export procedure cost ($/ton)

Item	Camb	Viet	Thai	Comment on Thai costs
Export License	.63	--	.01	Bht 30 per shipment
Inspection fee	1.42	--0	.03	Bht 3.5/ton + transport (Bht 400 for Bkk)
Cert. of Origin	1.25	--	--	
GMO Cert.	1.75	--	--	
Sales Tax	.82	--	--	
Est. Informal Charges	5.13	.05	.05	Bht 200 per B/L
Subtotal	11.00	.05	.10	
Hom Mali Cert.			.05	Bht 200 per shipment

Note: Basis 5 containers of 24 tons each

Source: Thai Rice Exporter Assn, USDA/HCMC, authors' interviews

[26] Excluding fumigation costs.
[27] Personal communications with a Thai exporter.
[28] Personal communications with USDA/HCMC.
[29] "Ministry to limit licenses for rice exporters," Viet Nam News, August 1, 2012

44. In an effort to reduce complexity and costs, the government in November 2011 agreed to set up a "one stop" office for rice export document processing. This service was to be provided at the Council for Development of Cambodia (CDC) office, but rice exporters initially found that the change had not worked out as planned as the officers at the CDC office did not have the authority to actually issue the documents. Following complaints by exporters, MAFF agreed to allow SPS certificates to be issued at this office and the MoC authorized its officers to issue CO paper work. Needed approvals CamControl and Customs, however, cannot currently be obtained at the "one stop" office. Exporters expect that the "one stop" office as currently operating will shave the time needed for document approval to about 5-6 days, down from 7 days previously.

Take Away Points

1. Cambodian export procedures remain complex and costly compared to Thailand and Vietnam, despite government efforts to reduce delays and formal costs.

2. The "one stop" office established at CDC initially has not work as planned, but the government has partially rectified the problem. CamControl and Customs have not yet agreed to authorize their officials at the CDC to issue the needed paper work.

3. Estimated formal and informal charges for needed export documents fell to $9/ton as of late 2011, but effective July 1, 2012 CamControl and GDCE began to formally charge for their services, adding up to $3/ton to exporter costs. Export document processing costs now stand at an estimated $12/ton, down significantly from the $17 charged one year ago. Fobbing costs (stuffing containers, transport from PP to SHV, and port charges) remain at $18/ton.

4. To obtain the GMO-free certificate, one must still rely on foreign labs, where the costs have increased in the last year.

5. High Domestic Costs Remain a Hurdle

45. While Cambodia has significantly cheaper production costs than Thailand and Vietnam, its prices for non-aromatic milled rice become increasingly uncompetitive ex-rice mill, FOB the port, and delivered to the overseas destination, as noted in our 2011 report. This is due to the combination of improper drying of the paddy, mixing of the varieties by paddy traders, out-of-date milling technology, high power costs to operate the rice mills, inefficient milling technology, expensive transport costs, informal payments, high costs for processing export documents, expensive port charges, and uncompetitive ocean freight."[30]

Table 9: Paddy Prices January 2010

Paddy Prices, January 2012 ($/ton)		
Origin	Frgt	White
Cambodia	340	235
Thailand	481	303
Vietnam	390	269
Note: Spot prices as of January 18		
Source: Thai Dept. of Internal Trade, Viet Food & authors' interviews		

Table 10: Cambodia Trucking Costs

Cambodia: Trucking Costs ($/ton)	
From	Costs
Battambang to PP	15
Kompong Thom to PP	12
Kralanh Siem Reap to PP	20
Pursat to PP	13
PP to SHV	7.5
Source: ARPEC, July 2012	

46. Local Transportation & Milling Costs Declining But Still Higher than in Thailand and Vietnam. Current tansportation consts for rice are estimated at $10-13 per 100 km, significantly above levels in Vietnam and Thailand. Based on earlier studies, compareable costs in Vietnam are approximately $7 per 100km, while Thailand is at $5[31]. More importantly, both Vietnam and Thailand heavily relay on river transport for moving rice, which is significantly cheaper. Virtually all of Vietnam's rice mills in the Mekong River Delta (where the rice exports are sourced) are located on the numerous water channels of the Mekong River. According to a recent report, Vietnamese transport costs via the Mekong River and its subsidiaries are as little as $3-4/ton compared to $15/ton to move the same distance by truck in

[30] Slayton and Muniroth.

[31] Draft "IFC Gasifiers Study" by Rogier van Mansvelt, February 2011.

Cambodia[3132]. While most of Thailan'ds fragrant rice must be trucked from the Korat Plateau, its white rice is primarily barged fown the Chao Phraya River to the exporters' warehouses in Bangkok.

47. Our study shows that Cambodian costs have declined somewhat since a comparable study was undertaken in 2010 but they remain significantly above those of Thailand and Vietnam. Milling costs have improved to an estiamted $ 30-43/ton, down from $30-50/ton two years ago. While the cost of the commercial (smaller) mills have remained flat at around $30-32/ton, the expensies of the larger mills have been reduced by $7-10 to $34-43 due to an upgrading their milling equipment and the use of gasifiers to reduce fuel costs.[33] Despide these gains, they are still significantly higher than the $20-30 in Vietnam and Thailand where power costs are cheaper. Local milling costs are analyzed in Appendix 1.

48. Currently Cambodia rice millers use electricity from Vietnam for Phnom Penh and the Southeast region, while the Northwest uses electricity from Thailand. In part due to very large mark ups, Cambodia rice millers pay between $0.25 - 0.26 per KWH, compared to electricity costs of around $0.10 per KWH in Thailand and Vietnam. Apparently reacting to these large mark ups on its prices, Vietnam has informed to Cambodia it will soon increase electricity costs by about 30%. As a consequence, rice millers who use electricity sourced from Vientam will face higher processing costs than they do currently. Also diesel costs in Vietnam and Thailand are less than $1 per liter but in Cambodia it is around $1.20 per liter.

49. The milling cost advantage in Vietnam and Thailand would be narrowed due to better utilization of the milling equipment through the use of multiple shifts and full operation throughout the year**,** - but not disappear due to the higher energy costs in Cambodia.

50. The spectacular expansion in the larger rice milling subsector is intensifying the competition among the rice millers. Theoretically, this same competition should help to wring unnecessary costs out of the milling industry (and ultimately benefit farmers with better prices). As indicated above, milling costs are being reduced at factories which are installing rice husk gasifiers to convert the rice husks to fuel and slash diesel costs by up to 75% or save almost $15/ton. More, however, needs to be done to encourage the adoption of this cost-cutting technology through extending loans and otherwise promoting the adoption of the technology.

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[32] The distance between Battambang and PP is 291 km for which the estimated trucking cost (including informal costs) is $15/ton (including informal costs). This compares with 280 km from Chau Doc to HCMC via the Mekong. ARPEC reports barging costs as low as $3/ton. Source: "Defining a Road Map for Our Rice Sector," ARPEC July 2012. The trade reports barging costs of $4-5/ton (VND 85,000 to 110,000), depending on the season. Source: personal communications.

[33] These cost calculations are based on producing 25-35% brokens - the quality demanded by the local market. The cost advantage of the small mills evaporates if their output needs to be reprocessed or polished to meet overseas quality requirements.

Take Away Points

1. Cambodia has significantly cheaper production costs than Thailand and Vietnam, but its prices for non-aromatic milled rice become increasingly uncompetitive ex-rice mill, FOB the port, and delivered to the overseas destination. As such, first priority must go to increasing aromatic rice exports.

2. Cambodian exporters are also at a disadvantage vis-a-vis their competitors in Thailand and Vietnam because of higher transport costs. Not only due Cambodia's land transport cost compare unfavorably, but most of Vietnam's rice moves on its waterways for a reported savings of $10-12/ton

3. While Cambodian milling costs have been reduced by as much as $7-10/ton through machinery upgrades and the adoption of gasifiers, they remain uncompetitive compared to Vietnam and Thailand because of higher energy costs and under-utilization of the milling equipment due to working capital limitations. Where Cambodian milling costs are $30-43/ton, they are still significantly higher than the $20-30 in Vietnam and Thailand where power costs are cheaper.

4. Electricity costs, which are already at uncompetitive levels, are likely to increase.

5. Competition from the rapid increase in the larger mills and the expected entry of better-capitalized milling companies offers hope in driving out some of the inefficiencies.

6. Expanding and Improving Logistics and Transportation

51. For all practical purposes, the Kingdom's exportable surplus is primarily grown along the Thai and Vietnamese borders. The largest concentrations of surplus fragrant rice are grown in the northwest in Battambang and Banteay Meanchey, while the white rice surplus is in the southeast in Takeo, Prey Veng, and Svay Veng. Even with steep growth in formal exports during the last three years, these surpluses are still overwhelmingly shipped informally to Thailand and Vietnam.

52. One year ago, there were only two options for formal exports: Container shipments either via PP or SHV, and small coastal vessels being loaded in SHV.[34]

53. In SHV, Cambodia's export potential is currently constrained because of draft (depth of water a ship draws when loaded) limitations due to rocky outcrops in the channel. The entrance to the port is restricted to vessels with a draft of less than 8.0-8.5 m. This limits vessels that may call to about 8,000 dwt. Even these coastal vessels have not been utilized as all of the exports up until August 2011 were via containers. In our 2011 analysis, we explained that the majority of the world rice trade is shipped in bagged form on break bulk vessels. These ships are generally a cheaper and more convenient mode of transportation to ship large quantities of rice because containers require extra paper work and the physical handling of the individual rice bags. It was further explained that the majority of containers present in Cambodia are either too large or are too dirty to be suitable to ship rice or other food items. We reported that the rising volume of rice exports was increasingly resulting in the need to bring in empty containers (with the added expense). Further, the growing shortage was leading to shipping delays.

54. As a small developing economy, the number of incoming containers in Cambodia is relatively limited compared to Thailand and Vietnam. This has several implications. First, Cambodia's outgoing container freight rates will always tend to be higher than its neighbors. Second, finding enough food quality containers in this smaller national universe is increasingly a constraint and results in the need for empty containers to be shipped to Cambodia[3235]". Finally, because of this imbalance in Cambodia's container trade, there is a reluctance on the part of shipping companies to allow empty containers to be transported upcountry where most of the rice is produced and milled for fear that they will not be used on a timely basis. As a result,

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[34] Current chartering costs for break bulk vessels carrying 5-8,000 tons is $30-35/ton, depending on the current position of the vessel. There is no premium/discount *per se* for Bangkok, HCMC, or SHV. Source: Personal communications with a major rice trader based in Singapore.

[32] Surveying companies in Thailand indicate that approximately 80% of the twenty-foot containers in that market are of "food quality." Market participants in Cambodia indicated that it is generally significantly lower (perhaps 20%).

virtually all bagged rice intended for formal export is trucked to Phnom Penh where it is loaded ("stuffed") into containers and then shipped out of the country through the container ports located in PP and SHV. Notwithstanding the additional transport costs to truck to SHV, an increasing share the rice exports are shipped via this port. According to CamControl data, 88% of this year's rice exports were shipped via SHV, up from 71% last year.

Table 11: Cambodia: Rice Export Traffic (as %)

Port	2010	2011	2012
Sihanoukville (SKV)	67	71	88
Phnom Penh (PP)	2	14	9
Dry Port	27	4	0
Other	4	5	3
Non-Container	0	6	1

Source: CamControl through August 2012

55. It can be concluded that the export target of 1 million tons could not be achieved if shipments were limited to containers, because of the lack of food quality containers and an insufficient number of semi- trailer trucks to transport such a large number of containers.

6.1 Progress in utilizing Mekong logistics

56. A 2009 accord between Cambodia and Vietnam provided a framework where Cambodian milled rice could gain duty-free access to Vietnam's down river ports but the details for "transit" goods were not agreed to.[33] Extent of any follow-up discussions is not know. However, beginning in August, limited quantities of uncontainerized bagged rice began to be exported via barges down the Mekong River to load on vessels waiting in Saigon Port. Eleven thousand tons of white rice were barged down the river for onward shipment to Russia, accounting for 16% of all shipments during this period.

57. With Indian export prices negating the benefit of the Russian import tariff preference, the major Russian importer switched from Cambodia to India

[36] "Agreement between the Government of the Socialist Republic of Vietnam and the Royal Government of Cambodia on Waterway Transportation," signed December 2009.

for its rice needs. As a result, this new transportation corridor went unutilized for rice during the first six months of 2012, although it is understood that 16,000 tons of tapioca chips was barged down the river en route to China. In late July, the rice barge traffic resumed with 850 tons of fragrant rice departing for a vessel intended to West Africa - potentially opening a major new market for Cambodia, while saving up to $30/ton in ocean freight costs.[34]

58. As this transport route has informally opened up, it could just as easily be closed in the lead up to the Asean Economic Community becoming a reality in 2015. As such, it is important for Cambodia to formalize the current arrangement to protect this gain.

59. According to trade comments, export formalities, especially on the Cambodian side, need to be improved so that the full potential of this transport corridor can be realized. While both Green Trade and Men Sarun have privately owned loading wharves on the Mekong River, current barging efforts are limited to PPAP.

60. While market participants are reluctant to talk about informal charges, it appears that they may be as high as $3/ton. In addition, transit clearance in Vietnam is reported to be $.50/ton.[38] As a result, rice buyers are faced with barging costs from PP to HCMC of $18/ton FAS or $20/ton FOB. Official charges, which are detailed in the table below, total almost $3.80/ton for a 1,500 dwt barge, the largest item of which is an agency fee of $1.60/ton for Kampuchea Shipping Agency and Brokers (KAMSAB, a government-owned shipping agency for marine cargo) which are in addition to CamControl charges.

[37] The need to reposition empty containers can lead to situations where container freight is cheaper than break bulk vessels. Generally speaking, though, container freight is more expensive. In June a major trader advised that container freight costs to Ghana were $100-110/ton, compared to $80 if barged down Mekong River, loaded on break bulk vessel, and shipped to Tema.

[38] As Cambodia does not have a barge fleet, most of the barges chartered must sail empty from HCMC. The barges used for carrying rice have varied in size - 900 tons dwt, 1,500 tons dwt, and 2,000 tons dwt.

Table 12 : Official Cost for Barging - 1,500 dwt

Item	$/ton	Comment
Border Clearance		
Pilot		$200/barge
Customs	0.07	$100/barge
Police	0.15	$230/barge
Quarantine	0.05	$80/barge
Agent Service Charge	0.07	$100/barge
Subtotal Border Clearance	0.47	
PP Port Charges	1.30	Includes pilot charge
KAMSAB Tally Fee	0.42	~ $30-50/ton
KAMSAB Agency Fee	1.60	
Total	3.79	

Source: authors' interviews

6.2 Thai door won't open without knocking

61. Cambodia and Thailand have long had a bitter-sweet relationship. At least at the highest levels, however, bilateral relations between the two countries have improved dramatically since the Thai election held in July 2011. In May 2012, a bilateral meeting was held in which discussions occurred about expanding trade between the two Kingdoms. More recently, the Thai government indicated it will send a trade and investment team to Cambodia. [39]

62. Thailand's policy *vis-a-vis* Cambodian rice is conflicted. Under the ASEAN Trade in Goods Agreement (ATIGA), Thailand is obliged to allow duty free imports of Cambodian rice. Its actual policy, however, is to limit imports to brokens destined for industrial use. These imports are to be restricted to only certain months and by approved importers. Thailand's trade posture is defensive in nature, but ignores the reality that massive tonnages of Cambodian rice already are being informally imported.

