CGIAR Research Program
Aquatic Agricultural Systems

Annual Report 2011

Making a difference in the lives of the poor Making a difference in the lives of the poor Making a difference in the lives of the poor

CGIAR

RESEARCH PROGRAM ON
Aquatic Agricultural Systems

A. KEY MESSAGES

The Program on Aquatic Agricultural Systems (AAS) aims to change the way the CGIAR engages with aquatic agricultural systems and the poor and vulnerable communities who depend upon them. To do so the program has focused on three primary lines of work in its first six months: (i) preparing for implementation of the program in focal countries and geographical hubs; (ii) harnessing the best of earlier and ongoing research that contributes to the science themes of the program and which we wish to see expanded and integrated into the program as it develops; (iii) establishing innovative governance and management arrangements that will guide and implement the program.

Our program methodology builds on recent learning from participatory approaches to agricultural research in development, integrates recent innovations in science where these show particular relevance to our work, and confronts the challenge of achieving impact at scale through community based research.

Country research teams have worked with partners to refine the choice of the geographical hubs where the program will focus and this will be followed in 2012 with detailed diagnosis and design in each. As we proceed through this work from scoping to design and implementation the program will move from identifying issues and trends impacting AAS landscapes to working with communities to understand how these provide opportunities for, or constraints to, agricultural development, natural resource management, and livelihoods at local level. Our research agenda will in turn be designed to better understand and identify solutions to these issues, as well as identify approaches that can seize opportunities and address constraints.

The first scoping phase was carried out in Western Province of Zambia in October and November 2011, and concluded with a national launch workshop in Lusaka on 7 December. The strong presence of partners from government, NGOs and the private sector, together with donors and CGIAR Centers reflected the strong partnership approach of the program and its success to date in Zambia. This emphasizes the importance of local and national government partners as critical enabling agents, national research institutions as key sources of expertise and long term sustainability, local and international development NGOs as essential intermediaries for engaging effectively with development processes at community level, and the communities themselves where the program will pursue innovative approaches to foster greater engagement in research prioritization, design and implementation.

A Program Handbook is being developed through a participatory process involving a wide group of practitioners; an approach that we believe will greatly strengthen its quality and value. This details the overall approach and methodology to be used by the program in each focal hub, including scoping, diagnosis and design. It places particular emphasis on the program's participatory approaches and research that empowers communities, to Monitoring and Evaluation and Impact Assessment, and to Gender.

We have articulated a transformative gender action research agenda and are preparing to implement it. Key steps have included strengthening staff capacity in gender analysis and transformative gender research, and establishment of strategic partnerships with leading partners in gender research. An international workshop on transformative approaches to agricultural research is being prepared for October 2012 and this will serve to further guide the program's focus in this area.

To build on the best of existing CGIAR research in AAS the program has conducted an initial assessment of ongoing research by participating Centers that is contributing outputs under each of the program's six research themes (see Annex B for listing). Amongst these research achievements a suite of outputs contribute to increased system productivity in focal countries, including development and stocking of virus free shrimp by over 2800 farmers in coastal Bangladesh, and provision of training to over 2300 men and 700 women farmers. Similarly in the Philippines a series of technical reports and training activities have been directed towards improved aquaculture production.

In the Solomon Islands and Cambodia, existing research gives greater attention to resilience and policy research, with analysis of options for improving resilience and adaptive capacity of fisheries dependent communities in the Solomons. In Cambodia a multi-stakeholder workshop on resource competition, governance and livelihood in Tonle Sap fisheries was held. In Africa research outputs have to date been more strongly focused on water management dimensions of AAS, with IWMI developing a methodology to assess the hydrological functions of different aquatic ecosystems in the Zambezi basin.

The Program Oversight Panel (POP) was established in November 2011 by the WorldFish Board of Trustees in their role as governing body of the Lead Center. Reflecting the program's ambition to develop innovative approaches to CGIAR research six of the eight members are independent. Four POP members are women and four men.

The Program Leadership Team (PLT) was established in December 2011 and brings together representatives from participating CGIAR Centers (Bioversity, IWMI, WorldFish), representatives from CARE and CRS, Country Managers (or their delegates), the head of the Program Support Unit, and lead scientists for the Program's six research themes. By bringing together the people concerned with implementing the program, its science, and key representatives of our development partners, the PLT provides an innovative blend of both science and operational capacity, and CGIAR and NGO perspectives that we believe will foster greater pragmatism and effectiveness in the program.

B. BASELINE

Overall Context

Globally AAS focuses on three major types of aquatic agricultural systems: Asia's mega deltas, African inland freshwater systems, and the small islands of SE Asia and the Pacific. Within these systems the program will focus its work in a limited number of countries, with Bangladesh, Cambodia, Philippines, Solomons and Zambia the focus for the first three years. In each country the program focuses further by working in a limited number of learning landscapes or geographical hubs selected on the basis of the extent and importance of the aquatic agricultural systems there and the incidence of poverty. Detailed program design in each of these landscapes involves participatory scoping of major development challenges faced and their relevance to national agricultural and rural development policy priorities, followed by participatory diagnosis and design with the communities we will work with to address these challenges. Because these processes have not yet been completed the key indicators mentioned below are indicative, and will be adjusted as a result of the planning and inception process. More detail on the baseline conditions in the program AAS target countries is provided in the proposal.

