WorldFish Science Week – Writeshop Schedule

Monday	**11.00-12.30 and 13.30-15.00**	**Wednesday**	**13.30-15.15**
Tuesday	**13.30-15.30**	**Thursday**	**13.30-15.45**

1. Aquatic agricultural systems – what they are and why they are important Patrick — Leo Bill Collis — Hoanh Len — Alonso Ben — Robert Kevin — Zainul	***BLOCK A: PERCH***
2. Strengthening aquatic resource governance across scale Blake — Joseph Mam Kosal — Benoy	***BLOCK A: GUPPY***
3. Impact and outcomes of research and development in AAS Charlie — Joelle Jahan — Meen Chee Firoz Khan — Mike Potts Kirsten	***BLOCK B: PARI***
4. Gender and aquatic agricultural systems Ruchira — Yumiko Tabeth — Maripaz Kiyoko	***BLOCK G/H: FUGU***
5. Climate change and aquatic systems Eddie — Suan Pheng Marie — Daniel Eric	***BLOCK A: ANCHOVY***
6. Resilience and its application in AAS Neil — Anna Dave — Md Golam Mostafa Gareth	***BLOCK A: GROUPER***
7. Fish, food and nutrition and the implications of the growth of aquaculture Steve — Alan Malcolm — Jharendu Shakuntala	***BLOCK E/F: EEL***
8. Genetic improvement in aquaculture Raul — Nguyen Alex — Curtis Gamal — Hooi Ling Nabil	***GENETICS LABORATORY***
9. Aquaculture and business Mike — Diaa Wayne — Monjural Fred — Hemogenes Froukje — Bill Downing Oai Li	***BOARD ROOM***

Spare rooms:

BLOCK E/F: GOBY Room
LIBRARY: KAMBALI Room

Writeshop Abstracts

Writeshop 1. Aquatic Agricultural Systems – what they are and why they are important

Rationale: With CRP 1.3 the CGIAR is giving its first system-wide attention to this group of diverse agricultural systems. At the present moment however AAS are poorly understood within the CGIAR and receive little coherent recognition there and the wider development community. One of the objectives of CRP 1.3 is to change this. As a first science product from the CRP we are planning preparation of a special publication, either as a journal special issue, or as a CABI book. This Science Week workshop will contribute to the development of this volume by synthesizing current understanding of the opportunities and challenges for integrating different agricultural commodities and sectors in AAS.

Output: Draft of a paper on the benefits of integrating agricultural practices in AAS

Writeshop 2. Strengthening aquatic resource governance across scale

Rationale: A central premise of the AAS perspective is to shift focus from individual production sectors (fisheries, crop agriculture, livestock, aquaculture) to integrated food and livelihood systems. How does this intersectoral perspective affect priorities for policy and institutional change? One trend that it brings into sharp relief in many AAS is the increasing competition from multiple stakeholders operating from local to national and regional scales over rights to access and use natural resources --- land, water, wetlands, and fisheries -- essential to rural livelihoods. A key implication is the need to strengthen governance to enable equitable decision-making amidst such competition. This paper will identify lessons from selected AAS regarding the factors that have enabled such improvements in the past, and the ongoing challenges. We will focus in particular on formal and informal mechanisms that hold decision makers accountable towards poor and marginalized groups, including the role of bridging organizations that improve communication across sectors and geographic scales, and the role of civil society advocacy. Case studies from Bangladesh, Cambodia, the Philippines, Solomon Islands, and Uganda will be used to illustrate particular lessons and challenges.

Output: Advanced draft of a paper for publication

Writeshop 3. Impact and outcomes of research and development in AAS

Rationale: The start up of the new CRPs focuses renewed interest in M&E and the corresponding desire for good practice in outcome and impact reporting. WorldFish has a long tradition of impact assessment and outcome reporting. Some WorldFish research has been evaluated by others. This paper will critically review the published and grey literature information base from WorldFish or about WorldFish research on impact assessment and outcome reporting for content and method. The objective of the paper to aggregate estimates of impact to a global measure, identify gaps and learn lessons for program priorities and research practice. The objective of content analysis is to identify whether it is impact or outcomes, geographic and topical coverage, potential spillover and

benefits estimated. For method critically review the studies for methodological rigor, data design and other criteria. Finally, assess the WorldFish and stakeholder utilization of impact assessment: policy briefs, research agenda setting papers, donor accountability, public awareness, fund raising, internal research priority setting or other uses.

Output: Advanced drafts of a paper for publication

Writeshop 4. Gender and aquatic agricultural systems

Rationale: In developing CRP 1.3 strong emphasis was placed on the role of gender in aquatic agricultural systems and the program has been recognized as "best practice" in the CGIAR gender scoping study. As we move to implementation, the CGIAR and partners will need to build on this recognition to deliver a program that mainstreams gender effectively and achieves the transformative outcomes that we seek. To do this the program will give prominence to gender concerns during the participatory scoping and diagnosis to be pursued in program hubs in each focal country, and subsequently in the research agenda to be pursued in each hub and in the design and implementation of the program's monitoring and evaluation. To contribute to the background analysis for this work the writeshop will draw together participants understanding and experiences of gender issues and challenges in the program's five focal countries, and distill their analysis of key issues that need to be addressed as the program is implemented.