[39] Government fosters cooperation in rice production," The Nation August 14, 2012

63. The current Thai government has a stated policy of transforming Thailand into a regional "rice trading hub." While unrestricted imports of Cambodian rice into Thailand is likely to be politically unpopular as it would depress Thai paddy and milled rice prices, a transport corridor agreement similar to one that Laos and Thailand have in place is likely to be more politically palatable to the general Thai public. [3540] Under such an agreement, Cambodian milled rice would be trucked to Thai ports for export both on break bulk vessels, as well as in containers. These shipments, of course, would need to be closely monitored by the Thai authorities.

64. The local transportation savings alone amounts to almost $6/ton.[41] Additional savings would be realized due to lower port charges and more competitive ocean freight. Where container freight from SHV to Europe is currently $2,000 - $2,050 per teu, savings of up to $150- $200/teu could be realized via Laem Chabang, Thailand's principal container port.[42] Total savings are estimated to be as much as $18.50/ton CFR main EU port.

65. There may be reluctance to negotiate such an accord by the Government as it is perceived that such a transit agreement could "give" Thailand "leverage" over Cambodia. We believe that these fears are misplaced on several accounts. First, both parties would benefit from such an agreement. Second, and more importantly, this transit route would be one of several routes by which Cambodia's formal exports would occur. Finally, the advent of the Asean Economic Community ostensibly would overtake the need for this accord. Furthermore, there are influential domestic interests in Thailand which want to promote Cambodian milled rice exports either by purchasing this rice and shipping it to its overseas customers and/or investing in the Cambodian rice milling sector.[43] Further, Thai shipping companies would also benefit from this arrangement.

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[40] "Agreement Between the Government of Lao People's Democratic Republic and the Government of the Kingdom of Thailand on Road Transport," signed March 5, 1999.

[41] Sa Kaeo is a primary destination for much of the informal movement from Cambodian to Thailand.

[42] Container freight charges vary by shipping line and also depend on the relationship between the exporter and the shipping company. As such, comparisons of relative shipping costs are fraught with difficulties. Prior to the global recession, Laem Chabang handled 5.2 million teu in 2008, when it was operating at about half of its installed capacity. That same year, the combined container throughput at Phnom Penh and Sihanoukville ports was 306,000 teu. For a description of Laem Chabang Port, see http://www.worldportsource.com/ports/THA_Port_of_Laem_Chabang_3449.php.

[43] Thai imports of Cambodian paddy provide a sorely needed source of raw material for the grossly overbuilt Thai rice milling industry. While this political support would presumably be lacking for a "transit corridor" agreement, Thai rice exporters, which have recently started to trade Cambodian milled rice, would be benefit from the transit accord.

Table 13 : Comparison of Freight and Port Costs

Laem Chabang vs SHV ($/ton)		
Item	Thai	Camb
Transport	16.13	22.00
Container stuffing	3.33	1.38
Fumigation	1.46	1.25
Port Charges		
Gate In/Gate Out	2.50	
Terminal Handling Charge (THC)	3.75	
Sealing	0.25	
Bill of Lading (BL)	0.33	
Subtotal Port Charges	6.83	15.38
Total Domestic Costs	27.76	40.00
Container Freight to E.U.	77.08	83.33
Grand total	104.84	123.33
Note: Local transport from Sa Kaew to Laem Chabang, Thailand vs Battambang to SHV		
Source: Authors' interviews		

66. Another Transport Corridor to Open in 2013 - Kampot. Crystal Rice Kampuchea (a joint venture involving Asia Golden Rice, one of the largest Thai rice exporters) is curently building a large rice mill and port facilities in Kampot. Under the first phase of this project which is to be operational in July 2013, rice would be barged down a canal from the CRK's mill to be loaded mid-stream on vessels that are waiting in deeper waters. The loading of pre-slung bags using the cranes on the vessels would replicate how much of Thailand's rice is loaded at Koh Si Chang in the Gulf of Siam. This will open up direct Cambodian rice exports to West Africa - a market for 5 million tons of white and fragrant rice in 2011. This loading operation would precede by two years the port improvements in SHV which will permit large vessels to load.

67. Sihanouk Port Expansion by 2015. Under current plans, Japan is financing dredging and building of a new jetty in Sihanouk Port which will allow the loading of large vessels. The new jetty will service a navigational channel 12 meters deep. This will allow the simultaneous loading of two 50,000 dwt vessels.[44]

[44] Personal communications with Japanese Embassy in Phnom Penh.

Take Away Points

1. Over the course of the last year, Vietnam opened up use of the Mekong River to transit shipments of rice (and tapioca chips). As this transport route has informally opened up, it could just as easily be closed. As such, it would be important for Cambodia to formalize the arrangement to protect this gain.

2. The advantages of break bulk barging rice down the Mekong River could be enhanced if export formalities are improved and costs reduced. Currently, for example, exporters pay duplicative fees to CamControl and KAMSAB. Cost efficiencies are also likely if the present policy of allowing some private ports on the Mekong River is expanded to include firms competing in this barging effort.

3. Negotiating a transit accord with Thailand would improve the competitiveness of Cambodian rice grown in Battambang and Banteay Meanchey by reducing land transport costs and allow access to cheaper port charges and ocean freight. Estimated total savings could reach as high as $18.50/ton for cargo destined for the EU.

4. In the near-term, the construction of a rice mill and port facilities in Kampot will permit loading of large vessels in deeper waters off the Cambodian coast by mid 2013 In the longer term, expansion of Sihanouk Port will allow large vessels to be loaded by 2015.

7. Recommednations

68. Significant progress on facilitating exports has occurred during the last year, which can be largely ascribed to the guidance and incentives provided by Government's rice policy. This includes:

- The investment pace in larger mills and rice polishers has accelerated;
- Several of the new mills being built will have access to sufficient capital that they plan to work three shifts, rather than the current norm of a single 8-10 hour shift;
- Despite the recent uptick in export procedure charges, overall costs are down compared to one year ago;
- A "one stop" office has been opened, helping to further trim the number of days required to get export permission;
- Barging uncontainerized rice down the Mekong River has begun; and,
- Investments in port facilities in Kampot should permit mid-stream loading of large vessels by mid 2013 and in SHV by 2015.

69. Thailand's high rice support policy (which is prompting many Thai rice exporters to seriously consider investing in Cambodia) is also having an adverse impact on the competitiveness of Cambodia's formal rice exports. Further, many of the complex, inter-related issues, which hamper competitiveness, remain to be surmounted if Cambodia is to emerge as a major rice exporter. These include: limited (but improving) access to working capital, high milling costs, expensive local transport, time consuming and costly export document clearance, high port charges, uncompetitive container freight, expensive electricity and so on. The planned rehabilitation of the railroads and the modernization of PP and SHV ports are medium-term remedies, which will only partially alleviate the Kingdom’s high logistics costs and bottlenecks. Following suggestions of measure what the Government may want to consider addressing these issues, all which improve the competitiveness of Cambodia's rice exports.

70. Continue to remove bureaucratic hurdles and cut export procedure costs. Cambodian exporters face fees costing about $11/ton, while Thai and Viet exporters face comparable charges of no more than 15 cents and 5 cents, respectively. Consideration should be given to reducing these charges, ideally to comparable levels. In order to achieve this, we suggest to: (i) unify all export procedure costs into a single payment; (ii) roll back recent fee increases by CamControl and GDCE, and (iii) streamline the number of agencies involved in the export approval process. Consideration, for example, should be given to consolidating the number of Ministry

of Commerce and Ministry of Finance offices involved in export approvals from the current three to only two or, preferably, just one.

71. Improve the functionality of the newly opened "one stop" office. Authorize officials from CamControl and Customs at the "one stop" office to issue the required certificates. We also suggest, based on the needs of exporters, that additional "one stop" offices be opened in SHV as a first priority. If a CamControl certificate is still required, CamControl should provide staff to its offices in Battambang and in the other major milling centers with rice inspectors to facilitate the inspections upcountry.

72. Undertake a study of the absence of GMO rice in the Kingdom by MAFF. SPS issues are increasingly likely to become a major constraint. The E.U., Cambodia's largest export market, is very sensitive about importing GMO-free food and there are no labs in Cambodia to test the goods. Presently, the exporters must ship a sample to Vietnam for testing which costs $210 per test and takes several days to perform.

73. MAFF needs to issue a blanket certification that the Cambodian rice crop is GMO free, eliminating this testing requirement, after the study is reviewed and referenced in a recognized scientific publication.

74. Initiate bilateral negotiations with Vietnam and Thailand to ensure Cambodian rice has attractive export alternatives to container shipments via Phnom Penh and Sihanoukville ports. In the case of Vietnam, Cambodia needs to lock in recent informal changes, which allow uncontainerized rice to be barged down the Mekong River. Using the Thai-Lao transit agreement as a template, Cambodia should negotiate as transit agreement which would allow uncontainerized rice from Battambang and Banteay Meanchey to be exported via Thai ports.

75. Continue to reduce port charges. Encouraging competition from private sector investors into port infrastructure would go long a way in reducing these (especially informal) costs. To help increase the export competitiveness of Cambodian rice, formal port charges should be reduced by at least $2/ton. Besides reducing PPAP and SHV charges for container shipments, there is a scope to reduce official charges for uncontainerized cargo, pilot charges, and KAMSAB fees in PPAP.[45]

76. Continue to encourage and seek private investments in larger mills and rice polishing factories with capacities of at least 30 tph. These facilities offer the best opportunity for increasing rice exports in the near-term. Use tax incentives if necessary to encourage overseas or domestic investments in the milling sector, which

[45] These changes, of course, will also benefit other dry bulk exports such as tapioca chips, corn, rubber, etc.

are able to meet export requirements. This could include an exemption to official export clearance costs for up to five years for qualifying foreign and domestic firms.

77. We would like to compliment the Government for signing MOU with Indonesia for the export of 100,000 tons of rice and similar MOUs with other countries may follow. It is of utmost importance, however, that actual contracts only be signed for volumes that can be reliably be performed by credible players. We would like to suggest that Government maintain flexibility in appointing implementing organization for these contracts. Like Vietnam, Government could allow the actual execution of any signed contract to be made by members of its rice exporter association.

78. The private sector membership of the Rice Technical Working Group (RTWG) should be involve five largest rice exporters in order to assist government in identigying ongoing hurdles and overcoming problems as they arise. Membership of the group could be based on recent export volumes as recorded by either CamControl or GDCE. This RTWG would provide a cross section of the Cambodian rice sector – millers, polishers, and exporters without factories. Every two years the private sector membership could be changed based on the most recent export performance records.

8. Annexes

Annex 1: An Analysis of Cambodia's Rice Milling Sector

Cambodia's has enjoyed a rising surplus since 1996, with very significant increases in the last 5 years. The country, however, has not fully taken advantage of these surpluses because most of it is informally exported as paddy to Vietnam and Thailand. Compared to these countries, Cambodia's rice milling industry sector is uncompetitive because of constraints such as low processing capacity, inefficient milling equipment, low storage capacity, and high costs for local transportation, energy, export procedures, and port charges, as well as uncompetitive international container transportation tariffs. To overcome these hurdles requires the building of extra processing capacity and warehouses, a reduction in the bureaucracy for obtaining export documents, and lowering transportation and energy costs.

Cambodia's milling sector can be divided into village and commercial mills. Beginning in 2009, there has been a dramatic increase in the number of larger commercial mills. Due to operating capital constraints, even these larger mills are limited to a single 8-10 hour shift. This is in contrast to its counter parts in Thailand and Vietnam which operate three shifts per day.

Our study of milling costs shows that Cambodian costs have declined somewhat since a comparable study was undertaken in 2010, but that they remain signicantly above those of Thailand and Vietnam. Milling costs have improved to an estimated $30-43/ton, from $30-50/ton two years ago. While the costs of the commercial (smaller) mills have remained flat at around $30-32/ton, the expenses of the larger mills have been reduced by roughly $7 to $40-43 due to an upgrading their milling equipment and the use of gasifiers to reduce fuel costs. Despite these gains, they are still significantly higher than the $20-30 in Vietnam and Thailand where power costs are cheaper (electricity cost is around $0.10 per KWH, while Cambodia rice millers pay between $0.25 – 0.26 per KWH or nearly triple their costs). Also diesel costs in Vietnam and Thailand are less than $1 per litre but in Cambodia it is around $1.2 per litre.

Regardless of mill size, milling margins improve significantly to the extent that more aromatic rice is processed.

Introduction

Until 1993, the sector was directly controlled by the government through the Ministry of Commerce and the Ministry of Agriculture, Fisheries and Forestry. Very little marketing was conducted by individual enterprises. There was no available media, telecommunications, or access to market information or international business contacts.

The Government privatized the sector in 1993. During 1993-1998, marketing practices and activities of this sector evolved as a “dual” system. On the one hand, private investors were permitted to set up and operate rice milling businesses, to buy

paddy and produce milled rice, and sell into whatever markets they chose. However, the Government was involved and influenced the milling sector through ownership of a small amount of milling capacity and through government contracts for milled rice (for the army, police and for relief purchases). Also the Government was involved through food security policies, rice export permit quotas, enterprise licenses and fees, informal taxation and custom regulations.

Those operating village mills have throughout this period focused on providing small scale milling services to local farm families and local markets on a fee for service basis. Commercial rice mills in that period gradually assumed responsibility for overall milled rice production that supplied urban demand. Each year, as paddy production rose, the commercial rice mills increased their output, searching for new opportunities to market their products outside their own provincial markets, to Phnom Penh, and to overseas markets.

According to the Ministry of Industry, Mines & Energy (MIME), there are around 50,000 rice mills in the Kingdom. The vast majority, however, are small village mills. Only a limited number of rice mills can produce rice for export quality. There are presently estimated to be 22 larger rice milling companies that can produce good quality rice for the intenational market. These mills have constraints in terms of working capital and the lack of markets. These mills typically operate only a single 8-10 hour shift per day and most do not operate twelve months out of the year.

This is in contrast to the rice mills in Thailand and Vietnam, many of which can operate continuously throughout the day and year. As a result, this impacts the size of the export orders that an individual milling company can accept. Additionally, Cambodian mills have higher processing and transportation costs than those in neighboring countries. In 2010, ADI conducted a study on rice milling costs in Cambodia and found that they were about $30-50/ton, compared to $20-30/ton in Thailand and Vietnam.

While Cambodian paddy prices at harvest are typically much cheaper than in neighboring countries, the ex-mill prices are uncompetitive due to more expensive electricity, fuel, and local transportation costs, as well as low milling efficiencies. This contributes to informal exports of paddy to Vietnam and Thailand, preventing Cambodia from capturing the value-added from rice milling. Equally important, Cambodian rice millers have insufficient access to financing to purchase sufficient paddy to cover optimal milling activity until the next rice harvest.