Key Indicators

In the Asian mega deltas we will work in Bangladesh and Cambodia. In Bangladesh, fertile alluvial floodplains cover some 80% of the country and the AAS they support dominate the rural economy. Most of Bangladesh's 16 million rural farm households rely on these agricultural systems for a combination of rice farming, fishing, and rearing household livestock or vegetable cultivation. Over 50% of farming families are poor or vulnerable to poverty, and large parts of the delta are exposed to cyclones and sea level rise. In these farming systems greater household adaptive capacity will be a key indicator of program success.

About 30% of Cambodia is covered by permanent water bodies or areas that are inundated during the flood season. Rice production and fisheries predominate in these areas, with rice grown by 70% of the rural population and fisheries providing income for 46% of the total population of 14.5 million people. About 90% of Cambodia's 4.8 million poor live in rural areas, and two-thirds of the 1.6 million rural households face seasonal food shortages. Improved AAS household food security will be a key indicator.

Many farming households are unable to grow enough rice and seek income from fishing, poultry, livestock, other crops and wage labor to increase their income and ensure their food security. In the Asia-Pacific islands, we will work first in the Philippines and Solomon Islands. Nationally, the Philippines has a more diverse economy and less poverty than any of the other focal countries, but many of the provinces remain poor and vulnerable. With their extensive coastlines and heavy reliance on agriculture and fisheries in rural areas, the economies of these provinces rely heavily on AAS. Poverty reduction in AAS households in target provinces will be a key indicator.

As a small island state, The Solomon Islands consists largely of coastal and aquatic ecosystems, with AAS dominating the rural economy. The 1999 census reported three-quarters of Solomon islanders are subsistence smallholders and fishers, with 71% of women and 53% of men engaged in subsistence agriculture, and 50% of women and 90% of men engaged in fishing. In this subsistence economy, about a third of the population lives below the poverty line, and there is substantial interisland migration in search of employment. For these reasons improved livelihood opportunities for these subsistence communities will be a key indicator.

In Africa the program will start in Zambia where rivers and lakes cover 20% of the country; support extensive agriculture, fisheries and livestock production; and provide livelihoods for 3 million people, or 25% of the country's population. Poverty remains persistently high in the provinces dominated by AAS, with 84% living below the poverty line in Western Province, and 73% in Luapula Province. Similarly, vulnerability to malnutrition, poor access to social services and disease are particularly high there. Improved adaptive capacity of AAS households will be a key indicator.

Each country and the aquatic agricultural systems we will focus upon exhibit a range of social relations and gender roles and disparities. For example there are relatively fewer gender inequities in development outcomes in the Philippines and Solomon Islands and wider disparities in Zambia and Bangladesh. Reduction of these disparities will be a key indicator of the program's success.

C. PROGRESS IN PRODUCING OUTPUTS

Achievement of Milestones and Output Indicators

Progress against key milestones is summarized in Annex A. The following paragraphs provide more detail on key highlights:

Governance and management arrangements

By the end of 2011 the Governance and Management arrangements for the program had been established. The Program Oversight Panel (POP) was established in November 2011 by the WorldFish Board of Trustees in their role as governing body of the Lead Center. Following extensive consultation with CGIAR donors, the Consortium Board, Centers, and partners, six independent members of the POP were appointed (Dr Chris Barlow, Dr John Kurien, Ms Jo Luck, Dr John Lynam, Dr Kyoko Kusakabe, Dr Rekha Mehra). They are joined by Dr Stephen Hall as representative of WorldFish, and Ms Barbara Schreiner as representative of other participating CGIAR Centers. Jo Luck was appointed as POP Chair. The POP will provide strategic guidance for the program, oversee quality of our science and, by fostering linkages with the wider agricultural research and development community, play a critical role in communicating the program's work.

To support the program WorldFish established a Program Support Unit, appointed the Deputy Director General to be Program Leader, and recruited a senior manager for program operations. The Program Leadership Team (PLT) was also established and brings together representatives from participating CGIAR Centers (Bioversity, IWMI, WorldFish), representatives from CARE and CRS, Country Managers (or their delegates), the head of the Program Support Unit, and lead scientists for the Program's six research themes. The PLT is chaired by Dr Patrick Dugan in his role as Program Leader.

Program approach and methodology

The initial stages of implementation in focal countries are critical to achieving the program's goal of developing a more effective approach to agricultural research and development in aquatic agricultural systems. To this end the program has focused attention in 2011 on developing the methodology to be used in designing program activities and on establishing the team of researchers that will lead this. This work has paid particular attention to ensuring that the program draws from past learning in participatory approaches to agricultural research while also exploring where innovation is needed to address past constraints, and successful integration of this learning and innovation will be needed for program success.

This learning is being distilled into a Program Handbook that will serve to guide roll out in the program's focal hubs. This details the overall methodology to be used by the program in each hub, including scoping, diagnosis and design. It places particular emphasis on the program's approach to Monitoring and Evaluation and Impact Assessment, and to Gender.

At national level program teams in the first focal countries (Bangladesh, Solomons and Zambia) have worked with national research partners, including government research institutes and universities, national and international development NGOs, and agencies of both local and central government partners to refine the choice of the geographical hubs where the program will focus. This highly participatory process will be followed in 2012 with similar engagement of partners in diagnosis and design of the program in each hub.

