



Asia-Pacific
Economic Cooperation

Department of
International
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Agriculture,
Forestry and
Fisheries of JAPAN



MURC

Agriculture Research & Development Contributions to Strengthening Food Security in Papua New Guinea.

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APEC Workshop on Food Security, Tokyo 10 – 11 September 2013

Outline

- Background of the Economy – Papua New Guinea
- Food Security System in Papua New Guinea
- Research & Development efforts in contributing to addressing food security in PNG; (experiences, lessons, constraints and opportunities).

Background of PNG Economy



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Background of PNG Economy

- PNG is rich in natural resources which includes rain forest that cover over 70 per cent of the land, a rich marine life, agriculture potential and significant deposits of oil, gas, gold, copper and other minerals. The national economy is largely dependent on the exploitation of these natural resources dominated by the capital-intensive oil, minerals and forestry sectors. Although, there have been fluctuations in gross domestic product (GDP) over the past 10 years, GDP per capita has been growing at a rate of K131 per year, with growth rates of around K2000 and K2500 in 1996 and 2002, respectively.
- Actors in PNG's economy range from the subsistence level to the market level. In between is the smallholder cash cropping of coffee, cocoa, vanilla and copra, is integrated with food crops. About 75 per cent of the population depends on the subsistence economy. The market sector includes minerals, forestry, fisheries, and oil palm, and is dominated by large foreign investors.

Food security situation in Papua New Guinea

Food insecurity in PNG has been identified as a chronic problem among the majority of small-scale farmers, rural communities and urban dwellers and is recognized as a key factor contributing to low levels of human welfare and standards of living as reflected in the low Human Development Index (UNDP 2011) rankings for PNG being 153rd. It is estimated that 40% of PNG's 7 million people earn less than two dollars per day. On welfare issues, the most seriously and adversely affected being women and children. This is also reflected in low life expectancy rate in PNG (being average of 57 years), as compared to the world's highest around 80 years.

Food security situation in Papua New Guinea

- Subsistence food based – supports 85% of the population
- Staple traditional food s are Sweet Potato, Banana, Taro, Cassava and Sago.
- Much underdeveloped agricultural land
- Net importer of wheat and rice . Wheat and rice are becoming staple food
- Government set up appropriate agency (NARI, FPDA, DAL Food Security Branch)
- Challenges: Land, Drought, Prolong rain, Pressure on Land
- National Food Security Policy Framework and other overarching government policies

PNG food security strategies and policies

- PNG Rice Development Policy 2004 - 2014
- PNG National Food Security Policy 2000-2010.
- National Agriculture Development Plan 2007-2016.
- PNG Vision 50, 2010-2050.
- PNG Strategic Development Plan 2010-2030.
- PNG Medium Term Development Plan 2010-2030.
- Import Substitution policy
- Public Private Partnership Policy
- District Support Improvement Plan

Institutional Arrangements and responsibilities

- National Department of Agriculture – Policy, Strategy Development
- Provincial DAL – Implementation/Extension & Advice
- PNG Land Development Task Force – Mobilisation land for large agricultural medium to large agricultural investments
- Cooperative Societies – Mobilizing of farmers into cooperative society groups for greater cooperation and stronger voice and market bargaining power.
- National Agriculture Research Systems (NARIs) – 5 institutions

National Agricultural Research Institute (NARI) – Research & Development – *on Food Crops, Livestock, Fruits and Nuts, natural resource management, plus more*

www.nari.org.pg



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NARI



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Research & Development efforts in contributing to addressing food security in PNG

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1. Improving of crop and livestock species through breeding and biotechnology tools and enhancing accessibility of these materials to farming community.
2. Improving crop production through adoption of sustainable land and soil fertility management practices (Resource Use Efficiency).
3. Developing and promoting alternative food crops such as rice, grains, and pulses
4. Developing and adaptation of feeds and feeding systems based on locally available feed resources
5. Developing and adoption of appropriate technologies - mitigation of and adaptation to climate change
6. Installing and administering ICT for efficiency in information sharing

Research & Development efforts in contributing to addressing food security in PNG

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7. Capacity development through enhanced farmer literacy and entrepreneurial skills
8. Improving efficiency and profitability through supply and value chain and partnership development
6. Improving knowledge, skills and business acumen of women farmers and others
7. Developing and providing information and knowledge on improved technologies, farming practices, policy inputs, and sustainability to stakeholders
9. Influencing and creating enabling environment

Examples of Innovative Approaches Overcome Food Security Problems.