The funding that the mills have obtained from the banks is mostly against the collateral of fixed security. The lack of available financing has slowed both capital investments to upgrade the sector's milling capacity, as well as needed drying and storage availabilities, and working capital to secure sufficient paddy to operate the mills throughout the year.

The vast majority (76%) of Cambodia's rice is from the wet season crop. As paddy prices are normally low at harvest, having sufficient storage is also critical for rice millers. Those who have enough cash can buy and store the paddy until August or September and usually earn significant benefits from the higher prices later in the year.

Cambodian rice is categorized it into three different types - fragrant, mixed, and IRRI varieties. Prices for paddy and rice depend on the variety. Despite the rising surpluses,

Cambodia faces many challenges in term of quality because the majority of the crop is comprised of mixed varieties which results in non-uniform milled rice.

Rice Milling Industry Analysis

The vast majority of the rice mills in Cambodia use equipment more than 20 years old, are fairly inefficient, and should be upgraded or replaced. However, most of the commercial mills work on such thin margins that they are unable to save enough money to renovate or replace their milling equipment. These millers manually fill bags of rice in various sizes as provided by their customers. If they sell in the urban markets, some millers use their own bags.

The vast majority of all bagged rice is manually weighed. Bagging for the larger mills is done by semi automatic machinery, and the bags are mechanically stitched shut, whereas rice intended of local sale is in hand sewn bags.

During the last year, it is estimated that an additional further 100 tons/hr of expansion has occurred, bringing the milling capacity of the larger milling companies to 350 tons/hr. Where there were no rice polishing factories in 2009, there are now three facilities with a combined capacity of 32 tons/hr.

Village Rice Mills

Village rice mills are typically owned and operated by a single family and the milling equipment is installed in or under the owner's residence. The paddy and milled rice is stored in the house or nearby in a small traditional storeroom building.

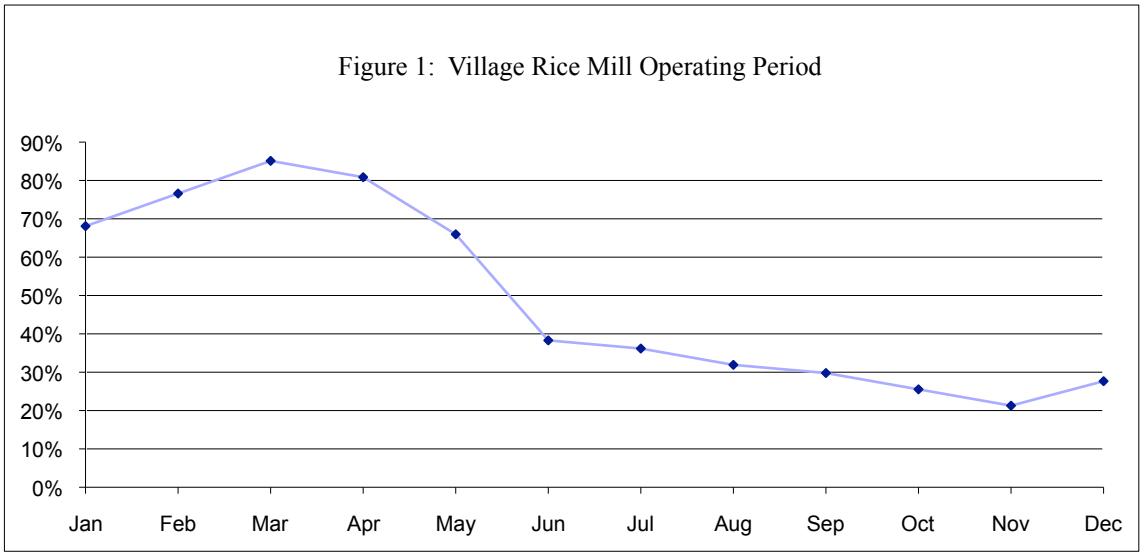
The village mill is often not registered with the provincial MIME office as a legal business operation because these mills are home-based-businesses and rarely have any formal employees. Rather, they use family members informally recruited to help.

In general, village milling operations have equipment capacity of less than 500 kg of paddy per hour (or even less than 300 kg/hr) and operate only a few hours per day and around 3-4 days in a week. The village rice mills provide milling services to local subsistence farm families in the village.

Usually village rice mills are busy operating for about 6-7 months per year beginning in January. The peak season is March-April because the farmers are preparing for Khmer New Year (see figure 1 on village mill operation) and also during the celebration after the harvest. An average operation is about 5 tons of paddy per month for local household consumption and a small number of village mills also utilize about 4-5 tons per month for supplying to the local market nearby the village.

All village rice millers process paddy on a fee-for-service basis for farmers in their village. Mostly village rice mills do not charge a cash fee for milling paddy. Instead, they keep the bran and small brokens and sell it as animal feed, largely to swine producers.

Figure 1: Village rice mill operating period



Source: Interviews by authors.

Village rice milling equipment is primarily manufactured in Vietnam and China, where the cheapest machinery in the region is produced. Village millers indicate that the main production problem facing them is the age and reliability of their equipment. This equipment often consists of a mixed set of engine, drive belts and a single pass milling machine that is installed under a house in a temporary or moveable manner. The village rice mills operate with a single pass machine that de-husks and removes a portion of the bran, but does not polish, sort, grade, or separate rice. As the average age of the equipment is more than ten years of age, it is likely that harsh operating conditions, poor maintenance and repair account for many of the operating problems. Secondary problems include a lack of skilled labor.

Village rice mills produce milled rice containing 35-45% brokens with a recovery rate averaging 62% for dry season rice and 64% for wet season rice. Since they have no sorting equipment, it is not possible to separate the large brokens and small brokens from the head rice (whole kernels).

The finances of the village rice mills are usually the responsibility of the spouses and there is no formal record keeping or accounting systems. Financial management usually means managing the cash balance on hand. Village rice mills are extremely small operations and reflect the general lack of education and accounting skills of the rural Cambodian population.

Commercial Mills

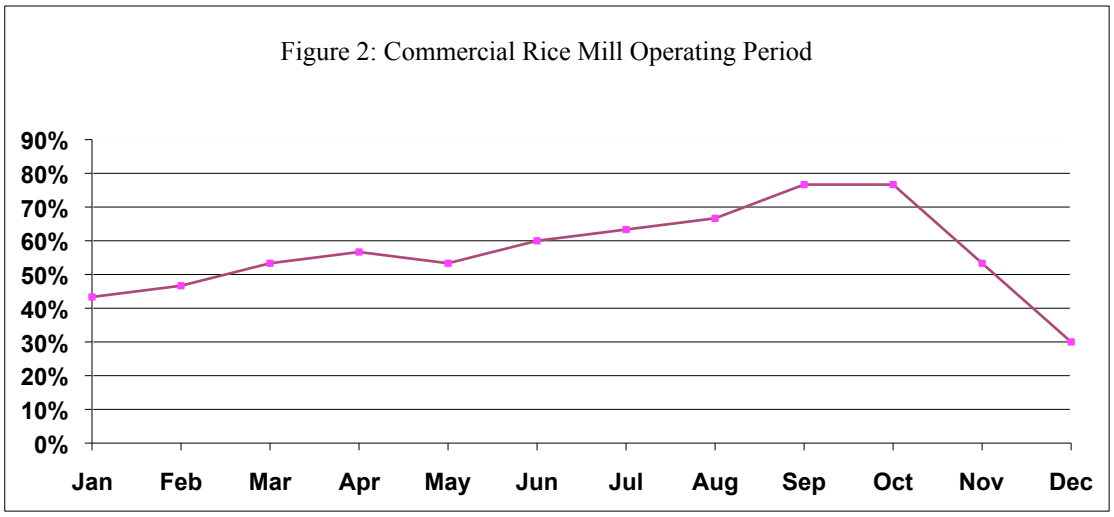
Commercial rice mills can be differentiated into small home-based mills with a capacity as small as 500 kg and intermediate-sized operations milling up to 5 tons of paddy per hour. Commercial mills also have larger buildings used to mill the paddy and space to store dry paddy, milled rice, and by-products. They buy paddy directly from farmers and local traders and store it in their own warehouse. Some of these warehouses can store up to 500-3,000 tons of paddy. Typically some commercial mills provide small loans or inputs directly to farmers during the production period

and farmers repay the loans at harvest either in cash or pay with paddy on a market price basis.

Commercial mills produce rice primarily destined either for the domestic market or to supply to larger mills or polishers for re-processing for the export market. These mills are typically family-owned and operated businesses which seasonally employ 3 to 10 workers. Commercial rice mill owners are not as heavily involved in operating a secondary family business. This is a reflection of the scale of their most important income source and investment. While some smaller commercial mills have characteristics similar to village mills, most commercial rice mills are moving in the direction of being operated as businesses. Normally the wife or daughters are responsible for accounting, record keeping, purchasing paddy and production inputs, and the financial administration of the mill.

Generally, the commercial rice mills are operating almost year-round (January to October), while in November-December the owners concentrate on trading paddy to Vietnamese and Thai traders who are looking for Cambodian paddy at harvest time. The busiest months are August to October because at this time farmers are short of their own rice and buy milled rice from the local market (see figure 2).

Figure 2: Commercial rice mill operating period



Source: Interviews by authors

Commercial mills process an average of about 230 tons of paddy per month or between 7-20 tons of paddy per day and supply milled rice for local market, provincial towns, and the Phnom Penh market. Commercial mills interviewed in Kandal, Prey Veng and Battambang indicated that they annually mill around 1,000-5,000 tons of paddy.

The milling equipment of the commercial rice mills is mostly manufactured in Vietnam, China, Japan and Thailand and often includes machinery from differences sources. Milling equipment from Vietnam and China are the cheapest machinery available. Most of commercial millers indicate that they intend to upgrade their

milling equipment because it is over 10 years old and also because of the recent market demand for higher quality rice.

The commercial rice mills still use old technology powered by an engine with drive belts and three pass milling machines with a rubber roller for paddy de-hulling. Most of commercial mills do not have polishing and rice grading equipment, but use a rice separator with old technology. They also have a poor storage arrangement. Like the village mills, the operating problems of the commercial mills are due to poor maintenance and frequently need repairs. Secondary problems include a lack of skilled labor.

The commercial mills usually produce rice with 30-35% broken, but some are able produce 5% brokens if they have separator grading equipment, polishers, and color sorters. The milling rates average 56% for dry season rice and 57% for wet season rice for the domestic market. If milling 5% brokens, the conversion rate is between 45-47%.

Some commercial millers face financial difficulties in operating due to a shortage of working capital which prevents them from securing enough paddy at the harvest. If they have fixed assets which they can pledge as collateral, these mills are able apply for loans from commercial banks. Management of the mill's finances are also in the hands of the spouses. The mills do not use formal record keeping or accounting systems. Financial management consists only of managing the cash balance on hand.

Largest mills

Following the opening of Golden Rice mill in 2009, a growing number of modern larger mills have been built. Many of the new rice mills have modern drying facilities and large warehouses to store paddy. Additionally, most new large rice mills and rice polishing factories have installed color sorters and drying equipment. The operating capacity of the millers is curtailed due to capital limitations, relatively limited storage and drying capacities, and insufficient overseas demand due to high FOB prices.

Many of the largest rice mills and polishers have installed mixed and mostly used equipment from Vietnam, China, Taiwan, Japan, and Thailand. While Cambodia's largest rice mills compare favorably in size with many of the mills in Thailand and Vietnam, they have insufficient financing to operate continuously with three shifts throughout the year, which is the practice of its competitors.

Only few of the largest mills have formal accounting system. Most finances are managed by the spouse.

Milling Costs and Margins

The production costs and margins are calculated by the different levels of rice milling (village mills, commercial mills and largest mills - with differences in energy usage). Field interviews were conducted in Prey Veng, Kandal, and Battambang provinces with 3 large rice mills, 7 commercial mills, and 2 village mills. Based on these surveys, the production costs and margins were calculated, assuming that the rice

being processed was for the domestic market with around 35% brokens. Additionally, two rice polishing factories were interviewed in the Phnom Penh environs.

An examination of the gross margins shows that profitability is not so much dependent on the mill size, but on whether the factory processes a significant amount of aromatic rice. For both the commercial and the larger mills, the profit margins are low if the operations primarily process only mixed and IR 66 varieties; while the profit margin improves even if they also mill only a small amount of aromatic paddy.

Tables 2, 3, and 4 present the gross margins of the larger rice mills in Prey Veng, Kandal, and Battambang. The first two annually process 12,500 ton and 13,000 tons, respectively. The gross margins are low (only between 4.2% - 5.0%) because these two facilities process such a high percentage of mixed and IR 66 varieties. While aromatic paddy represents only 7.7-8.0% of the paddy milled, fragrant paddy contributes, respectively, 9.9% and 21.7% of the revenue. This is in marked contrast to the Battambang factory (which annually processes 9,000 tons) which has a profit margin about three times higher (14.6%) because aromatic varieties represented 55.6% of the paddy processed. (Figures 3, 4, and 5 present the percentage of costs and returns by parameter.)

A similar pattern was evident in the smaller commercial mills surveyed in Kandal and Battambang. While the factory in Kandal only processed 1,900 tons, its gross margin was 12.3% because 32% of the paddy processed was aromatic. Also contributing to the gross margins of the smaller factories are their lower milling costs.

(The millers understand the higher profitability if they process relatively more aromatic rice, but they face financial difficulties with cash flow at harvest and also demand in the domestic market for aromatic rice is limited and highly competitive. Most of local consumers are looking for cheaper rice - mixed varieties & IR 66. Further, availabilities of aromatic rice are scarce during several months of the year, adding to its relatively high price in both the rural and urban markets.)

The profit margins of the rice polishers are very low. The two polishers surveyed had gross margins only 3.2% and 4.8% (see tables 8 and 9). As in the case of rice milling, polishing aromatic rice is more profitable than for ordinary rice. The polishers indicate that even some of the rice from the larger mills still needs re-processing and grading to ensure the quality is satisfactory.

Current Cambodian milling costs have declined somewhat from 2010 when ADI conducted a similar study. Milling costs are now estimated at $30-43/ton of paddy vs $30-50 in the prior period. While the costs of the smaller commercial mills have remained at around $30-32/ton, the expenses of the largest mills have been reduced by roughly $7-10 to $40-43 due to an upgrading their milling equipment and the use of gasifiers to reduce fuel costs. The milling cost in Vietnam and Thailand, however, is about $20-30 per ton due to a lower price of power and a higher milling efficiency. Their cost for electricity is around $0.10 per KWH, while Cambodian electricity costs between $0.25 – 0.26 per KWH or nearly triple their costs. Also diesel costs in Vietnam and Thailand are less than $1 per liter, but in Cambodia it is around $1.2 per liter. These costs contribute to Cambodia's lack of export competitiveness.

In addition to the milling costs for domestic market, the polishing cost to meet the international market quality requirements is between $39-42 per ton. The large rice mill that produces rice that can be exported without re-processing can lower total processing costs to $70. (Further reductions in milling costs are likely if the mills were able to work three shifts, six days each week, throughout the year.)