As we proceed through this work from scoping to design and implementation the program will move from the identification of issues and trends impacting AAS landscapes to work with communities to understand how these impact agriculture, natural resource management, and livelihoods at local level. Our research agenda will in turn be designed to better understand and identify opportunities and constraints presented by these trends, as well as approaches that can best harness the opportunities and address the constraints. In addition the program will give special attention to identifying mechanisms for scaling out these approaches and their results.

Integrating existing research

Complementing these investments in developing the new arrangements and science methodologies needed for the program, participating Centers have continued to pursue a substantial program of research in aquatic agricultural systems. This body of research will continue until the closure of existing projects. At this point the most promising approaches will be combined

with new directions as the program moves forward in each country and hub. To help facilitate this transition and ensure that the outputs from existing projects can contribute most effectively to the science themes and objectives of AAS a review of all existing projects was conducted and all 2011 science outputs identified (see Annex B for details).

This analysis of science outputs reveals the unequal distribution of the existing CGIAR research portfolio in AAS. Of 33 outputs identified, 13 contribute to theme 1 (Sustainable increases in system productivity), 1 to theme 2 (Equitable access to markets), 15 to theme 3 (Social-ecological resilience and adaptive capacity), 1 to theme 4 (Gender and equity), 3 to theme 5 (Policies and institutions to empower AAS users), and none to theme 6 (Knowledge sharing, learning and innovation). As the program proceeds with the new process of participatory scoping, diagnosis and design in focal countries and learning hubs we expect that the focus and balance of this research agenda will change, and in some cases substantially. Building on this analysis the program has identified a list of 55 priority publications for 2012 of which 30 will be in the primary literature.

Milestones or output not achieved or deferred; new milestones or outputs

Some milestones were partially achieved in 2011. These include the first face to face meeting of the Program Leadership Team and some key recruitments. The decisions to delay these meetings were taken in order to ensure full attendance at the PLT meeting and to secure the best possible candidates for the positions. These delays have been very short term and the relevant actions have now been completed in the first quarter of 2012. These short term delays reflect the inevitable inertia in launching a new program where there is first uncertainty around when approval will be given and consequent funding levels, followed by the need to readjust workplans of key individuals.

In addition the draft of the program implementation manual and some key methodologies on participatory diagnosis and hub design, on Monitoring and Evaluation and Impact Assessment, and Gender have been deferred until 2012. These decisions were taken in view of the critical importance of these methodologies and the desire to get them right. This work is now underway and is an integral part of the hub roll out process which is being used as a test bed for these methodologies. In this way the development of the program's methodology is being managed as a participatory process involving a wider group of practitioners, a step which we believe will greatly strengthen its quality and value.

CRP AAS has articulated a transformative gender action research agenda and is preparing to implement it as a core element of the programs approach. The five program countries of the CRP are quite diverse in the various dimensions related to gender equality. A baseline review of gender has been undertaken during this period and a working draft of the report has been prepared. This will be further refined and a peer reviewed working paper prepared in the first half of 2012. This review has highlighted the diversity of challenges and opportunities available in each of the countries for transformative action and also the research gaps. A broad set of research questions useful for comparative analysis and cross-learning across program countries, as well as some country specific research questions, have emerged from this review. This will be complemented by a community and household level analysis during 2012. In support of this work strategic partnerships have been established with the International Center for Research on Women (ICRW) and University of East Anglia (UK). Similarly the program expects to work closely with the newly appointed Gender Adviser in the Consortium Office and with the cross CRP gender research network.

D. PROGRESS IN PRODUCING OUTCOMES

While it is too early to report on outcomes from the new body of research that is being developed through the program's roll out in focal countries and hubs, careful consideration is being given to how the program's research needs to be designed and partnerships nurtured in order to result in significant outcomes. Despite this sequencing challenge research carried out through pre-existing projects has contributed a number of notable AAS outcomes in 2011. In Bangladesh the USAID funded project "Greater Harvest and Economic Returns from Shrimp"

(GHERS) has been working since 2008 to improve the productive capacity of shrimp and fish farms in the southern coastal districts of Bagerhat, Khulna and Shatkhira of Bangladesh. By 2011 this initiative had reached over 22,500 farmers and increased annual aquaculture system profits to US$1075per household over a baseline of US$356. As the AAS program proceeds we will endeavor to build on such local successes and work with development partners to pursue outcomes at larger scale.

In the Solomon Islands WorldFish has worked since 2008 to improve resilience and adaptive capacity in coastal communities. Through partnership with the communities, and provincial and national level government, key threats, vulnerabilities and strengths

underpinning resilience have been analyzed, and community based resource management (CBRM) catalyzed in six community clusters comprising 37 individual villages. Building upon this CBRM has been identified as the preferred management mechanism for inshore fisheries and coastal marine resources and incorporated into the Solomons' Inshore Fisheries Strategy and National Plan of Action for the regional Coral Triangle Initiative. The AAS program will build on this success to foster wider implementation of CBRM in the Solomons, with initial focus on the program hubs.

