The CGIAR Research Program on Aquatic Agricultural Systems (AAS)

• WorldFish is leading the CGIAR Research Program on Aquatic Agricultural Systems together with two other CGIAR Centers; the International Water Management Institute (IWMI) and Bioversity.

• In 2012 and 2013 the AAS Program rolled out in Solomon Islands, Zambia, Bangladesh, Cambodia and the Philippines.
What are Aquatic Agricultural Systems?

Aquatic Agricultural Systems are places where farming and fishing in freshwater and/or coastal ecosystems contribute significantly to household income and food security.

Program Goal: Improve the well-being of AAS-dependent people.
The Program “Theory of Change” is that through these “ways of working” we will achieve and influence specific intermediate development outcomes (IDOs)

**The Research in Development Approach**

**Effective partnerships**
- Commitment to people and place
- Participatory action research
- Gender transformative approach
- Learning and networking

**Strengthened capacities**

**IDOs**
AAS works in Hubs

- Research in development requires a commitment to people and places to establish the trust and co-operation essential to implementing action research.
- A hub is a geographic location that provides a focus for learning, innovation and impact through participatory action research.
- In Solomon Islands AAS works in Malaita Hub (Malaita Province) and Western Hub (Western Province).
- In each hub we identify a ‘Development Challenge’ that the Program will address to give us focus and motivation.
AAS works through three pathways

**Pathway 1** focuses on hub based research.

Through **Pathway 2** we will extend lessons from hub research to the rest of Solomon Islands and to the wider Pacific region, utilizing multiple channels strongly centered on partnerships. Resources are allocated for innovative communication and information dissemination amongst communities, provincial governments and national government ministries.

High quality research and demonstrating significant outcomes will contribute to **Pathway 3**.
Partnerships

• If our research is to add value to, and support, development processes we need to work effectively and build ‘networks’ with the multitude of actors who are engaged in research in development at multiple scales- locally, regionally and nationally.

• The Program has been designed, developed, and is being implemented, in collaboration with national and regional partners.

• We aim to build on each others strengths and foster synergies rather than working separately.

• We will manage partnerships by building common challenges, visions of success, the pathways to achieve them and a commitment to learning and sharing together.
Characteristics of a Hub in Solomon Islands

• Presents a coherent set of challenges, opportunities and intervention points.

• Usually aligns with administrative units e.g. provinces.

• Dependence on AAS is high.

• “Poverty” indicators are high.

• Existing or proposed relationships with provincial governments and potential for partnerships.

• Opportunities for cross hub learning and scaling; i.e. gradients across AAS challenges.

• Opportunity for successes in innovation from which lessons can then be shared across the country through various pathways.

• Opportunities for impact (high populations).
## Key Determinants of Hub Selection

<table>
<thead>
<tr>
<th>AAS characteristics</th>
<th>Malaita Hub</th>
<th>Western Hub</th>
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<tbody>
<tr>
<td><strong>Existing or proposed relationships and potential for partnerships</strong></td>
<td>Request from Provincial government to be active in Malaita; Development NGO’s active (World Vision, Save the Children, ADRA); priority province for NPOA (MFMR and MECDM).</td>
<td>Field station established on Nusa Tupe since late 1990’s; draft MOU with Western Province Government; many partners working on resource management; priority province for NPOA (MFMR and MECDM).</td>
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<tr>
<td><strong>Human Development Index (HDI)</strong></td>
<td>Ranks lowest of all Provinces in HDI.</td>
<td>Ranks highest of all Provinces in HDI.</td>
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<tr>
<td><strong>Proportion of households fishing</strong></td>
<td>Highest number of households engaged in fishing in Solomon Islands.</td>
<td>Second highest number of households engaged in fishing in Solomon Islands.</td>
</tr>
<tr>
<td><strong>Population</strong></td>
<td>Highest rural population in Solomon Islands.</td>
<td>Second highest rural population in Solomon Islands.</td>
</tr>
<tr>
<td><strong>AAS gradient and opportunities cross scale and national learning</strong></td>
<td>The majority of the population is highly reliant on natural land and sea resources with a high subsistence component.</td>
<td>The Province is heterogeneous in its reliance on natural resources for subsistence; the Province hosts industry (logging and fishing); tourism and more than one small urban center.</td>
</tr>
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</table>
Program Governance

Guiding coalition-task completed December 2012

Country Program Committee
Role: steering

Country Program Team
Role: Management

Country Program Support Unit
Role: Administration and Finance

Malaita Hub Steering Committee
Malaita Hub Management Team

Western Hub Steering Committee
Western Hub Management Team
Malaita Hub
Program Design
Malaita Hub Development Challenge

The situation: Rural people in Malaita Hub in Solomon Islands face major challenges from rising population and declining quality and availability of marine and land resources.

The development challenge is to improve their lives through more productive, diversified livelihoods that empower communities to be better able to adapt to change and make more effective use of their resources.

The research challenge we will address with the people of Malaita Hub is to develop and test alternative approaches to livelihood diversification and resource stewardship that will accelerate development and restore the productivity of their resources.
The AAS Program Design for Malaita Hub

1. Connecting people and markets
2. Sustainable farming for nutrition and income
3. Climate change
4. Marine resource management
5. Mangrove management
6. Cross-scale governance and scaling
7. Transformative learning and change

Ways of working
- Community engagement
- Participatory action research
- Gender integrated knowledge sharing and learning
- Partnerships
- Capacity building

Program operations
- Governance
- Management
- Communications

7 community-driven, stakeholder-agreed, research initiatives and ways of working
Malaita Hub Research Initiatives

• Research initiatives have been derived from community identified priorities, with stakeholder input.