Currently Cambodia rice millers use electricity from Vietnam for Phnom Penh and the Southeast region, while the Northwest uses electricity from Thailand. This power is supplied through Electricite Du Cambodge (EDC), which sets the retail price for customers. Apparently reacting to EDC's large mark up on its prices, Vietnam has informed to Cambodia it will soon increase electricity costs by about 30%. As a consequence, rice millers who use electricity will face higher processing costs than they do currently.

Besides a rollback in the large profits enjoyed by EDC in its purchase price from Vietnam, the rice husk gasifier is only solution to curb production costs for rice milling by reducing fuel costs by 40-60%. SME Renewable Energy is the main supplier of Indian rice husk gasifiers in Cambodia. Until now they have sold 41 gasifiers to rice millers. In addition, there are 8 domestic companies which are manufacturing and selling locally made rice husk gasifiers - 3 each in Phnom Penh and Battambang, and two in Kampong Cham. These local manufacturers have sold around 40 gasifiers to rice millers. The locally made gasifier is less efficient than the original from India, saving only 40% of fuel consumption and is prone to more quickly damage engines. However, the locally made gasifiers are priced at half of the cost of the imported model.

Our cost analysis indicates nearby prospects for Cambodian rice farmers and millers are brightest for aromatic rice for both the domestic and international markets. Thailand currently dominates the international market through the branding of "Jasmine," but Vietnam is gaining market share because of significant gap in prices between the two origins. Thai Jasmine is currently quoted at $1,020/ton FOB for 100% B, but Vietnamese aromatic rice 5% is quoted at $620, and Cambodia aromatic 5% at $895/ton. As such, Cambodia must maintain quality of its aromatic rice to build trust with the international buyers while finding ways to reduce processing costs and other unnecessary informal expenses.

Cambodia rice market prices, which fluctuate depending on local supply and demand, are strongly influenced by market prices in Vietnam and Thailand. In Northwest of Cambodia, local prices level clearly show the influence of Thai prices, where the Southeast paddy prices are closely linked to Vietnamese market.

Rice prices on the international market can be highly volatile. Furthermore, there are no hedging tools available to manage the price risks, and a fixed price forward contract does not exist in this country. One consequence is that storage decisions are not without risk. In a closed market one can expect prices over time to reflect the post-harvest prices plus storage costs. In other words, prices can be expected to increase as the crop year advances. However, as Cambodia rice sector is open to international influences, this assumption is not always justified. The season starts at harvest (November-December for fragrant rice, December-January for mixed rice, and March-April for dry season crop IRRI varieties. There are many years that prices

do not increase in any significant extent within the season. Millers are aware that some of rice millers have faced bankruptcy because of adverse price movements. As consequence of this and due to the lack of adequate working capital and storage facilities, most of millers throughout the year only keep 2-4 months of paddy in stock for processing.

Rice Mill Constraints

The World Bank launched a Study on Access to Financial Services by Small- and Medium-Sized Agribusiness Enterprises in April 2011. The study identified and analyzed broad constraints to agricultural finance in Cambodia and identified potential ways to mitigate these problems. Farmers and millers have limited to access to financing by using their fixed asset as collateral to the commercial bank. Despite improvements, the banking sector provides only limited capital for millers for operating costs or for long term investments for upgrading milling equipment. This, first and foremost, is their biggest problem.

Besides financing problems, the rice millers face high production costs, low efficiency milling technology, and a lack of warehouse and drying facilities. Additionally, their operations are impacted by poor post-harvest practices. Farmer use poor quality seed and the mixed varieties that typify Cambodian paddy production leads to a lack of uniform paddy length. In the absence of proper drying techniques, high moisture paddy is usually delivered to the mill and local paddy collectors often mix the output from different farms. As a result, the milling process results in a relatively high percentage of brokens, non-uniform grain appearance, and the admixture of non-fragrant rice. Millers indicate that significant losses are incurred if poor quality aromatic seed is present. If farmer keeps the seed for 4 years, the purity of the aromatic grain is lower than 90%, while seed used for two years has a purity of up to 95%.

Table 1: Summary of major constraints in the milling sector

Constraints	Nature of Constraints
Lack of both working capital and funds for long term investment	The lack of working capital for millers to purchase sufficient paddy at harvest time to store and process for year round raises operating costs. Limited capital precludes improvements in milling technology and expansions in milling capacity.
Low Paddy Quality	Mills contend with poor paddy quality, in terms of mixed varieties (low purity by variety) from farmers/traders and poor post harvest handling (due to poor drying facilities and inappropriate storage). This results in milled rice with a high percentage of brokens, low percentage of purity for aromatic, which in turn reduces profit and limits entry to high value export market.
Low Levels of Milling Technology	Commercial mills still use old equipment from Vietnam and China, which causes high brokens and inefficiencies in processing for export.
Limited Access to Markets	Cambodia rice millers have limited access to international markets due to high processing costs and the inability to produce large and consistent quantities of uniform appearing milled rice.
Production Costs	High production costs due to expensive electricity and fuel and the lack of milling efficiencies.
Major Constraints for Polishers/ Exporters	
High processing cost	Due to high electricity costs, most polishers use diesel engines for power, which causes higher processing costs if compared to neighboring countries.
Lack of Domestic Storage Facility	Private mills and rice polishers Also at port storage facility
Transportation Costs	Cambodia primarily transports by truck which has a higher cost than using a waterway. Containers for loading food are sometimes limited. High informal fees, which neighboring countries don't have.
Export procedures	Take long time and are costly
Limited capacity to make large sales	Due to financing limitations, most exporters/polishers can't accept large contracts that need to be fulfilled in short period. The larger mills only have a combined capacity about 350 tons/hr. Including 3 rice polishers, total polishing capacity is estimated at 375 tons/hr.

Table 2: Gross margin of large rice mills in Kandal province, 2012

Types of Products		Recovery (%)	Quantity (Tonnes)	Unit Price (Riels)	Value	Share
Expenses						
Paddies						
1	Aromatic		1.000	1.500.000	1.500.000.000	9,01%
2	Mixed		10.000	1.200.00	12.000.000.000	72,09%
3	IRR 66		1.500	1.050.000	1.575.000.000	9,46%
Sub-total			**12.500**		**15.075.000.000**	
Milling						
1	Fuel cost		12.500	70.000	875.000.000	5,26%
2	Labour		12.500	20.333	254.162.500	1,53%
3	Sack &	56%	7.000	20.000	140.000.000	0,84%
4	Tax		12.500	72	900.000	0,01%
5	Repairing		12.500	20.000	250.000.000	1,50%
6	Other		12.500	4.100	51.250.000	
Sub-total					**1.571.312.500**	
Total					**16.646.312.500**	100,00%
Revenue						
Milled						
1	Aromatic	56%	560	3.100.000	1.736.000.000	9,91%
2	Mixed	56%	5.600	2.000.000	11.200.000.000	63,95%
3	IRR 66	56%	840	1.700.000	1.428.000.000	8,15%
By-						
1	Broken	11%	110	1.800.000	198.000.000	1,13%
2	Broken	11%	1.265	1.400.000	1.771.000.000	10,11%
3	Bran	13%	1.625		1.056.250.000	6,03%
4	Husk	20%	2.500	50.000	125.000.000	0,71%
Total					**17.514.250.000**	100,00%
Gross Margin					**867.937.500** **$211.692**	**4,96%**

Source: Interviews by authors
Note: Mill active with capacity 9 tons/hr, processing at least 8-10 hr/day, and 26 days/month and year round. The milled rice prices calculated are for domestic rice with is 35% brokens. The mill has installed a rice husk gasifier, which can reduce fuel costs around $7 per ton.
Exchange rate R 4,050 = $1

Figure 3: Percentage of costs and returns of table 2

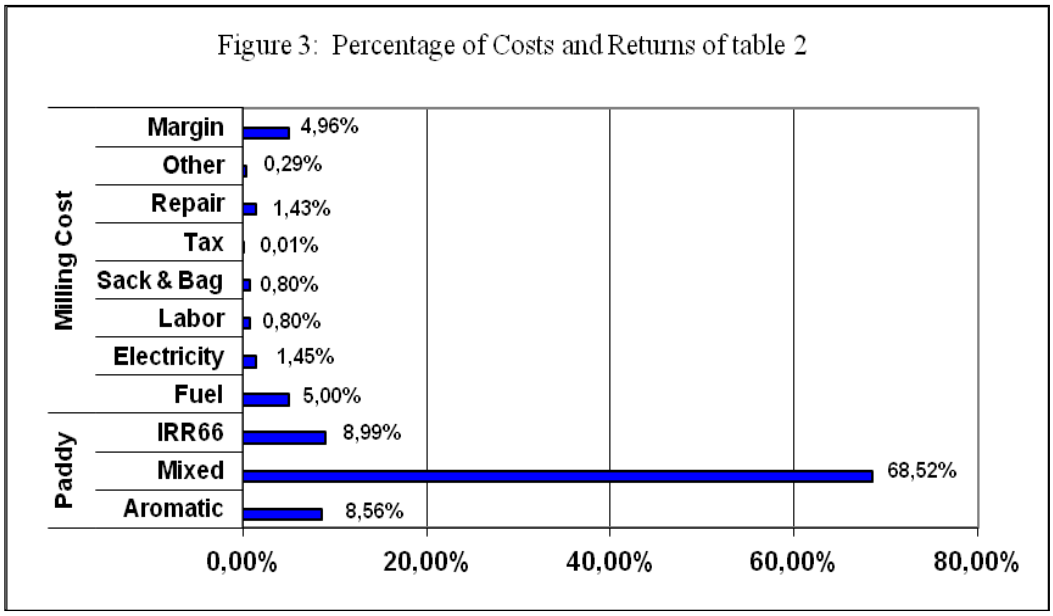


Figure 4: Percentage of costs and returns of table 3

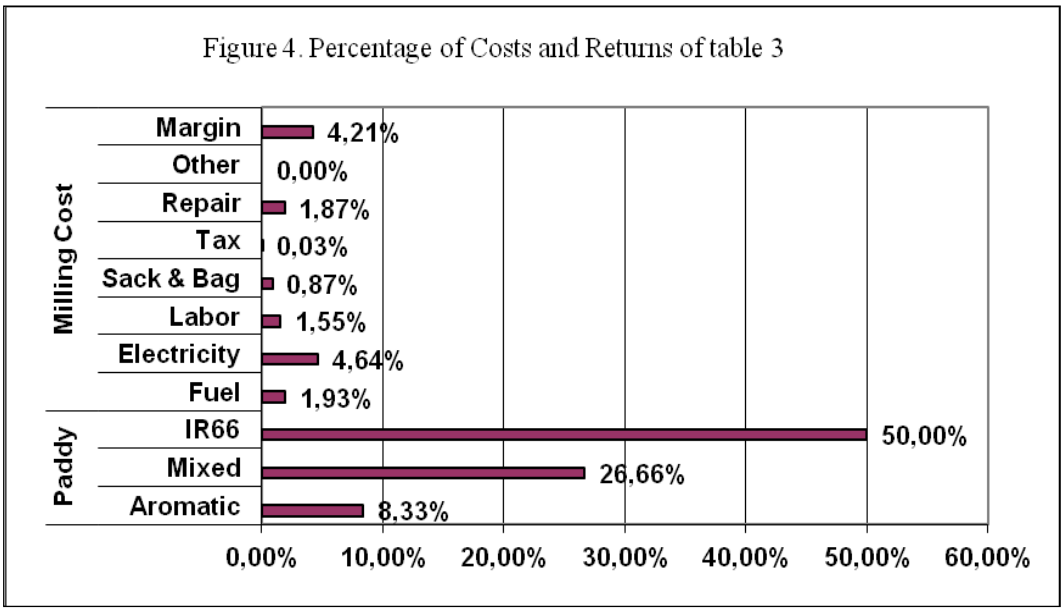


Table 3: Gross margin of large rice mills in Prey Veng province, 2012

Types of Products		Recovery (%)	Quantity (Tonnes)	Unit Price (Riels)	Value	Share
Expenses						
Paddies						
1	Aromatic		1.000	1.400.000	1.400.000.000	8,70%
2	Mixed		4.000	1.120.000	4.480.000.000	27,84%
3	IRR 66		8.000	1.050.000	8.400.000.000	52,19%
Sub-total			**13.000**		**14.280.000.000**	
Milling						
1	Fuel cost		13.000	25.000	325.000.000	2,02%
2	Electricity		13.000	60.000	780.000.000	4,85%
3	Labour		13.000	20.000	260.000.000	1,62%
4	Sack &	56%	7.280	20.000	145.600.000	0,90%
5	Tax		13.000	400	5.200.000	0,03%
6	Repairing		13.000	23.000	299.000.000	1,86%
7	Other cost		-	-	-	
Sub-total					**1.814.800.000**	
Total					16.094.800.000	100,00%
Revenue						
Milled						
1	Aromatic	56%	560	2.900.000	1.624.000.000	9,67%
2	Mixed	56%	2.240	1.800.000	4.032.000.000	24,00%
3	IRR 66	56%	4.480	1.700.000	7.616.000.000	45,33%
By-						
1	Broken	12%	120	1.800.000	216.000.000	1,29%
2	Broken	12%	1.440	1.400.000	2.016.000.000	12,00%
3	Bran	13%	1.690		1.149.200.000	6,84%
4	Husk	19%	2.470		148.200.000	0,88%
Total					**16.801.400.000**	100,00%
Gross Margin					**706.600.000** **$172.341,46**	**4,21%**

Source: Interviews by authors

Note: Large mill with capacity 10 ton/hr and operates less than 25 days/month and about 10 months per year. The milled rice prices calculated are for domestic rice with 25-35% brokens. The mill uses the combination of electricity and diesel engine.