In Cambodia IWMI and WorldFish have partnered since 2008 to support decision making for water allocation for fisheries and agriculture in the Tonle Sap wetland system. Commune Agro-ecosystem Analysis guidelines developed through this work have now been adopted by the national Government and are being used nationally to improve agricultural planning and decision-making in favour of more sustainable use of aquatic resources, especially water and fisheries.

Measures of Progress in Delivering Gender Responsive Achievements/Outcomes

While the gender focus of the program is strong it is too early yet to report on gender responsive achievements/ outcomes. These will emerge as the program's strong gender strategy is implemented. We note however that 50% of POP members and the Chair are women, 35% of PLT members are women, and 60% of country managers are women. We also note the strong partnerships being developed with ARIs in support of the program's gender strategy. MoUs have been signed with the International Center for Research on Women (ICRW) and with the University of East Anglia (UK) in order to foster effective linkages with these two leading institutions on gender research. Similar partnerships at country level are now being pursued.

E. RISK MANAGEMENT

Risk Factor	Mitigation strategies
Limited engagement of CGIAR Centers	Early program management involvement with participating centers (Bioversity, IWMI, WorldFish). Conversations have also been held with other Centers as part of work to foster synergies in focal countries, including with IRRI, CIMMYT, IFPRI and CRP5/ CPWF, CCAFS and CRP4/Harvest Plus. Where appropriate, engagement of ARIs and NARS will be increased.
Existing projects leading to dispersion of effort	During the transition years when pre-existing projects are being completed only projects that contribute to developing IPGs under one or more of the 6 research themes of the program will be included in AAS. As we move forward to design new projects through the roll out process first priority will be given to projects in focal hubs and countries. In some instances however new opportunities to develop AAS relevant research will emerge in other countries. As these opportunities are considered priority will be given to those countries and locations that lie in one of the large aquatic systems that are the focus of the program, namely Asia's mega deltas, African fresh water systems, and coastal and coral reef systems in Asia Pacific.
Absence of strong management	The participating Centers have given high priority to assigning appropriate people to work on the program and participate in the Program Leadership Team. In addition the Lead Center has given high priority to appointing a high quality Oversight Panel, Program Leader and Support Unit.
Inadequate funding	Success in securing the funding required will depend on the program's ability to both pursue and communicate high quality science that leads to substantial outcomes and impacts. To this end the program is pursuing a high quality roll out process and investing in high quality communications. This is accompanied by ongoing review of funding needs, which will become clearer as the roll out process proceeds.
Rapid start up	The program has proceeded at a good pace in 2011 but we envisage that this will accelerate in 2012 as roll out activities increase. To support this program is investing in sustained communication with partners, early events to build awareness of the program and sustain momentum, and appointment of strong and effective managers in key positions.

F. LESSONS LEARNT

Analysis of Variance from what was Planned

In 2011 there was no significant variance from governance, management and research plans. However there are already indications that the detailed program design process being developed for focal countries and hubs is going to take longer than expected. This reflects commentary received from the ISPC and we will adjust the number of hubs as needed. As a first step the program will concentrate efforts in 2012 on Bangladesh, Solomons and Cambodia, with similar investment in Cambodia and Philippines scheduled for 2013. As there were no significant variations from what was planned there are no significant cost and budget implications.

Impact Pathways

The impact pathways as set out in the program proposal were indicative and will remain so until the detailed design is completed through the roll out process.

Analysis of Changes in Effectiveness and Efficiency

A fundamental premise of the program is that a more focused and well integrated approach to agricultural research will be much more effective in reducing poverty and hunger amongst the communities who depend upon aquatic agricultural systems. We believe this will be achieved by identifying research priorities through demand driven processes and engaging communities directly in participatory action research, while at the same time working through partners to pursue impacts at scale. While it is still early to show whether this hypothesis is correct, there is growing support for the approach amongst partners and the wider science community that the program is engaging with.

In conjunction with pursuit of this larger scale effectiveness and efficiency the program has also taken some specific steps to reduce costs in some key areas. With the appointment of the Program Oversight Panel and its ability to commission targeted science reviews of the program WorldFish has dissolved its own Science Advisory Committee. Similarly rather than establish the position of program leader as another senior management cost, WorldFish has appointed the Deputy Director General to lead the program.

Complementing these efforts the program has also taken explicit steps to foster synergies with other CRPs addressing related natural resource management issues, participatory approaches, impact assessment and gender transformative research. These will be developed further in 2012 as a means of achieving greater effectiveness and efficiency.

Qualitative Description of the Effectiveness of the Partnership Strategy of the CRP

AAS has given strong emphasis to effective partnerships during development of the program and is now doing so in implementation. This is reflected in the close engagement of national and international partners in the detailed program design process at country level, and the engagement of international partners to both strengthen capacity in selected areas of science and development practice and increase potential for scaling out the results of the program. Specific examples of this include the MoU on Gender with the International Center for Research on Women, and the presence of two international NGOs (CARE and CRS) as members of the Program Leadership Team.

The national level partnerships are essential to the success of the program and the strong engagement of partners in the roll out process to date suggests that the steps taken so far are highly appreciated. In an independent survey of partners in focal countries 83% of respondents viewed WorldFish as a partnership driven development organization, which provides an indication of how WorldFish is perceived in these countries. Given the WorldFish role in leading the program this survey can be taken as a useful proxy for partner perceptions of AAS.