- Rice, grain and pulse research and development
- Domestication and commercialisation of Galip nut
- Multiplication and distribution of improved crop varieties (livestock)
- Breeding crop varieties with tolerance to drought, excess moisture & salinity
- Soil fertility management in the highlands
- Promoting floriculture to improve livelihood
- Village extension worker program

**APEC Workshop on Innovative Approaches for the Implementation of
APEC Food Security Action Plan in Developing Economies**

Sunway Putra Hotel, Kuala Lumpur, Malaysia, 18 – 21 June 2012

Current best practices

- Research & development initiatives
- National food germplasm maintenance
- Model Rice farmer concept
- Resource centre concept
- Local subsistence production system supported by research, extension and advisory work.

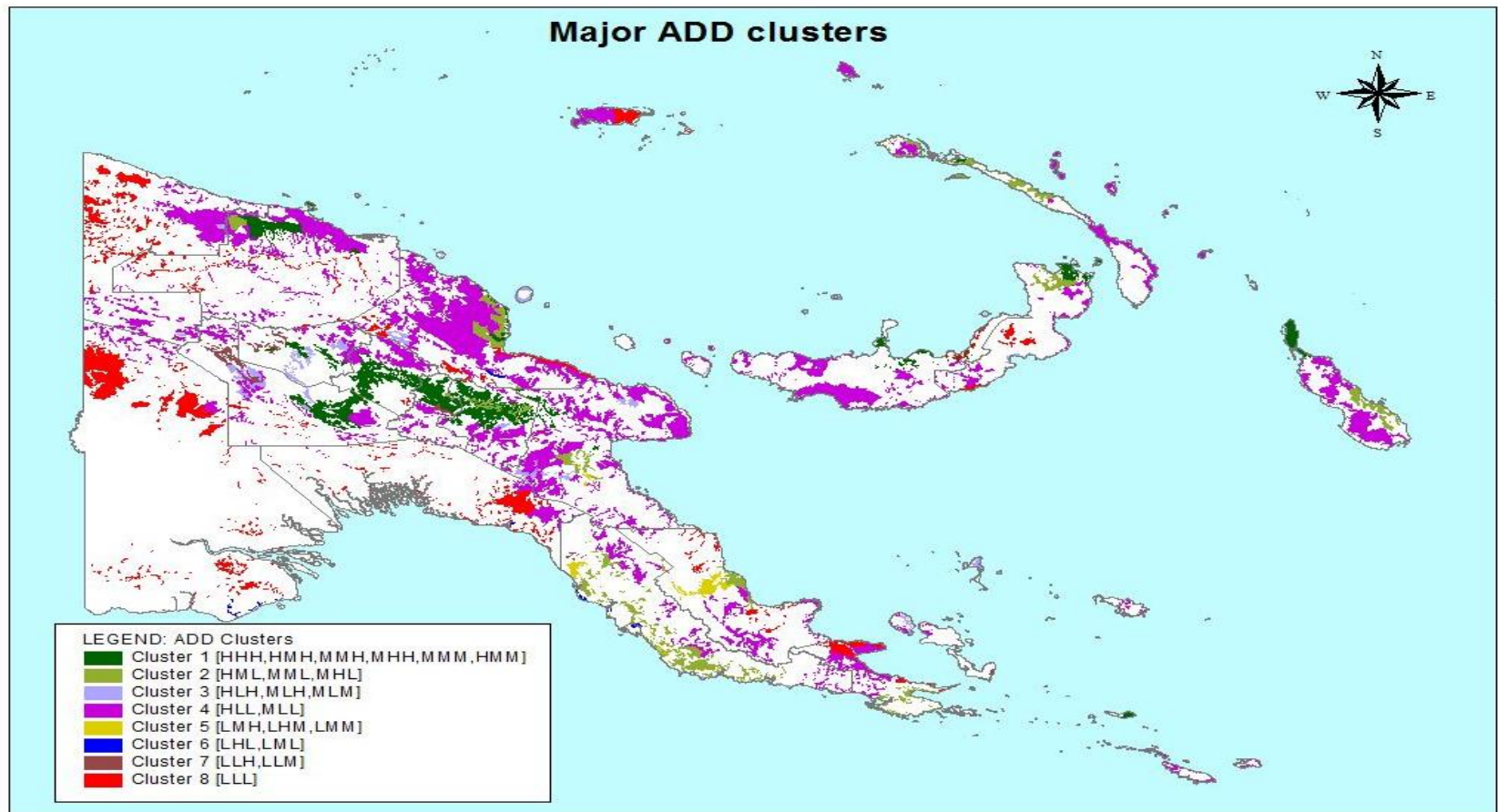
R&D Paradigm Shift

From: Research → extension → farmer mode

To : Agriculture Research for Development (AR4D)