Exchange rate R 4,050 = $1

Table 4: Gross margin of large rice mills in Battambang province, 2012

Types of Products		Recovery (%)	Quantity (Tonnes)	Unit Price (Riels)	Value	Share
Expenses						
Paddy						
1	Aromatic		5.000	1.540.000	7.700.000.000	56,32%
2	Mixed		3.000	1.250.000	3.750.000.000	27,43%
3	IR 66		1.000	1.100.000	1.100.000.000	8,05%
Sub-total			**9.000**		**12.550.000.000**	
Milling cost						
1	Fuel cost		9.000	55.000	495.000.000	3,62%
2	Electricity		9.000	20.000	180.000.000	1,32%
3	Labour		9.000	18.696	168.264.000	1,23%
4	Sack & Bags	54%	4.860	20.000	97.200.000	0,71%
5	Tax		1.900	1.000	1.900.000	0,01%
6	Repairing		9.000	20.000	180.000.000	1,32%
Sub-total					**1.122.364.000**	
Total Expenses					**13.672.364.000**	100,00%
Revenue						
Milled rice						
1	Aromatic	54%	2700	3.200.000	8.640.000.000	53,94%
2	Mixed	54%	1.620	2.100.000	3.402.000.000	21,24%
3	IR 66	54%	540	2.000.000	1.080.000.000	6,74%
By- Product						
1	Broken Rice A	13%	650	1.900.000	1.235.000.000	7,71%
2	Broken Rice	13%	520	1.350.000	702.000.000	4,38%
3	Bran	14%	1.260	680.000	856.800.000	5,35%
4	Husk	19%	1.710	60.000	102.600.000	0,64%
Total Revenue					**16.018.400.000**	100,00%
Gross Margin					**2.346.036.000** **$ 572.203,90**	**14,65%**

Source: Interviews by authors **Note**: This mill's capacity 18 tons/hr if full operation. Normally runs around 12 tons/hr. The milled rice prices calculated are for domestic market with 25-35% broken. The rice mill has rice husk gasifier. Exchange rate R 4,050 = $1

Figure 5: Percentage of costs and returns of table 4

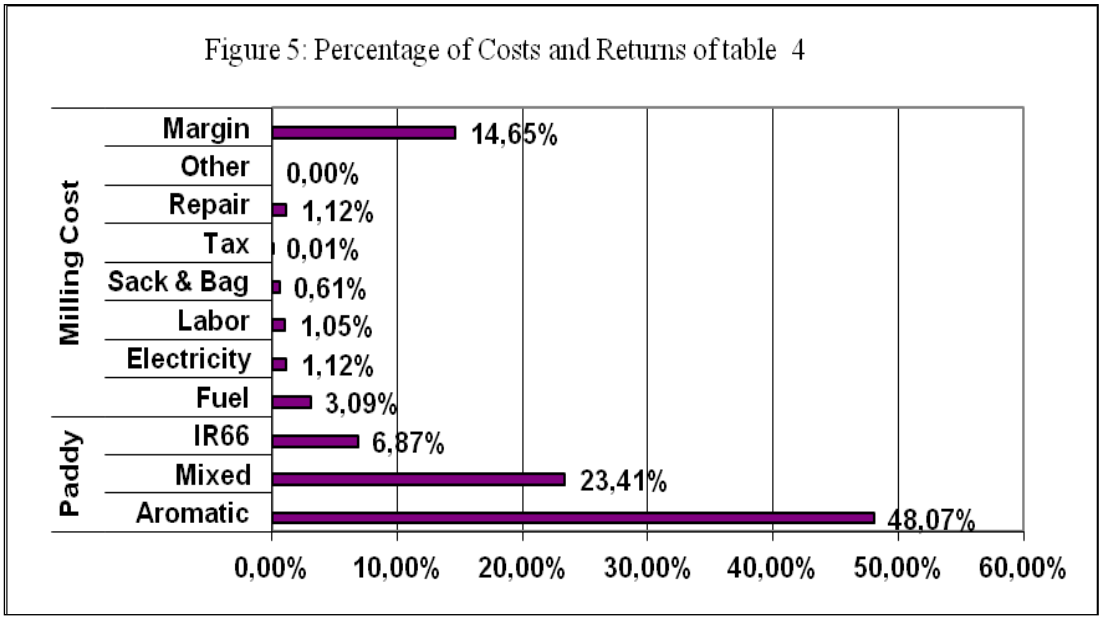


Figure 6: Percentage of costs and returns of table 5

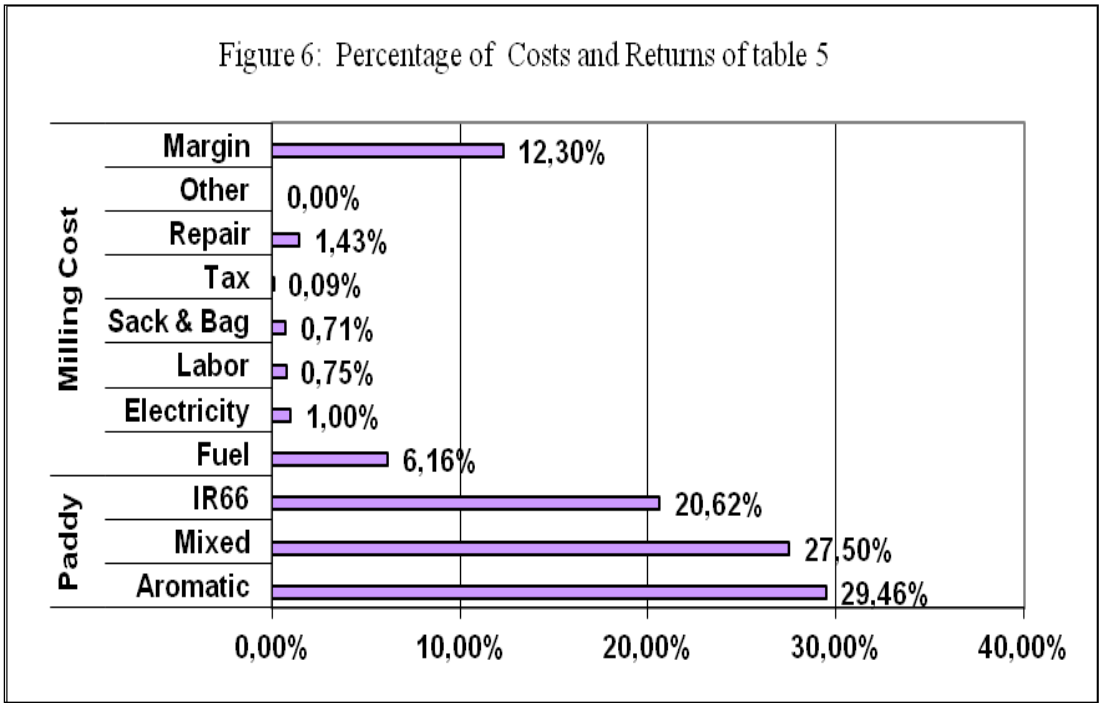


Table 5: Gross margin of commercial rice mills in Kandal province, 2012

Expenses						
Paddy	**Product**	**Recovery**	**Quantity**	**Unit**	**Value**	**Share**
1	Aromatic		600	1.500.000	900.000.000	33,59%
2	Mixed		700	1.200.000	840.000.000	31,35%
3	IR 66		600	1.050.000	630.000.000	23,51%
Sub-total			**1.900**		**2.370.000.000**	
Milling						
1	Fuel cost		1.900	99.000	188.100.000	7,02%
2	Electricity		1.900	16.000	30.400.000	1,13%
3	Labour		1.900	12.000	22.800.000	0,85%
4	Sack &	57%	1.083	20.000	21.660.000	0,81%
5	Tax		1.900	1.400	2.660.000	0,10%
6	Repairing		1.900	23.000	43.700.000	1,63%
Sub-total					**309.320.000**	
Total					**2.679.320.000**	100,00%
Revenue						
Milled						
1	Aromatic	57%	342	3.200.000	1.094.400.000	35,82%
2	Mixed	57%	399	2.200.000	877.800.000	28,73%
3	IR 66	57%	342	1.700.000	581.400.000	19,03%
ByProduct						
1	Broken Rice A	11%	66	1.800.000	118.800.000	3,89%
2	Broken	11%	143	1.400.000	200.200.000	6,55%
3	Bran	12%	228	700.000	159.600.000	5,22%
4	Husk	20%	380	60.000	22.800.000	0,75%
Total Revenue					**3.055.000.000**	100,00%
Gross Margin					**375.680.000**	
					$ 91.629,27	**12,30%**

Source: Interviews by authors

Note: This mill not so active with processing with capacity 3 tons/hr and working around 25 days/month and 8-10 months/year. The milled rice prices calculated are for the domestic market with 25-35% brokens. The rice mill uses large diesel engine to operate.

Exchange rate R 4,050 = $1

Table 6: Gross margin of commercial rice mills in Battambang province, 2012

Types of Products		Recovery (%)	Quantity (Tonnes)	Unit Price	Value	Share
Expenses						
Paddy						
1	Aromatic		250	1.540.000	385.000.000	44,23%
2	Mixed		200	1.250.000	250.000.000	28,72%
3	IR 66		150	1.100.000	165.000.000	18,96%
Sub-total			**600**		**800.000.000**	
Milling cost						
1	Fuel cost		600	66.000	39.600.000	4,55%
2	Electricity		600	6.000	3.600.000	0,41%
3	Labour		600	20.951	12.570.600	1,44%
4	Sack & Bags	54%	324	20.000	6.480.000	0,74%
5	Tax		1.900	500	950.000	0,11%
6	Repairing		600	12.000	7.200.000	0,83%
7	Other costs		-	-	-	
Sub-total					**70.400.600**	
Total					**870.400.600**	100,00%
Revenue						
Milled rice						
1	Aromatic	54%	135	3.000.000	405.000.000	42,10%
2	Mixed	54%	108	2.000.000	216.000.000	22,45%
3	IR 66	54%	81	1.900.000	153.900.000	16,00%
By- Product						
1	Broken Rice	13%	33	1.900.000	61.750.000	6,42%
2	Broken Rice	13%	46	1.350.000	61.425.000	6,38%
3	Bran	14%	84	680.000	57.120.000	5,94%
4	Husk	19%	114	60.000	6.840.000	0,71%
Total					**962.035.000**	100,00%
Gross Margin					**91.634.400** **$22.349,85**	**9,53%**

Source: Interviews by authors

Note: Commercial mill with capacity 1.8 tons/hr and not active in milling. Operates about 6-8 months per year. The milled rice prices calculated are for domestic market with 35% brokens.

Exchange rate R 4,050 = $1

Figure 7: Percentage of costs and returns of table 6

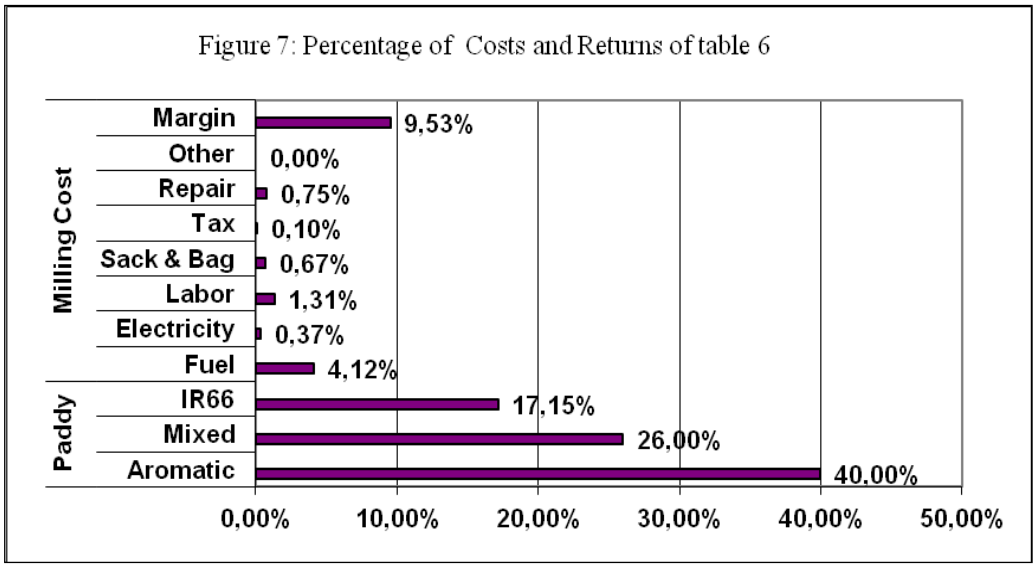


Table 7: Gross margin of village rice mills in Prey Veng province, 2012

Types of Products		Recovery (%)	Quantity (Tonnes)	Unit Price (Riels)	Value	Share
Expenses						
Paddy						
1	Aromatic		-	-	-	0,00%
2	Mixed		-	-	-	0,00%
3	IR 66		-	-	-	0,00%
Sub-total			**-**		**-**	
Milling						
1	Fuel cost		60	55.000	3.300.000	90,16%
2	Electricity		-	-	-	0,00%
3	Labour		-	-	-	0,00%
4	Sack &	54%	-	-	-	0,00%
5	Tax		-	-	-	0,00%
6	Repairing		60	6.000	360.000	9,84%
7	Other		-	-	-	
Sub-total					**3.660.000**	
Total					**3.660.000**	100,00%
Revenue						
Milled						
1	Aromatic	64%	-	-	-	
2	Mixed	64%	-	-	-	0,00%
3	IR 66	64%	-	-	-	0,00%
By-						
1	Broken	0%	-	-	-	0,00%
2	Broken	3%	1,80	1.350.000	2.430.000	
3	Bran	16%	9,60	680.000	6.528.000	69,70%
4	Husk	17%	10,20	40.000	408.000	4,36%
Total					**9.366.000**	100,00%
Gross Margin					**5.706.000**	
					$1.391,71	**60,92%**

Source: Interviews by authors

Note: Most village mills are the same capacity and service charges by taking bran and small broken rice. Capacity around 200 kg/hr. Operation depends on villagers' needs. Normally milling about 4-5 tons/month just for household consumption.Exchange rate R 4,050 = $1

Table 8: Gross margin of rice polishing in Phnom Penh, 2012

Types of Products		Recovery (%)	Quantity (Tonnes)	Unit Price (Riel)	Value	Share
Expenses						
Milled rice						
1	Aromatic	10	3.800	3.078.000	11.696.400.000	72,26%
2	White rice	10	2.200	1.580.000	3.476.000.000	21,48%
Sub-total			**6.000**		**15.172.400.000**	
Milling cost						
1	Fuel cost		6.000	60.750	364.500.000	2,25%
2	Electricity		6.000	-	-	0,00%
3	Labour		6.000	16.000	96.000.000	0,59%
4	Sack & Bags	87%	5.220	20.000	104.400.000	0,65%
5	Tax		6.000	8.000	48.000.000	0,30%
6	Repairing		6.000	6.000	36.000.000	0,22%
7	Transport		6.000	60.700	364.200.000	2,25%
8	Other costs		-	-	-	
Sub-total					**1.013.100.000**	
Total Expenses					**16.185.500.000**	100,00%
Revenue						
Milled rice						
1	Aromatic	87%	3.306	3.685.500	12.184.263.000	72.86%
2	White rice	65%	1.430	2.005.000	2.867.150.000	17.15%
By-						
1	Broken	10%	380	1.490.400	566.352.000	3.39%
2	Broken	25%	550	1.417.500	779.625.000	4.66%
3	Bran A	3%	114	972.000	110.808.000	0.66%
4	Bran B	10%	220	972.000	213.840.000	1.28%
Total Revenue					**16.722.038.000**	100,00%
Gross Margin					**536.538.000**	
					$130.862.93	**3.21%**

Source: Interviews by authors **Note**: This factory buying milled rice and re-processing for export with 5-10% brokens. Uses diesel engine to run; capacity 12 tons/hr. Exchange rate R 4,050 = $1

Table 9: Gross Margin of Rice Polishing in Phnom Penh, 2012

Types of Products		Recovery (%)	Quantity (Tonnes)	Unit Price (Riels)	Value	Share
Expenses						
Milled						
1	Aromatic	10	9.000	3.078.000	27.702.000.000	95,16%
2	White rice	0	-	-	-	0,00%
Sub-total			**9.000**		**27.702.000.000**	
Milling						
1	Fuel cost		9.000	-	-	0,00%
2	Electricity		9.000	36.450	328.050.000	1,13%
3	Labour		9.000	20.000	180.000.000	0,62%
4	Sack &	87%	7.830	20.000	156.600.000	0,54%
5	Tax		9.000	-	-	0,00%
6	Repairing		9.000	6.000	54.000.000	0,19%
7	Transport		9.000	60.750	546.750.000	1,88%
8	Other costs		9.000	16.000	144.000.000	0,49%
Sub-total					**1.409.400.000**	
Total					**29.111.400.000**	100,00%
Revenue						
Milled						
1	Aromatic	87%	7.830	3.624.750	28.381.792.500	92,85%
2	White rice	0%	-	-	-	0,00%
By-						
1	Broken	10%	900	2.187.000	1.968.300.000	6,44%
3	Bran	3%	270		218.700.000	0,72%
Total					**30.568.792.500**	100,00%
Gross Margin					**1.457.392.500**	
					$355.461,59	**4,77%**

Source: Interviews by authors
Note: This factory buying milled rice and re-processing for export with 5-10% brokens.
Uses diesel engine to run; capacity 12 tons/hr.
Exchange rate R 4,050 = $1

Annex 2: A Shinawatra Raises the Thai Rice Price Umbrella Again*

"Rice is not like either wine or oil. Unlike oil, which does not lose its value when it is not pumped ("produced"), rice is a renewable good... Rice is also not like wine whose vintage improves with age. Hold rice stocks too long and your outlets will be limited to animal feed or starch."