At international level it is too early to tell how partners assess their engagement in the program. However partner engagement in program design greatly strengthened the quality of the final proposal and we believe this will hold true through implementation.

Qualitative Description of Interactions with Relevant CRPs

Collaboration with other CGIAR Research Programs is also at an early stage, but specific opportunities for doing so have been pursued actively with CCAFS in 2011 and plans will be pursued to do this with CRP 2, 4 and 5 in 2012. In addition project level collaboration is taking place with GRiSP, Wheat, and Water through project level partnerships in Bangladesh and we expect these to grow.

G. FINANCIAL REPORTING

Report Description	
Name of Report	Themes - Finance Report of Whole Life
Reporting Line	Lead Center Report to Consortium Office
Frequency/Period	Half-Yearly / 01 Jul 2011 - 31 Dec 2011
Delivery	45 days after period end
CRP Nr :	1.3 (AAS)
Period :	01 Jul 2011 - 31 Dec 2011

	(a) Actual Expenses - Cumulative					(b) Budget - Whole of Life					(c) Available - Future Periods				
The WorldFish Center	Window 1 & 2	Window 3	Bilateral funding	Other funds	Total funding	Window 1 & 2	Window 3	Bilateral funding	Other funds	Total funding	Window 1 & 2	Window 3	Bilateral funding	Other funds	Total funding
Theme 1	-	-	1,274	-	1,274	7,556	-	5,955	-	13,511	7,556	-	4,681	-	12,237
Theme 2	-	-	15	-	15	3,240	-	2,554	-	5,794	3,240	-	2,539	-	5,779
Theme 3	-	-	1,037	-	1,037	3,543	-	2,793	-	6,336	3,543	-	1,756	-	5,299
Theme 4	-	-	584	-	584	2,582	-	2,036	-	4,618	2,582	-	1,452	-	4,034
Theme 5	-	-	281	-	281	1,102	-	870	-	1,972	1,102	-	589	-	1,691
Theme 6	586	-	297	-	883	3,288	-	2,593	-	5,881	2,702	-	2,296	-	4,998
Impact Assessment	227	-	-	-	227	1,068	-	840	-	1,908	841	-	840	-	1,681
Country & Hub Coordination	1,322	-	-	-	1,322	6,790	-	5,355	-	12,145	5,468	-	5,355	-	10,823
Program Governance & Management	302	-	-	-	302	1,692	-	1,331	-	3,023	1,390	-	1,331	-	2,721
Total - all Costs	**2,437**	**-**	**3,488**	**-**	**5,925**	**30,861**	**-**	**24,327**	**-**	**55,188**	**28,424**	**-**	**20,839**	**-**	**49,263**

Partner IWMI	(a) Actual Expenses - Cumulative					(b) Budget - Whole of Life					(c) Available - Future Periods				
	Window 1 & 2	Window 3	Bilateral funding	Other funds	Total funding	Window 1 & 2	Window 3	Bilateral funding	Other funds	Total funding	Window 1 & 2	Window 3	Bilateral funding	Other funds	Total funding
Theme 1	115	-	266	-	381	238	-	478	-	716	123	-	212	-	335
Theme 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Theme 3	-	-	-	-	-	178	-	355	-	533	178	-	355	-	533
Theme 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Theme 5	-	-	-	-	-	290	-	577	-	867	290	-	577	-	867
Theme 6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Impact Assessment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Country & Hub Coordination	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Program Governance & Management	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total all Costs	**115**	**-**	**266**	**-**	**381**	**706**	**-**	**1,410**	**-**	**2,116**	**591**	**-**	**1,144**	**-**	**1,735**

Partner Bioversity	(a) Actual Expenses - Cumulative					(b) Budget - Whole of Life					(c) Available - Future Periods				
	Window 1 & 2	Window 3	Bilateral funding	Other funds	Total funding	Window 1 & 2	Window 3	Bilateral funding	Other funds	Total funding	Window 1 & 2	Window 3	Bilateral funding	Other funds	Total funding
Theme 1	-	-	-	-	-	238	-	478	-	716	238	-	478	-	716
Theme 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Theme 3	-	-	-	-	-	178	-	355	-	533	178	-	355	-	533
Theme 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Theme 5	-	-	-	-	-	290	-	577	-	867	290	-	577	-	867
Theme 6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Impact Assessment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Country & Hub Coordination	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Program Governance & Management	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total - all Costs	**-**	**-**	**-**	**-**	**-**	**706**	**-**	**1,410**	**-**	**2,116**	**706**	**-**	**1,410**	**-**	**2,116**