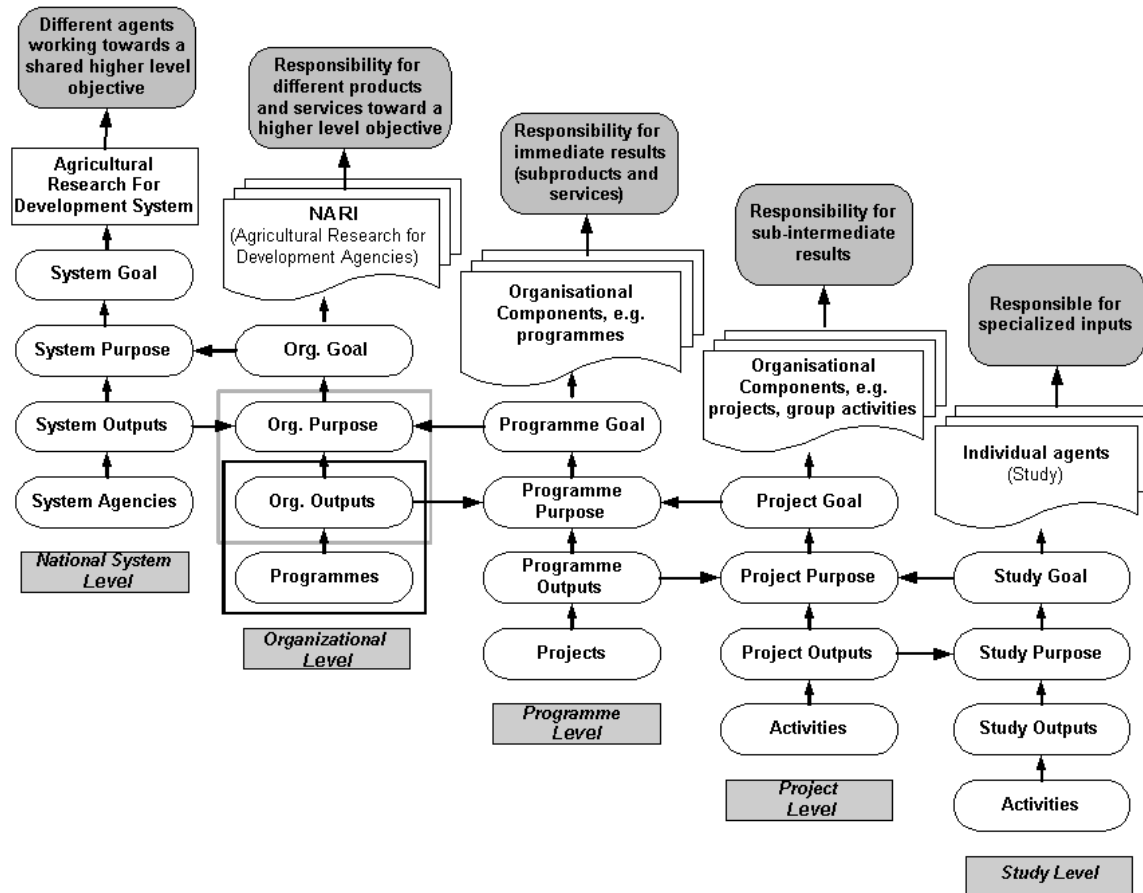
- Two stages
 - 1. Planning Process: 2008 -2012
 - ✓ Result Oriented
 - ✓ System Approach
 - ✓ M&E Framework and Practices
 - 2. Implementation: 2012

System Approach: ADD



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System Approach: Results oriented – Better M&E



Issues

- Past national Policies lack implementable and result-oriented plans – strategic implementation plans.
- National Food Security Policies need to be more comprehensive and not just focusing on rice – to **include** diversification and utilization of traditional foods both cultivated and wild.
- Institutional strengthening
- Revitalisation and/developing innovative extension services
- Capacity building in identified priority areas such postharvest technologies
- Appropriate infrastructure development – as part of strategic implementation plan.

Major Development Challenge: Infrastructure



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Opportunities:

- Huge Demand – Driven by Extractive Industries
- Market within the South Pacific Region
- Improvement of trade relations within the South Pacific Regions
- Climatic condition: Good rain, and sunshine
- Organic production

The End

Thank you