• Some build upon on-going initiatives by development partners; some are already being addressed, at least in part, by partner research; some are relatively new.

• For example while some of the AAS research will tackle what might be a new topic for the inshore fisheries sector; there may already be experience in the agricultural sector to draw upon and vice versa.

• The research questions in the following seven slides are therefore intentionally broad. Specific programs of work are developed and reviewed on an annual basis to address these questions.
Research Initiative 1.
CONNECTING PEOPLE AND MARKETS

Community identified priorities

Improve income generating activities and marketing.

The Outcomes

- Integrated small farming households have excess products for market.
- Opportunities for sustained relationships with new markets improved.

Initial Research questions

- Where are opportunities for improving household-scale agriculture and small-scale fisheries value chains of rural men and women in the hubs?
Community identified priorities

Restore soil fertility to increase production and food security.

Practice organic farming and restore soil fertility.

The Outcomes

- Locally appropriate integrated farming methods are providing benefits (including nutrition) to households.
- Improved farming practices: climate ready farming, fixed gardens, composting are standard practice.

Initial Research questions

- Can integrated farming technologies improve household productivity and nutrition of people who do not have easy access to coastal fisheries?
- What are effective mechanisms to equip local resource people with up to date knowledge of appropriate technologies and systems and are empower them to share this knowledge?
Research Initiative 3. CLIMATE CHANGE

Community identified priorities

Vulnerable sites including artificial islands and lagoon dwellers with poor access to land seeking adaptation options.

The Outcomes

• Community plans are integrated to accommodate drivers of change.

Initial Research questions

• What are suitable, and gender equitable, adaptation pathways for AAS dependent people in the hubs including options such as integrated farming and climate ready crops?
Research Initiative 4.  MARINE RESOURCE MANAGEMENT

Community identified priorities

Sustainable harvesting and managed fisheries.

Marine resource management.

Initial Research questions

• What are the success factors for effective CBRM at the community, province and national level?
• What is the most effective national model of CBRM?
• Does a more integrated version of CBRM (including brokering cross-sectoral partnerships) improve its ability to reduce poverty?

The Outcomes

• Fishing grounds are managed sustainably.
• Management plans are supported by Provincial/National legislation.
Research Initiative 5.  
MANGROVE MANAGEMENT

Community identified priorities

Reforestation of mangroves

Alternative fuel sources

The Outcomes

- Mangroves are being managed sustainably.
- Communities are replanting mangroves where required.
- Alternative fuel sources are available.

Initial Research questions

- What are the opportunities for enhancing mangrove management by communities?
- What are the gendered barriers to and impacts of adoption of alternative fuel sources?
Community identified priorities

Community co-operation and partnership with stakeholders.

The Outcomes

• Processes to resolve governance barriers at community level and improved links for communities to government are resulting in improved fisheries management.
• Traditional values and culture remain central and are built upon.

Initial Research questions

• What types of cross-scale governance improve inshore fisheries management, including where customary governance is ineffective?
• What are effective pathways for scaling of innovation?
Research Initiative 7.
TRANSFORMATIVE LEARNING AND CHANGE

Community identified priorities

Change is required through many avenues; appropriate materials in schools; demonstration sites; use of local resource people; better targeting of women, men and youth.

The Outcomes

• Innovative means of knowledge transfer is effected through networks and partnerships.
• Local resource ‘champions’ are empowered to share knowledge.
• Traditional values and culture remain central and are built upon.

Initial Research questions

• What are the entry points for development approaches that are gender transformative?
• How can Participatory Action Research enhance the benefits of agricultural and fisheries research?
Western Hub Development Challenge [DRAFT]

The situation: Western Hub is spread over a wide area of sea and is comprised of small urban centers and many small, often isolated communities. The hub supports major commercial industries including logging, tuna and tourism. These industries bring opportunities for employment but impacts are not universally positive or spread equitably across the hub. Rural people are vulnerable to external shocks and this can be compounded or ameliorated by the degree of isolation.

The development challenge is to improve the lives of people in Western Province by empowering communities to increase the benefits they derive from their natural resources, while accounting for the diversity and variability in the way they lead their lives and access resources and services.

The research challenge we will address in Western Hub is to work with AAS dependent communities and other partners to improve management of resources; and to improve equity in value chains to increase benefits and resilience.
Western Hub Design

Scoping will be completed by December 2013

Diagnosis will be completed during Q1 and Q2 2014

Hub Program design will be completed in late 2014
## Key Determinants of Hub Selection

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# References for Solomon Islands Program Design Documents

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<td>Solomon Islands: Essential Aspects of governance for AAS in Malaita Hub</td>
<td><a href="http://www.aas.cgiar.org/publications/solomon-islands-essential-aspects-governance-aquatic-agricultural-systems-malaita-hub#.UgMq7Gm4blU">http://www.aas.cgiar.org/publications/solomon-islands-essential-aspects-governance-aquatic-agricultural-systems-malaita-hub#.UgMq7Gm4blU</a></td>
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<td>Food and Nutrition Security in Solomon Islands</td>
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<td>Transforming aquatic agricultural systems towards gender equality: a five country review</td>
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With communities, changing lives