Summary Report by Themes	(a) Actual Expenses - Cumulative					(b) Budget - Whole of Life					(c) Available - Future Periods				
	Window 1 & 2	Window 3	Bilateral funding	Other funds	Total funding	Window 1 & 2	Window 3	Bilateral funding	Other funds	Total funding	Window 1 & 2	Window 3	Bilateral funding	Other funds	Total funding
Theme 1	115	-	1,540	-	1,655	8,032	-	6,911	-	14,943	7,917	-	5,371	-	13,288
Theme 2	-	-	15	-	15	3,240	-	2,554	-	5,794	3,240	-	2,539	-	5,779
Theme 3	-	-	1,037	-	1,037	3,899	-	3,503	-	7,402	3,899	-	2,466	-	6,365
Theme 4	-	-	584	-	584	2,582	-	2,036	-	4,618	2,582	-	1,452	-	4,034
Theme 5	-	-	281	-	281	1,682	-	2,024	-	3,706	1,682	-	1,743	-	3,425
Theme 6	586	-	297	-	883	3,288	-	2,593	-	5,881	2,702	-	2,296	-	4,998
Impact Assessment	227	-	-	-	227	1,068	-	840	-	1,908	841	-	840	-	1,681
Country & Hub Coordination	1,322	-	-	-	1,322	6,790	-	5,355	-	12,145	5,468	-	5,355	-	10,823
Program Governance & Management	302	-	-	-	302	1,692	-	1,331	-	3,023	1,390	-	1,331	-	2,721
Total - all Costs	**2,552**	**-**	**3,754**	**-**	**6,306**	**32,273**	**-**	**27,147**	**-**	**59,420**	**29,721**	**-**	**23,393**	**-**	**53,114**

Summary Report by CG Partners	(a) Actual Expenses - Cumulative					(b) Budget - Whole of Life					(c) Available - Future Periods				
	Window 1 & 2	Window 3	Bilateral funding	Other funds	Total funding	Window 1 & 2	Window 3	Bilateral funding	Other funds	Total funding	Window 1 & 2	Window 3	Bilateral funding	Other funds	Total funding
IWMI	115	-	266	-	381	706	-	1,410	-	2,116	591	-	1,144	-	1,735
Bioversity	-	-	-	-	-	706	-	1,410	-	2,116	706	-	1,410	-	2,116
Total - all Costs	**115**	**-**	**266**	**-**	**381**	**1,412**	**-**	**2,820**	**-**	**4,232**	**1,297**	**-**	**2,554**	**-**	**3,851**

Report Description

Name of Report	Themes -Bilateral Grants for Whole of Life
Reporting Line	Lead Center Report to Consortium Office
Frequency/Period	Half-Yearly / 01 Jul 2011 - 31 Dec 2011
Delivery	45 days after period end
CRP Nr :	1.3 (AAS)
Period :	01 Jul 2011 - 31 Dec 2011

The WorldFish Center	Expenditure		
	(a) Actual Expenses - Cumulative	(b) Budget - Whole of Life	(c) Available - Future Periods
ACIAR	242	2,749	2,507
ACIAR (CGIAR)	-	553	553
ADB	-	149	149
AED	80	80	-
ALE Party List	-	2	2
AGHAM	17	17	-
ANR	20	163	143
AUSAID	19	54	35
AWF	11	11	-
BAR	36	339	303
BGE	1	1	-
BGG	36	36	-
BMZ	-	266	266
CARE	-	79	79
CBFF	-	37	37
CEPF	17	153	136
CHE	-	28	28
CIDA	37	71	34
CPWF	117	952	835
CRISP	-	15	15
DANIDA	35	89	54
DOST	6	26	20
EC	22	924	902
EEPSEA	117	164	47
ESRC-UK	-	60	60
FAO	36	51	15
FINNIDA	-	15	15
GIZ	112	792	680
IDRC	-	120	120
IFAD	138	532	394
IRISHAID	-	27	27
IFPRI	5	5	-
IRRI	553	2,881	2,328
JAPAN	41	151	110
LGED	57	240	183
MECDM	-	18	18
MARDI	30	40	10
MBE	19	24	5
MFMR	78	409	331
NAC	-	30	30
NFRDI	5	73	68
OFID	11	75	64
OISCA	1	1	-

The WorldFish Center	Expenditure		
	(a) Actual Expenses - Cumulative	(b) Budget - Whole of Life	(c) Available - Future Periods
SAVE	85	498	413
SIDA	132	286	154
SPIA	4	149	145
TAP	86	142	56
TNC	69	69	-
UNDP-GEF	-	100	100
UniQuest	17	78	61
UQ	32	35	3
URI	-	219	219
USAID	1,075	6,837	5,762
UNE	-	-	-
WB	-	50	50
WWF-US	89	119	30
To be identified	-	3,243	3,243
Totals for CRP	**3,488**	**24,327**	**20,839**

Partner IWMI	Expenditure		
	(a) Actual Expenses - Cumulative	(b) Budget - Whole of Life	(c) Available - Future Periods
GIZ	100	100	-
UNE	25	25	-
FAO	6	6	-
EC	135	135	-
To be identified	-	1,144	1,144
Totals for CRP	**266**	**1,410**	**1,144**

Partner Bioversity	Expenditure		
	(a) Actual Expenses - Cumulative	(b) Budget - Whole of Life	(c) Available - Future Periods
To be identified		1,410	1,410
Totals for CRP	**-**	**1,410**	**1,410**

Totals for CRP	Expenditure		
	(a) Actual Expenses - Cumulative	(b) Budget - Whole of Life	(c) Available - Future Periods
ACIAR	242	2,749	2,507
ACIAR (CGIAR)	-	553	553
ADB	-	149	149
AED	80	80	-
ALE Party List	-	2	2
AGHAM	17	17	-
ANR	20	163	143
AUSAID	19	54	35
AWF	11	11	-
BAR	36	339	303
BGE	1	1	-
BGG	36	36	-
BMZ	-	266	266
CARE	-	79	79
CBFF	-	37	37
CEPF	17	153	136