Output: Draft paper for publication, including areas and issues that need to be developed through further scoping.

Writeshop 5. Climate change and aquatic systems

Proposed title of paper: The potential impacts of climate change on aquatic agricultural systems and options for adaptation and mitigation.

Rationale: The poor and vulnerable in aquatic agricultural systems confront the impacts of climate change from multiple pathways, including those that affect AAS productivity and farming systems, or human safety. AAS users are also vulnerable to the adaptive decisions made in other sectors, such as in water resource management or coastal defense. This paper will help to set out our current state of knowledge about climate change and its past and future impacts in the CRP1.3 regions and CRP7 regions (these overlap in Bangladesh/Indo Gangetic Plains only). We will also suggest the adaptive actions that will be necessary to sustain AAS productivity and associated livelihoods, and identify opportunities to contribute to agriculture mitigation and qualify for ecosystem-service payments, and also identify potential co-benefits approaches (adaptation that also contributes to mitigation).

Output: Advanced drafts of a paper for publication - target 5,500 – 6,500 words.

Writeshop 6. Resilience and its application in AAS

Rationale: An emerging critique of resilience theory is that it has not, for all its scholarship, changed lives in the developing world. This criticism was also noted in the ISPC review of CRP1.3. Resilience is a central concept in CRP1.3 and so we need to clearly articulate how we will apply theory. We have something to say about this bottleneck in applying theory and have offered fragments of a way forward beyond analysis and criticism. This paper will bring together those of us active in this area to offer comment on the particular frontier of resilience in fisheries and aquaculture. External experts will be brought in to provide perspectives on particular aspects of this narrative

Output: Draft of a paper for publication

Writeshop 7. Food, fish and nutrition and its implications of the growth of aquaculture

Rationale: The case for fish and its importance in food and nutrition security has not been sufficiently well made with the result that donors do not prioritize funding for research on, or development of, small-scale fisheries and aquaculture, focusing instead on other foodstuffs, especially starchy staples. Developing these arguments will be crucial to the mobilization of funds in support of implementation of CRP 3.7 and thus the viability and impacts of the fish aspects of this program. It also has considerable relevance for CRP 1.3. The purpose of the paper is to determine the role of fish – (it excludes other aquatic source foods for now - in food and nutrition security and how this is changing with the development of aquaculture.

Output: Advanced draft of a paper for publication

Writeshop 8. Genetic improvement in aquaculture

Provisional title of paper: Genetic improvement in aquaculture: visions and realities for genomics, climate change and feeding the poor

Rationale: A core component of CRP 3.7 is concerned with the adaptation and generation of technologies to improve aquaculture productivity. Development of genomic or genome-wide selection and its implementation in dairy cattle has generated interests towards the possible application of this new technology in aquaculture genetic improvement programs. WorldFish has been a pioneer organization for the application of statistical methods based on mixed model linear methodology and best linear unbiased prediction (BLUP) for the genetic improvement of aquaculture species in developing countries. Implementation of this phenotype based methodology has resulted in sustained improvement of growth rate of 10 to 15 per cent per generation over more than six generations. Whereas new genomic selection approaches could seem particularly attractive for developing countries given that they are often faced with limited resources, capacity and infrastructure, there are many significant hurdles that must first be taken into account. Against the background of current quantitative genetics approach, we will review the prerequisites for the implementation of this new technology and the pros and cons for its application in the genetic improvement of farmed aquatic animal species. We will also consider the prospects of utilizing this technology to provide solutions to the possible issues that may be encountered in the future due to a rapidly changing climate.

Output: Draft of a review paper for publication in a peer reviewed journal

Writeshop 9. Aquaculture and business

Rationale: Increasing smallholder incomes and aquaculture production at scale through CRP 3.7 and CRP 1.3 requires consideration of the role of private business and enterprise development. During 2010, the WorldFish Center conducted a review of finance for smallholder aquaculture and during 2011 further studies have been commissioned on business models and investment in small commercially oriented aquaculture enterprises. The purpose of these studies was to (1) explore further the business case for investment in aquaculture, with an emphasis on investments that build social, economic and environmental capital; and (2) prepare a concept for a program of future investment in the sector in ways that are consistent with our mission to reduce hunger and poverty by improving fisheries and aquaculture.

The purpose of the writeshop will be to review draft research outputs related to aquaculture and business, and assist in developing a concept for a possible future aquaculture and business initiative.

Output: Draft review paper; concept document for an Aquaculture and Business program