- Tom Slayton, 2001[36]

"Rice is coming out of the woodwork. Prime Minister Thaksin,...apparently believes that world rice export prices can be elevated by the formation of a rice exporters' cartel. While his government has unsuccessfully pushed this policy for several years now, Thaksin believes he can pull it off if only he devotes enough energy to the project (or finds the right minister to pull it off). We continue to believe that it is a fool's errand given the nature of the world market, quality problems arising from storing the rice for any length of time, and the relatively short cropping cycles... Thailand and Vietnam, however, are 'tigers,' not 'water buffalo' that can pull together. On top of centuries of rivalry, the two rice economies have different price structures and divergent interests. In the world rice market, the low cost producer is in the perennial position of trying to grab market share from the more established, high cost producer."

- Tom Slayton, 2005[37]

"Those who cannot remember the past are condemned to repeat it."

- George Santayana, 1905[38]

Running on a populist platform which prominently included reinstating a paddy mortgage scheme at prices which were far above prevailing market values, the Pheu Thai Party, ostensibly led by Yingluck Shinawatra, won the Thai general election held on July 3, 2011. Yingluck Shinawatra is a stand in for her fugitive, older brother, Thaksin Shinawatra - who served as prime minister from 2001 until 2006 when he was overthrown in a military coup.

At the time of the election, the government's rice policy was based on a price guarantee where farmers were paid the difference between market prices and a target of Baht 11,000 ton for top quality ordinary paddy ($364 at prevailing exchange rates).[39] The Pheu Thai promised fixed price supports of Baht 15,000/ton ($496) for the ordinary paddy and Baht 20,000/ton ($662) for the best grade of fragrant paddy, which were 50% and 67%, respectively above then prevailing prices. Above-market price supports

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* By Tom Slayton

[36] "The Outlook for Thai Rice in the New Millennium," by Tom Slayton. Paper presented at the Thailand Rice Convention 2001, Bangkok, Thailand, November 2001.

[37] "Thai Price Umbrella Keeps Competitors Smiling. The Outlook for World Trade," by Tom Slayton. Paper presented at the World Rice Conference 2005, Beijing, China, October 2005.

[38] "Life of Reason, Reason in Common Sense" by George Santayana. Scribner's, 1905.

[39] Paddy for making 100% B. All paddy prices referred to are based on this quality, which does not include fragrant or glutinous rice types, and is thus referred to as "ordinary".

were a proven vote getter for the Shinawatras among Thai rice farmers, which at 3.7 mllion households[40] accounted for a considerable share of the electorate. Thai rice exporters, however, warned that such huge support price hikes would propel Thai 100%B values to over $800 FOB, rendering Thai prices uncompetitive. With Thailand long established as the world's #1 exporter and accounting for over 30% of all international rice trade, Pheu Thai leaders believe that Bangkok can set world prices either directly or through the organizing of an exporters' cartel. Indeed, if only Vietnam's cooperation could be enlisted, overseas buyers would have to capitulate as the two origins have accounted for half of all the rice traded internationally. And, besides, they reasoned, Thai farmers deserve to earn more money even if there was some reduction in the export volume. Before examining the effects of the new policy, it is instructive to examine what happened the last time this policy was implemented.

The Thai have traveled this road before

The paddy pledging or mortgage scheme has been a key rice policy since its introduction in 1981. Under this policy, a farmer, rather than being forced to sell his crop at harvest time when prices are typically weakest, could mortgage his rice for three months either by delivering the produce to a participating rice mill or storing it in his own rice barn and receive a loan directly from the government's Bank for Agriculture and Agricultural Cooperatives.

Table 1: Thailand: Padddy Mortgage Price (Baht/ton)

	Wet Season		Dry Season
	Frgt 100%	Ordinary 100%	Ordinary 100%
2000-01	6,495	5,280	0
2001-02	6,500	5,330	4,975
2002-03	6,800	5,330	4,975
2003-04	7,000	5,330	5,900
2004-05	10,000	6,600	6,700
2005-06	10,000	7,100	7,100
2006-07	9,000	6,500	6,600
2007-08	9,300	6,700	14,000
2008-09	15,000	12,000	12,000
2009-10 1/	15,300	10,000	10,000
2010-11 1/	15,300	11,000	11,000
2011-12	20,000	15,000	15,000

1/ Years of price guarantee scheme.

Source: "Thailand Grain & Feed Annual" USDA, March 30, 2006 & March 20, 2012

[40] Source: Office of Agricultural Economics as reported in personal correspondence with USDA.

If during the loan period the market rises to a level that makes it profitable, the farmer can repay the loan in full plus interest and take title to his paddy. If not, he can walk away without repaying the loan. During the first two decades of its existence, the loan amount was always set substantially below the expected market. As such, only modest volumes entered the program. During the decade ending with the 1999/2000 main crop, only 1.2 million tons on average was annually pledged or less than 7% of the main crop.[41]

With the January 2001 election, the Thai Rak Thai Party led by Thaksin Shinawatra formed a broad-based coalition government which was insulated from parliamentary votes of no confidence. Under Thaksin, the paddy mortgage scheme was tranformed into a fixed price support and coverage was extended to the dry season crop. No longer was the paddy mortgage price set at below the expected market. The real innovation, however, came with the 2004/05 crop when the mortgage prices were hiked to far above-market levels, up almost 25% for ordinary and 43% for Jasmine paddy prices.[42]

Thaksin's move was part of an audacious plan to transform Thai politics from a system in which vote buying by politicians was common to a system where populist government policies were engineered to finance electioneering costs (and personal fortunes). Under the new system, a single champion was selected in each industry. For rice, the reported champion was President Agri Trading - a relatively small exporter and an owner of rice mills and warehouses.[43]

Under Thaksin, the paddy mortgage scheme was operated on a "pay to play" basis with only 10-15% of the rice mills in the kingdom participating.[44] Of course, if a rice miller paid serious money to join the program - which reportedly was split between the party and the local bureaucrats - then he had to engage in shenanigans to make up these costs (and usually then some). According to market participants, this included false use of farmer identifications to avoid farm sales limits, paper transactions, rather than paddy actually being physically delivered by farmers; claiming the paddy was a higher quality than it actually was; using the government stocks for the mill's commercial operations (and then replacing the stocks when inventory checks were held); and falsely claiming

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[41] This section relies heavily on the author's monitoring of the Thai market as owner and publisher of "*The Rice Trader,*" a weekly rice market intelligence publication, which involved extensive field travel in Thailand during 2001-06. It additionally is based on "The Political Economy of Thailand's Rice Price and Export Policies in 2007-2008," by Nipon Poapongsakorn contained in "The Rice Crisis" edited by David Dawe, published by the FAO and Earthscan 2010.

[42] These huge price increases occurred despite the government having unsold stocks of 2.25 million tons on November 1, 2004. The increase was made in the lead up to parliamentary elections in February 2005 and helped make President Agri's May 2004 stock purchase much more profitable.

[43] The managing director of President Agri was Mr. Apichat Chansakulporn. Prior to Thaksin's election, President Agri Trading never exported more than 300,000 tons in a single year, but it was the second largest exporter in 2004, credited with almost 1.7 million tons. Source: Thai Rice Exporters Association (TREA). The actual ownership of the firm was the subject of widespread speculation. Poapongsakorn notes that "the real owner of the company is believed to be the wife of an influential politician." - *op. cit.* Poapongsakor

[44] *ibid.*

Table 2: Thailand: Paddy production and quantities pledged, 1988/89 to present (MMT)

	Wet Season			Dry Season			Total		
	Prod'	Pledge	As %	Prod'n	Pledge	As	Prod'n	Pledge	As %
Avg '90/91-	16.87	1.57	9.2	2.54	--	--	19.41	1.57	2.54
Avg '95/96-'99/00	18.40	.84	4.6	4.63	--	--	23.02	.84	4.63
2000-01	19.79	1.62	8.2	6.06	.15	2.5	25.85	1.77	6.8
2001-02	22.41	4.30	19.2	5.62	1.07	19.0	28.03	5.37	19.2
2002-03	21.57	3.54	16.4	6.43	2.04	31.7	28.00	5.58	19.9
2003-04	23.14	2.84	12.3	6.33	.12	1.9	29.47	2.96	10.0
2004-05	22.65	5.30	23.4	5.89	.80	13.6	28.54	6.09	21.4
2005-06	23.36	5.30	22.7	6.75	2.17	32.2	30.11	7.47	24.8
2006-07	22.84	1.81	7.9	6.80	1.64	24.1	29.64	3.44	11.6
2007-08	23.31	.24	1.0	8.79	4.18	44.8	32.10	4.42	13.8
2008-09	23.24	6.06	26.1	8.42	5.47	65.0	31.65	11.53	36.4
2009-10 1/	23.15	.08	.3	8.86	.06	.7	31.51	.14	.4
2010-11 1/	24.34	*	0	10.14	0	0	32.51	*	0
2011-12 2/	20.36	6.95	34.1	11.25	11.81	105.0	31.61	18.76	59.4

* = 5,547 tons

1/ Years of price guarantee scheme.

2/ As of August 31, 2012

Source: Office of Agricultural Economics & Department of Internal Trade. 1990/91- 2001/02 by Poaponsakorn *op cit.* Subsequent pledging numbers thru 2011 from "Thailand Grain & Feed Annual," USDA, March 20, 2012. Production from Agricultural Statistics of Thailand 2010, FAO's "Rice Monitor" January 2012, and personal communications with USDA

that the stocks were larger than they actually were. (In one instance publicized in the press, a rice stack had been built around a truck.)

"In 2006 there were more than 200 millers who were charged by the PWO [Public Warehouse Organization] for violation of contracts and fraud, and 50 millers were blacklisted."[45]

[45] *ibid.* The Public Warehouse Organization was the commercial trading arm of the Ministry of Commerce.

During the Thaksin years, the government became the biggest player in the rice market, buying one out of every five tons produced - much of it low quality rice. The government's efforts to find overseas buyers proved notably unsuccessful, in part because foreign government demand for low quality rice was limited. Also contributing to the lack of success was the large gap between Thai export prices and those of Vietnam and other competitors and Bangkok's reluctance to be seen as selling the rice below prevailing local values. To help bridge the gap between Thai and world prices, the Thai government made repeated attempts to create a rice cartel, initially called the

Council on Rice Trade Cooperation (CRTC), but later as the Organization of Rice Exporting Countries (OREC). Despite serial efforts, nothing ever resulted from these attempts - notwithstanding lip service given to the idea by Vietnam and others.

Thailand's competitors were happy to see the Shinawatra government raise a price umbrella which protected them from Thai exporters while they raided Thai customers. Strangely the Thai failed to understand that they are bearing the burden of holding that large golf umbrella during market gusts, while its competitors crowded under it, protected from the elements.

With the government buying over 6 million tons in 2004/05 and 7.5 million tons the following year, the following additional adverse consequences occurred:

- Farmers were encouraged to grow low quality rice for which the only market was the government;
- Large numbers of privately-owned paddy markets in the lower North and Central Plains (which had provided price transparency and warehousing for farmers) and local traders were driven out of business;
- Many former paddy market owners (and other influential individuals) invested in large rice mills who had only a single customer - the Thai government, leading to a serious over-capacity in the milling industry[46] and creating losses for those mills not participating in the mortgage program;
- The quality of Thai Jasmine exports suffered as mixing with an HYV (*Patum Thani 1*) became widespread; and, Thai export prices were driven up to uncompetitive levels resulting in exports being slashed from 9.8 million tons in 2004 to 7.5 million tons the following year and less than 7.2 million tons in 2006 as markets were lost to competitors.

With the government doing more buying from Thai farmers than selling either to local exporters or foreign governments, the "rice mountain" grew quickly. Rather than prudently managing the quality of these holdings, the Thai government held on to the inventories until quality problems arose. This then justified selling these stocks at below market prices. In December 2003, for example, the government sold over 1 million tons of its stocks at firesale pices. The bulk of the rice - 687,000 tons - was 5% brokens from

[46] Even though production was leveling off, milling capacity is estimated to have doubled in the five years ending in 2005 as numerous very large mills were constructed to take advantage of milling rice for the government.

the 2001/02 crop, which was sold at an average price of $163/ton.[47] The sale of the government stocks was made so cheaply that these stocks were dubbed "Siam Fighting Rice" and Thai rice became competitive, once again, in the low quality rice markets overseas.[48]

President Agri's track record

Where five Thai exporters were successful in the late 2003 sale, the government held a snap tender on May 3, 2004 putting its entire remaining inventory of 2 million tons up for sale. According to trade reports at the time, most of the exporters submitted prices entailing a discount to the cash market of about $15/ton. President Agri, the largest buyer on the December tender, shocked the trade by offering to buy virtually the entire quantity - 1.78 million tons - at relatively high prices.[49] This set the trend for subsequent government rice tenders. In 2005, President Agri again virtually cornered the market, garnering 938,000 tons or 84% of the 1.12 million tons sold in public tenders. At the end of January 2006, another tender was held for .7 million tons and almost the entire quantity was, once again, awarded to President Agri. While a May tender for fragrant rice resulted in a large number of firms being awarded small tonnages, President Agri booked almost all of the 305,000 tons awarded in the June tender.