Totals for CRP	Expenditure		
	(a) Actual Expenses - Cumulative	(b) Budget - Whole of Life	(c) Available - Future Periods
CHE	-	28	28
CIDA	37	71	34
CPWF	117	952	835
CRISP	-	15	15
DANIDA	35	89	54
DOST	6	26	20
EC	157	1,059	902
EEPSEA	117	164	47
ESRC-UK	-	60	60
FAO	42	57	15
FINNIDA	-	15	15
GIZ	212	892	680
IDRC	-	120	120
IFAD	138	532	394
IRISHAID	-	27	27
IFPRI	5	5	-
IRRI	553	2,881	2,328
JAPAN	41	151	110
LGED	57	240	183
MECDM	-	18	18
MARDI	30	40	10
MBE	19	24	5
MFMR	78	409	331
NAC	-	30	30
NFRDI	5	73	68
OFID	11	75	64
OISCA	1	1	-
SAVE	85	498	413
SIDA	132	286	154
SPIA	4	149	145
TAP	86	142	56
TNC	69	69	-
UNDP-GEF	-	100	100
UniQuest	17	78	61
UQ	32	35	3
URI	-	219	219
USAID	1,075	6,837	5,762
UNE	25	25	-
WB	-	50	50
WWF-US	89	119	30
To be identified	-	5,797	5,797
Totals for CRP	**3,754**	**27,147**	**23,393**

Report Description

Name of Report	Expenses by Natural Classification, by Theme
Reporting Line	Lead Center Report to Consortium Office
Frequency/Period	Half-Yearly / 01 Jul 2011 - 31 Dec 2011
Delivery	45 days after period end
CRP Nr :	1.3 (AAS)
Period :	01 Jul 2011 - 31 Dec 2011

The WorldFish Center	Actual Expenses - Last Period					Actual Expenses - Cumulative				
	Window 1 & 2	Window 3	Bilateral funding	Other funds	Total funding	Window 1 & 2	Window 3	Bilateral funding	Other funds	Total funding
Personnel	-	-	-	-	-	832	-	1,402	-	2,234
Collaborator Costs - CGIAR Centers	-	-	-	-	-	-	-	-	-	-
Collaborator Costs - Others	-	-	-	-	-	2	-	423	-	425
Supplies and Services	-	-	-	-	-	804	-	671	-	1,475
Operational Travel	-	-	-	-	-	339	-	327	-	666
Depreciation	-	-	-	-	-	18	-	151	-	169
Sub-Total of Direct Costs	-	-	-	-	-	1,995	-	2,974	-	4,969
Indirect Costs	-	-	-	-	-	442	-	514	-	956
Total - all Costs	**-**	**-**	**-**	**-**	**-**	**2,437**	**-**	**3,488**	**-**	**5,925**

Partner IWMI	Actual Expenses - Last Period					Actual Expenses - Cumulative				
	Window 1 & 2	Window 3	Bilateral funding	Other funds	Total funding	Window 1 & 2	Window 3	Bilateral funding	Other funds	Total funding
Personnel	-	-	-	-	-	70	-	123	-	193
Collaborator Costs - CGIAR Centers	-	-	-	-	-	-	-	-	-	-
Collaborator Costs - Others	-	-	-	-	-	-	-	52	-	52
Supplies and Services	-	-	-	-	-	13	-	49	-	62
Operational Travel	-	-	-	-	-	12	-	13	-	25
Depreciation	-	-	-	-	-	-	-	-	-	-
Sub-Total of Direct Costs	-	-	-	-	-	95	-	237	-	332
Indirect Costs	-	-	-	-	-	20	-	29	-	49
Total - all Costs	**-**	**-**	**-**	**-**	**-**	**115**	**-**	**266**	**-**	**381**

Partner Bioversity	Actual Expenses - Last Period					Actual Expenses - Cumulative				
	Window 1 & 2	Window 3	Bilateral funding	Other funds	Total funding	Windows 1 & 2	Window 3	Bilateral funding	Other funds	Total funding
Personnel	-	-	-	-	-	-	-	-	-	-
Collaborator Costs - CGIAR Centers	-	-	-	-	-	-	-	-	-	-
Collaborator Costs - Others	-	-	-	-	-	-	-	-	-	-
Supplies and Services	-	-	-	-	-	-	-	-	-	-
Operational Travel	-	-	-	-	-	-	-	-	-	-
Depreciation	-	-	-	-	-	-	-	-	-	-
Sub-Total of Direct Costs	-	-	-	-	-	-	-	-	-	-
Indirect Costs	-	-	-	-	-	-	-	-	-	-
Total - all Costs	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Total for CRP	Actual Expenses - Last Period					Actual Expenses - Cumulative				
	Window 1 & 2	Window 3	Bilateral funding	Other funds	Total funding	Windows 1 & 2	Window 3	Bilateral funding	Other funds	Total funding
Personnel	-	-	-	-	-	902	-	1,525	-	2,427
Collaborator Costs - CGIAR Centers	-	-	-	-	-	-	-	-	-	-
Collaborator Costs - Others	-	-	-	-	-	2	-	475	-	477
Supplies and Services	-	-	-	-	-	817	-	720	-	1,537
Operational Travel	-	-	-	-	-	351	-	340	-	691
Depreciation	-	-	-	-	-	18	-	151	-	169
Sub-Total of Direct Costs	-	-	-	-	-	2,090	-	3,211	-	5,301
Indirect Costs	-	-	-	-	-	462	-	543	-	1,005
Total - all Costs	**-**	**-**	**-**	**-**	**-**	**2,552**	**-**	**3,754**	**-**	**6,306**