Actual stock levels held by the Thai government were (and are today) shrouded in secrecy. More importantly, there has been no authoritative accounting of the losses incurred in the paddy mortage scheme during Thaksin's years as prime minister. "The politicians have incentives to make the programme as opaque as possible because it has become one of the most effective means of using public money to win re-election." In 2005/06 - the last year of the program before the military deposed Thaksin, one estimate placed the net cost of the program at Baht 19.1 billion (over $490 million at prevailing exchange rates).[50] USDA, while using a figure half that size, estimates that losses during the five years ending in 2008/09 exceeded Baht 83.3 billion or $2.6 billion.[51]

Following a military coup in September 2006, a civilian caretaker government was installed which effectively lowered the price farmers could receive for the 2006/07 wet season crop by approximately 10% (which slashed pledgings by almost 2/3) and began to liquidate the rice mountain of over 5 million tons.[52] Reflecting improved market prices, the government modestly raised the mortagage prices for the 2007 dry season crop by Baht 100/ton and then the 2007/08 main crop by an additional Baht 200/ton.[53] In February 2008, Thaksin's Phak Palang Prachachon (PPP) party came back into

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[47] There has been a long history of alleged shady dealings between some rice exporters and Thai politicians. In the past, any exporter with a large enough bribe could be pointed to the right door to get the decision he needed. During the Thaksin years, however, exporters complained that only one firm could walk through those doors.

[48] In May of 2004, the government sold an additional 1.8 million tons, but the bulk of this rice was new crop 5%, which was sold at $240 before a "marketing fee" of $4.50 was deducted.

[49] These sales both eliminated "paper" stocks (rice which was on the books as having been pledged, but did not exist physically) held by influential rice mills and. provided lucrative opportunities when the rotated stocks (which were still in good condition) were sold as poor quality "old crop" rice.

[50] *op. cit.*

[51] "Thailand: Grain and Feed Update," USDA August 2, 2012.

[52] This included 559,000 tons which had originally been sold to President Agri, but which had declared bankruptcy in August 2007. Of the estimated inventory of nearly 5.2 million tons on January 2007, Poapongsakorn reports the government sold
2.86 million tons in 2007. *ibid.*

[53] The 2007/08 mortgage price for Jasmine was raised by Baht 300/ton.

power,[54] having won the December general election. The new government nearly doubled the dry season mortgage price, resulting in a 2.6 million ton increase in the volume pledged. Perhaps because of the polarized political environment, the new PPP government did not capitalize on the 2007/08 rice crisis to sell off its burdensome

stocks of 2.1 million tons held in December 2007.[55] After the first prime minister was forced to resign in September, he was succeeded by Thaksin's brother-in-law Somchai Wongsawat. The new prime minister trimmed the paddy mortgage price for ordinary paddy by 14%, but announced the new Jasmine prices would be 61% above year-earlier levels.

Back to the Present

The Constitutional Court in December 2008 removed Somchai Wongsawat from office and banned the three government parties for election fraud. The opposition party, the Democrats, formed a new coalition government under the leadership of Abhisit Vejjajiva. With the "rice mountain" having reached towering proportions, the government replaced the mortgage scheme with a price guarantee policy and began to liquidate the stocks. Under the new policy, Thai prices would be allowed to fluctuate with the world market with Thai farmers receiving the difference between the target price (which for ordinary paddy was set 17% below the last mortgage price). The Abhisit government remained in power for two and a half years, before being turned out in the July 2011 election. By the end of its tenure, it reportedly had reduced the government's rice stocks to around 2.0 million tons.

On October 7, 2011, the Yingluck government made good on its campaign promise of high rice prices for Thai farmers with the start of the new paddy mortgage scheme. Unlike previous mortgage scheme efforts, there was no overall cap on the quantity of rice that the government was willing to accept - the government pledged to buy unlimited quantities.[56] Thanks to severe flooding which caused both disruption and crop losses, "only" a record 6.95 million tons was pledged during the wet season or main crop - over one-third of the total harvest. This not insubstantial volume was, however, dwarfed by deliveries during the 2012 dry season campaign. At the end of August, with only a with only a few weeks remaining in the first year of the program, almost 12 million tons had been delivered to the government or .5 million tons more than the officially forecast crop of 11.2 million tons and more than double the previous record set in 2009. During its first year of operation, the Yingluck Government has so far made outlays to farmers totaling almost $9.7 billion for deliveries of 18.8 million tons or 7.2 million tons more than the previous record set in 2008/09. When one adds in the costs for milling, transporting this rice from the rice mills to government warehouses, storage, fumigation, financing, etc, the government's tab for holding this rice for twelve months swells to around $11 billion.

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[54] The Thai Rak Thai had been dissolved by the Constitutional Court for electoral law violations.
[55] *ibid.*

[56] There were limits on how much each rice household could deliver, but these "restrictions" had been liberally established by the Abhisit government at 25 tons Additionally, market observers indicate that rice "households" could be restructured to avoid these limits - just as U.S. farmers have been able to do.

Despite the huge volumes recorded as delivered to the government, large price gaps have persisted between the mortgage prices and the lower, officially recorded wholesale values. Despite ostensibly all of the dry season crop entering the program, a price gap of Baht 4,270/ton ($136) persisted from late May through early July, which then widened to Baht 4,750 ($152) by the end of August as deliveries declined because most farmers had exhausted their pledging rights. This suggests one of three things: a) many farmers were not actually getting the full price promised by the government; b) significant tonnages of pledged paddy were not actually physically delivered; and/or c) there was considerable leakage of the paddy out the back door of the participating mills. In point of fact, it is likely that all three factors are at work.

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Table 3: Thailand: Paddy Pledged, 2011/12 Crop (TMT)

	Wet Season				
Month	**Non-Frgt**	**Fragrant**		**Glut.**	**Total**
		Jasmine			
Oct			3		363
Nov	786	561	220	50	1,616
Dec			98	135	2,627
Jan	474	699	19	124	1,317
Feb	274	446	11	126	856
		Dry Season			
Mar	2,189	0	48	0	2,237
Apr	2,856	0	46	38	2,940
May	2,490	0	16	161	2,667
Jun	1,351	0	10	93	1,454
Jul	556	0	4	6	566
Aug	1,936	0	8	4	1,948

* = Less than 500 tons

Note: Some months estimated due to incomplete published data

Source: Department of Internal Trade

When asked about the gap, one market observer quipped "it's the rice mill's moisture meter." While the prices reported by the Thai Ministry of Commerce are also basis 15% m.c., the remark under scores the bargaining power of the rice mills *vis-a-vis* the farmers. Interviews with market observers indicate that the malfeasance in the revived program dwarfs that of the Thaksin years with wholesale cheating on the type, weight, and quality of the rice being delivered to the government, e.g. ineligble old crop being delivered instead of new, Patum being substituted for Jasmine, Cambodian and Vietnamese rice, etc.

Under the current scheme, millers of ordinary paddy are required to deliver 459 kg of milled rice and 161 kg of brokens for every every tone of of paddy milled. At 62%. this milling rate is very generous as USDA indicates an average milling rate in Thailand of 66%, allowing the participating miller to keep 40 kg of rice of rice as extra profit.[57] Using the official conversion, the Thai government has secured 11.7 million tons of milled rice from the 2011/12 harvest - or about three-fifths of the total crop. When the carryover stocks from the Abhisit era are included, this brings the total to 13.7 million tons. The Yingluck government, like others before it, has made "silent" negotiated sales to some of the Thai exporters. To what extent it has sold off sizable tonnages of either its old crop milled rice stocks or those secured since October is unknown, but the total is believed by the trade to be about 1 million tons.

Prior to the implementation of the new paddy mortgage scheme, Thai exporters argued vehemently that the resulting higher export prices would decimate overseas sales. The new government confidently dismissed these concerns, but these fears have proved to be well-founded. With India in September, 2011 ending its ban on exports of non-Basmati rice (which had been put in place in 2008), Asian export prices did not long follow Thai prices higher.

[57] Similarly generous milling rates are used for the other qualities - 59.6-60.5% for aromatic varieties and 55.1% for glutinous rice.

Table 4: Thailand: Exports by grade (TMT)

	White Rice						Parboiled	Other	Total
	High Quality		Medium	Low	Brokens				
	Frgt	Non-Frgt	Quality	Quality	Frgt	Non-Frgt			
Avg									
'05-09	1,777	2,123	325	413	839	358	2,259	150	8,506
2008	1,741	3,121	185	185	694	419	2,753	428	9,946
2009	1,779	1,208	71	71	787	515	2,877	518	8,507
2010	1,606	2,252	66	66	688	193	3,170	354	8,693
2011	1,527	3,169	326	326	786	271	3,432	401	10,624
Jan-Jun									
2011	681	2,254	275	184	446	155	2,112	218	6,316
2012	591	584	254	413	243	8	1,215	135	3,440
%CHG	-13	-74	-8	**	-46	-95	-42	-38	-46

1/ Includes brown and glutinous rice ** = Greater than 100%

Note: High quality - less than 10% brokens, medium quality - 10-20% brokens, low quality - more than 20%

Source: Thailand Board of Trade

Where Thai exports had been averaging just under 1 million tons each month in the year leading up to the start of the new mortgage scheme, during the 9 months ending in June 2012 average export loadings plummeted to below 563,000 tons. Indeed, calendar year shipments at mid year were off 46% to only 3.4 million tons.[58] It is not clear if the Yingluck Government actually believes it, but it persists in claiming that Thai sailings will pick up significantly in the second half of the year as India and Vietnam "run out" of rice to export and world prices jump significantly. Up until recently it insisted that the initial export target of 9.5 million tons would be achieved,[59] but has since trimmed its forecast to 8.5- 9.0 million tons.[60]

[58] Thailand's exports as of August 31, 2012 totaled 4. million tons, off 3.8 million tons or 46% from the same period one year earlier. Source: Department of Internal Trade, Ministry of Commerce.

[59] There currently are no signs of this happening. Vietnam has harvested a bumper summer-autumn crop and VFA reports that there are relatively large stocks in exporters' hands. As former TREA president Chookiat Ophaswongse noted, reaching the Thai government's export target would require monthly exports to average over 1 million tons during the second half of the year, where likely volumes will only be half of that level. Source:
Bangkok Post June 29, 2012.

[60] "Commerce Ministry seeks Bt260 bn to bolster rice pledging" The Nation August 14, 2012.

High quality rice exports slashed

Thai exports to every region have experienced double digit declines this year. The region experiencing one of the smallest decline was Africa, thanks to relatively resilient sales to Nigeria. Even this "success" masks a more troublesome picture as the Thai share of this market was halved to 44% thanks to very heavy purchases of Indian parboiled rice. (Nigeria's overall record-paced imports reflect the implentation of a previously announced increase in import duties which prompted heavy deliveries at the lower tariff).

Prior to the surge in Nigerian demand for Thai rice beginning in March, Indian parboiled prices averaged as much as $137 cheaper than Thai. But with the renewed demand, the premium for Thai parboiled zoomed to an average of $211 during May-June.[61] Thai sales of parboiled rice fell sharply to South Africa and other buyers such as Saudi Arabia and Yemen.

Almost three-fifths of the nearly 2.9 million decline in exports through June was the result of lower sales of high quality non-fragrant white rice. Central to this decline was the swoon in sales to the Middle East where purchases from India surged. Thai exports to Iran virtually dried up, resulting in a more than a quarter of a million ton loss to Thai exporters. Liftings by Iraq fell by over 285,000 tons. High quality white rice sales to Asian customers, such as China, Indonesia, Malaysia, and the Philippines also declined by 72,000 tons, 291,000 tons, 115,000 tons, and 137,000 tons, respectively, as the premium for Thai 100% B over Viet 5% has averaged $137 per ton during January-June 2012.

[61] Unless otherwise indicated, all FOB prices are taken from Live Rice Index - http://livericeindex.com/

Table 5: Thailand: Total exports (TMT)

COUNTRY	2010	2011	Jan-Jun		
			2011	2012	%
AMERICAS	490	495	248	191	-23
E.U	355	399	218	112	-49
F.S.U.	67	55	31	11	-65
MIDDLE EAST	1,250	1,375	1,076	526	-51
of which:					
Iran	119	278	275	2	-99
Iraq	503	627	512	226	-56
AFRICA	4,452	4,730	2,422	1,803	-26
of which:					
Ivory Coast	512	466	198	88	-56
Nigeria	1,870	1,704	914	926	1
Senegal	239	229	172	80	-53
South Africa	569	551	263	138	-48
ASIA	2,345	3,540	2,310	770	-67
of which:					
Bangladesh	141	737	683	*	-100
China	264	268	158	56	-65
Hong Kong	221	224	110	94	-15
Indonesia	277	915	577	281	-51
Malaysia	183	331	171	40	-77
Philippines	510	186	147	*	-100
Singapore	156	204	91	78	-14
TOTAL	8,989	10,624	6,316	3,440	-46

*Less than 500 tons

Source: Thailand Board of Trade as adjusted by Slayton & Associates

Fragrant rice, like other luxury goods, fetches a high price because it is more expensive to produce and is relatively scarce. Price it too high and knockoffs begin to surface. Jasmine rice is just such a good. Exports of Thai fragrant rice, which are destined primarily to Asian markets had already been under pressure from Vietnam before the

implementation of the new policy. Exports had already peaked at over 2.1 million tons in 2007, including just under 1.8 million tons of Jasmine and .3 million tons of Patum Thani 1 - a fragrant HYV. Facing stepped-up competition from Vietnam, Thai fragrant exports during the next two years averaged just under 2.0 million tons before falling to under 1.9 million and tumbled almost 10% last year to 1.7 million tons. As indicated in the table above, this trend is continuing in the current year. Current crop Jasmine 100% B is presently valued at $1,020/ton vs $620 for Viet fragrant 5%.

Table 6: Thailand: Exports of Jasmine by grade (TMT)

Year	High Quality	Medium Quality	Brokens	Brown	TOTAL
Avg '05-09	1,649	17	839	46	2,574
2009	1,794	21	781	33	2,626
2010	1,741	17	694	47	2,499
2011	1,532	13	783	29	2,356
Jan-Jun					
2011	684	9	444	16	1,152
2012	591	2	243	13	859
% CHG	-14	-77	-45	-17	-25

Note: High quality refers to less than 10% brokens.

Source: Thailand Board of Trade

While Vietnam only began exporting fragrant rice in 2000, its exports mushroomed to over 160,000 tons during 2008-09 and topped 220,000 tons last year.[62] Where one-fourth of the Viet fragrant has in recent years had been shipped to Africa where consumer purchasing power is more limited, with prices now $400/ton cheaper than Thai Jasmine, consumer acceptance in Asian markets such as China, Hong Kong, and Singapore is quickening.

According to the Vietnamese exporter association, Viet fragrant exports at midyear exceeded a quarter of a million tons.[63] While it may not "be as good" as Thai Jasmine, it is "good enough" - given the price differential.

[62] Vietnam does not publish its detailed rice export data by grade/and destination. As such, there can be significant variations between observed sailings and "official" data.

[63] "Gov't to purchase, stockpile rice from farmers" SGGP July 6, 2012

Table 7: Vietnam: Fragrant exports (TMT)

	Rice	Brokens
2008	164	11
2009	162	47
2010	222	17
2011	438	34

Source: Vietnam Food Association

High prices have also taken a toll on consumer demand for Thai fragrant brokens, which also peaked in 2007 at over 1.0 million tons. Overseas sales of Thai fragrant brokens, about 85% of which destined for Africa, have been particularly hard hit this year - declining 49% through June. With FOB prices averaging over $600/ton from late March through the end of June, Thai fragrant prices have simply become too expensive for many African consumers.

Future dim for Thai exporters and taxpayers

Allowing for 1 million tons of "silent" sales to the trade, the Thai government is sitting on 12.5 million tons of rice - almost 2 million tons more than last year's record exports and the equivalent of over one-third of world rice trade. While the government would dearly love to sell these stocks in an orderly fashion, it has dallied too long.[64] Its Government-to-Government sales efforts, for example, have been largely unsuccessful because of the high prices sought by the Thai.

Three things are clear. First, milled rice does not store well in the tropics. Second, unutilized warehouse space is shrinking by the day. Third, farmers can be expected to maximize plantings of higher yielding rice - at the expense of varieties producing better quality rice, adding to the rice made available to the government.

The Thai government has already announced that the paddy mortgage scheme will continue for a second year at these same elevated price levels, but important details, which could limit the pledged quantity by individual farmers have not been announced. Farmers, though, are expected to respond enthusiastically to the high prices with a record main crop of 25.9 million tons officially forecast, up 3 million tons from last year's flood-reduced harvest and besting the previous high by 1.6 million tons.

[64] The government announced on August 1, 2012 that it intended to start selling its stocks. The first tender was only held four weeks later on August 27, 2012 for 753,000 tons. "Thai govt to offer 753,000 tonnes rice from stocks" Reuters August 20, 2012. Awards for only 233,000 tons were made on September 4 - almost five weeks after the initial plan was announced. "Thailand agrees sale of 232,595 MTS of Intervention Stocks" Live Rice Index September 4, 2012.

Anecdotally, it is reported that some farmers are planting low quality, short duration varieties requiring no more than 75 days growing time.

While many private companies are rushing to build warehouses, these efforts are coming too late to ease the government's immediate problem of a wet season harvest which will begin in less than a month. The size of the inventory that must be liquidated in the next several months is so huge - probably 5 million tons in a 32 million ton world market - that it almost certainly will need to be sold through public auctions at fire sale prices. How fair and transparent these sales will be remains to be seen. Will Siam Indica, the successor firm to President Agri, play an out-sized role?[65] In order to attract buyers, this rice will have to be priced at levels that are competitive with Vietnam and India. This, in turn, is likely to depress world prices by as much as $100/ton, further exacerbating the losses to the Thai exchequer. The Thailand Development Research Institute conservatively forecasts that the government could lose $3.5 billion once these holdings are liquidated or $.9 billion more than all of the losses incurred for the 2004/05 through 2008/09 crops.[66] Losses in the second year of the program can be expected to escalate even further given the likely quality deterioration of this year's unsold inventory.[67] The govermnent has budgeted $13 billion for the 2012/13 campaign.[68] How long will the kingdom be able to continue on this course before international bankers in London, Geneva, and New York start to question Thailand's financial strength?

In the short run with the current rice policy, it's clearly better to be in the Thai warehouse business than in exporting Thai rice.[69] With their export infrastructure capable of handling two-thirds more volume than is currently being used, their customer base being under-served, and cash-flow needs predicated on more "normal" export volumes, it is hardly surprising that many of the larger Thai rice exporters have started to sell Vietnamese and Cambodian rice and are considering investment opportunities in Cambodia, Myanmar, and Vietnam. Indeed, Asia Golden Rice, the kingdom's largest

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[65] The trade reports that Siam Indica plays both a key advisory role to the Yingluck government and operates as the sole channel for those seeking to purchase government stocks through "silent" sales.

[66] This estimate is based on 10.4 million tons being sold with only a 10% impact on world prices or $40/ton for white rice. Personal communications with Dr. Poaponsakorn. Actual losses are likely to closer to $5 billion as holdings are now closer to 12 million tons (including at least 1 million tons of old crop) and the impact on world prices will likely be $100/ton.

[67] "The TDRI estimates paddy mortgage scheme during 2011/12 will end up costing the country 70-100 billion baht in export revenue. However, an additional 80-90 billion baht worth of damage is likely if the government holds onto the stocks so long that quality suffers. If the rice is stored longer than two years, then even more damage can be expected." "Pledging 'heavy burden'" Bangkok Post, May 21, 2012

[68] "DSI probes graft allegations in govt's rice pledging scheme" The Nation August 17, 2012

[69] According to trade sources, upcountry storage is so limited that exporter godowns are being rented. Indeed, even the silos of the two largest exporters are holding milled rice stocks owned by the government. Despite the current severed over-capacity, in the Thai rice milling industry, the trade also reports that there is a renewed boom in building new rice mills, especially by those who are politically well-connected. As a result, the trade estimates that there is three times as much milling capacity as there is rice produced in Thailand.

rice exporter, has already started construction on a large rice mill in Cambodia and others are expected to soon follow.

Annex 3: Trade Tables

Table 1: China: Rice imports by origin (TMT)

DESTINATION	Avg '05-09	2008	2009	2010	2011	Jan-Jun 2011	Jan-Jun 2012	Jan-Jun % CHG
TOTAL	468	296	338	366	578	354	1,178	**
of which:								
Laos	6	4	17	7	7	4	4	-2
Pakistan	*	*	*	*	9	2	281	**
Thailand	439	286	317	299	326	197	73	-64
Vietnam	22	1	3	56	234	149	810	**

* = Less than 500 tons

** = More than 100%

Source: World Trade Atlas

Table 2: EU 27: Rice imports by origin (TMT)

DESTINATION	Avg '05-09	2008	2009	2010	2011 Qty	2011 % CHG vs '05-09	2011 Share
NORTH AMERICA	148	144	78	80	112	-24	8
U.S.	135	116	74	79	110	-18	7
SOUTH AMERICA	239	285	337	235	347	45	23
Argentina	9	11	20	2	64	**	4
Brazil	18	35	35	10	86	**	6
Guyana	107	108	132	135	68	-37	5
Suriname	19	18	24	31	14	-27	1
Uruguay	85	113	125	58	115	35	8
Egypt	106	61	51	92	52	-51	4
ASIA	810	1,005	911	818	954	18	65
Cambodia	5	3	12	39	122	**	8
India	262	273	225	220	215	-18	15
Pakistan	126	189	135	176	192	53	13
Thailand	380	483	465	353	381	0	26
Vietnam	27	44	64	21	25	-5	2
TOTAL	1,312	1,520	1,386	1,229	1,478	13	100

** = More than 100% **Source**: World Trade Atlas

Table 3: Russia: Rice imports by origin (TMT)

DESTINATION	Avg '00-04	Avg '05-09	2008	2009	2010	2011 Qty	2011 % CHG vs '05-09	2011 Share
AMERICAS	9	10	10	24	11	11	10	6
of which:								
U.S.	8	3	2	1	2	3	0	2
Uruguay	0	5	6	13	8	6	20	3
E.U.	4	4	2	2	3	2	-50	1
C.I.S.	17	20	19	2	12	*	-100	0
of which:								
Kazakhstan	17	20	19	2	12	0	-100	0
Egypt	8	7	3	1	1	0	-100	0
ASIA	379	254	239	200	195	162	-36	-8
of which:								
Myanmar	1	*	0	*	9	17	**	10
Cambodia	0	0	0	0	2	16	**	9
China	175	70	32	35	16	7	-90	4
India	28	25	8	*	*	1	-96	1
Pakistan	4	16	2	18	46	30	88	17
Thailand	44	78	141	65	52	41	-47	23
Vietnam	127	65	55	82	71	50	-23	28
TOTAL	41	294	273	229	222	176	-40	100

* = Less than 500 tons

** = More than 100%

Source: World Trade Atlas

Table 4: Thailand: Total exports (TMT)

DESTINATION	Avg '00-04	Avg '05-09	2008	2009	2010	2011	Jan-Jun 2011	Jan-Jun 2012	%CHG
AMERICAS	583	493	552	539	490	495	248	191	-23
of which:									
U.S.	295	392	409	445	392	376	185	164	-11
E.U	255	409	581	450	355	399	218	112	-49
F.S.U.	54	100	164	79	67	55	31	11	-65
MIDDLE EAST	1,296	1,233	1,354	897	1,250	1,375	1,076	526	-51
of which:									
Iran	506	327	154	24	119	278	275	2	-99
Iraq	392	450	495	282	503	627	512	226	-56
AFRICA	3,222	3,882	4,637	4,626	4,452	4,730	2,422	1,803	-26
of which:									
Ivory Coast	252	390	463	509	512	466	198	88	-56
Nigeria	1,199	1,276	1,513	1,669	1,870	1,704	914	926	1
Senegal	557	484	492	410	239	229	172	80	-53
South Africa	419	505	547	557	569	551	263	138	-48
ASIA	2,346	2,362	2,618	1,883	2,345	3,540	2,310	770	-67
of which:									
Bangladesh	2	4	15	*	141	737	683	*	-100
China	355	434	250	327	264	268	158	56	-65
Hong Kong	271	294	299	268	221	224	110	94	-15
Indonesia	507	216	111	220	277	915	577	281	-51
Malaysia	339	379	531	161	183	331	171	40	-77
Philippines	202	274	600	156	510	186	147	*	-100
Singapore	245	196	239	178	156	204	91	78	-14
TOTAL	7,715	8,508	9,946	8,507	8,989	10,624	6,316	3,440	-46

* = Less than 500 tons

Source: Thailand Board of Trade as adjusted by Slayton & Associates

Table 5: Thailand: Jasmine 100% exports (TMT)

DESTINATION	Avg '00-04	Avg '05-09	2008	2009	2010	2011 Qty	2011 % CHG vs '05-09	2011 Share
AMERICAS	298	410	440	445	425	411	*	27
of which:								
Canada	50	66	69	74	80	75	14	5
U.S.	246	342	368	368	343	334	-2	22
E.U	71	133	152	159	155	167	26	11
MIDDLE EAST	60	108	114	135	112	96	-11	6
of which:								
Israel	23	25	22	31	33	28	12	2
Saudi Arabia	26	29	31	33	27	26	-10	2
U.A.E.	4	25	29	22	22	19	-24	1
AFRICA	57	242	282	350	309	303	25	20
of which:								
Gabon	9	21	27	26	31	22	5	2
Ghana	10	62	88	80	80	86	39	6
Ivory Coast	12	95	85	166	130	112	18	7
ASIA	772	826	639	638	561	517	-37	34
of which:								
Australia	32	55	61	62	60	58	5	4
Brunei	17	26	26	27	21	23	-12	2
China	247	280	170	125	125	96	-66	6
Hong Kong	215	220	190	184	160	159	-28	11
Malaysia	87	100	108	105	62	34	-66	2
Singapore	139	122	111	102	99	114	-7	8
TOTAL	1,275	1,717	1,531	1,746	1,584	1,513	-12	100

Source: Thailand Board of Trade as adjusted by Slayton & Associates

Table 6: Thailand: Patum exports (TMT)

DESTINATION	Avg '05-09	2008	2009	2010	2011 Qty	2011 % CHG vs '05-09	2011 Share
AMERICAS	4	3	4	6	6	50	3
of which:							
U.S.	3	3	4	5	6	100	3
E.U	12	14	27	33	26	**	13
MIDDLE EAST	5	11	9	12	15	**	8
of which:							
Saudi Arabia	1	3	3	5	7	**	4
AFRICA	11	13	15	14	20	82	10
of which:							
Gabon	0	0	0	0	*	**	*
Ghana	2	3	4	0	3	50	2
Ivory Coast	4	1	5	8	10	**	5
ASIA	242	192	135	96	126	-48	64
of which:							
China	141	56	33	22	39	-72	20
Hong Kong	57	76	57	39	41	-28	21
Singapore	26	40	25	17	17	-35	9
TOTAL	276	236	190	161	196	-29	100

Source: Thailand Board of Trade

Table 7: Vietnam rice exports by grade (TMT)

	High		Medium	Low	Brokens		Other/	Total
	Frgt	Non-Frgt			Frgt	Non-Frgt	Unknown	
2008	164	1,585	1,089	1,525	NA	161	155	4,679
2009	162	2,376	1,301	1,652	47	413	102	6,053
2010	222	2,270	1,561	2,232	17	251	201	6,754
2011	438	1,887	3,147	3,189	34	405	868	7,105

Note: High quality - less than 10% brokens, medium quality - 10-20% brokens, low quality - more than 20% brokens

Source: Vietnam Food Association

Table 8: Vietnam: Exports, 2000 to present (TMT)

DESTINATION	Avg '00-04	Avg '05-09	2008	2009	2010	2011 Qty	2011 % CHG vs '05-09	2011 Share
AMERICAS	306	502	598	475	527	451	-11	7
Of which:								
Cuba	293	486	573	432	462	421	-13	6
MIDDLE EAST	600	248	302	311	302	109	-64	2
Of which:								
Iraq	541	116	209	230	243	28	**	*
AFRICA	785	1,337	1,292	1,838	1,398	1,610	20	24
Of which:								
Ghana	69	137	110	173	175	184	34	3
Ivory Coast	102	222	163	290	222	349	57	5
Senegal	151	119	139	221	145	260	-82	4
ASIA	1,755	2,795	2,626	2,967	4,018	4,506	61	66
Of which:								
China	82	35	1	12	360	296	**	4
Indonesia	763	463	164	51	728	2,121	**	31
Malaysia	148	438	367	772	619	603	38	9
Philippines	653	1,609	1,835	1,766	1,579	789	-51	12
TOTAL	3,633	5,036	5,058	5,843	6,435	6,808	35	100

* = Less than .5% ** = More than 100%

Source: Slayton & Associates

Table 9: Vietnam fragrant exports (TMT)

DESTINATION	Avg '05-09	2008	2009	2010	2011 Qty	2011 % CHG vs '05-09	2011 Share
AMERICAS	1	1	2	5	8	**	3
Of which:							
U.S.	1	*	1	5	7	**	2
E.U.	34	7	4	6	6	-82	2
MIDDLE EAST	3	6	4	3	6	0	2
Of which:							
Israel	2	3	2	1	3	50	1
AFRICA	40	51	67	40	79	98	26
Of which:							
Ghana	7	7	18	25	52	**	17
Ivory Coast	17	14	28	12	21	24	7
ASIA	26	29	53	104	207	**	67
Of which:							
China	1	0	1	13	59	**	19
Hong Kong	4	1	18	58	85	**	28
Malaysia	5	9	1	6	14	**	4
Singapore	7	10	13	14	28	**	9
Taiwan	3	4	9	4	3	0	1
TOTAL	80	103	131	161	309	**	100

** = More than 100%

Source: Slayton & Associates

Table 10: Vietnam: Fragrant brokens export (TMT)

DESTINATION	Avg '05-09	2008	2009	2010	2011 Qty	2011 % CHG vs '05-09	2011 Share
AFRICA	19	52	35	12	34	79	87
Of which:							
Ghana	1	1	6	1	1	0	3
Guinea Bissau	2	8	*	0	0	-100	0
Ivory Coast	10	19	26	9	20	100	51
Senegal	6	23	2	0	0	-100	0
ASIA	1	2	4	0	4	**	10
TOTAL	22	54	44	12	39	77	100

* = Less than 500 tons ** = More than 100%

Source: Slayton & Associates