Report Description	
Name of Report	Cash Flow (Windows 1 and 2 only)
Reporting Line	Lead Center Report to Consortium Office
Frequency/Period	Half-Yearly / 01 Jul 2011 - 31 Dec 2011
Delivery	45 days after period end
CRP Nr :	1.3 (AAS)
Period :	01 Jul 2011 - 31 Dec 2011

	Prior Periods	Last Quarter, to 31 Dec 2011
Opening Balance	-	-
Received from Consortium Office (actual dates)		
08 Dec 2011	-	3,900
	-	-
	-	-
Total Receipts	**-**	**3,900**
Disbursements - Prior Periods		
IWMI	-	-
Bioversity	-	-
WorldFish	-	2,437
Total Disbursements	**-**	**2,437**
Funds held - end of Period	**-**	**1,463**

APPENDIX A – PROGRESS AGAINST KEY MILESTONES JULY-DECEMBER 2011 (31 JANUARY 2012)

MILESTONES		
Area of activity	**2011**	
	Q 3	**Q 4**
Establishment (Quality leadership and staffing in place)	• Decide and announce arrangements for program leadership (Program Leader + Program Manager); • Program Leader in place	• Program leader and program manager in place
Establishment (Effective Program Leadership Team)	• Refine ToR of PLT and establish	• 1st meeting PLT
Establishment (Well-managed Program Support Unit)		• Refine ToR for PSU • Key recruitments made • Audit completed of business systems in place in focal countries for managing CRP • Business systems agreed for overall running of CRP
Governance		• POP membership agreed • 1st meeting POP
Administrative arrangements		• Budget agreed for 2012; • PIA signed • PPAs agreed and signed with other Centers for their work under CRP
Funding		• Unrestricted targets set for CRP in 2012
Country roll out (coordination)	• Outline program implementation manual; • Methodology for hub scoping agreed	• First full draft program implementation manual • Methodology and tools for participatory diagnoses and hub design agreed and posted
Country roll out (Bangladesh, Solomons, Zambia)		• Initial hub scoping (Zambia) • National Inception Workshop (Zambia)
Country roll out (Cambodia, Philippines)		
M&E + IA		• ACIAR proposal designed • Approach promoted to DFID, IDRC • Methodology for M&E and IA agreed and posted
Gender		• Gender methodology for hub diagnosis and design agreed
Science products		
Policy events		• Discuss CRP at ISPC Science Forum
Communications	• Web site structure and modus operandi agreed	• Web site operational

Completed
Delayed slightly + completed in next quarter
On track
Slow progress - concern
Not done – to be rescheduled or dropped

APPENDIX B – SCIENCE OUTPUTS

THEME	SCIENCE OUTPUTS IDENTIFIED IN 2011
1. Sustainable Increases in system productivity	*WorldFish outputs* Bangladesh - A total of 16.99 million PCR tested virus free shrimp PLs were stocked by 2831 project farmers; sales increased by a total of USD 24.47M; new investments totaled USD 2.85M; 3,832 new jobs were generated; and 66 news, case study and articles published in local and national newspapers. (SA1559USA) Bangladesh - several workshops at CBO level with important stakeholders and technical training of RFLDC and DoF Officials on genetic management of broodstock for quality fish seed production in the hatcheries. (BA2370DAN) Bangladesh - Training of lead fishers in Sumamgonj, lead farmers at Dinajpur and Rangpur, and kitchen demonstrations conducted. (BA3739IFA) Bangladesh - preparation of an inception report for a project that will increase the resilience of agricultural and aquaculture systems in the coastal areas of the Ganges Delta. (BA3826IRR) Bangladesh - Training of RFLDC and DoF Officials on genetic management of broodstock for quality fish seed production in the hatcheries; Several workshops at CBO level with important stakeholders. (BA2370DAN) Bangladesh - Training for Lead Fishers in Sumamgonj, Lead Farmers at Dinajpur, and Lead Farmers at Rangpur; Kitchen demonstration to support improved infant nutrition; Distribution of juvenile stock and feed to communities. (BA3739IFA) Bangladesh - Report - 'Expansion of the Cereal Systems Initiative for South Asia (CSISA) in Bangladesh: Village Survey of the Three Hubs'; 86 demonstrations established; 19 farmer field days involving 475 farmers who received direct project support; farmer training on different improved technologies (3093 farmers incl. 762 women). (BA3746IRR) Philippines - Technical report "Assessment of Alternative Livelihood Opportunities for Small Scale Aquaculture Operation in the Philippines" in six Regions (2, 5, 7, 8, 9, 10); Report - technical and economic viability of three culture modalities: monoculture (prawn), poly-culture (prawn-tilapia), and integrated rice-prawn) (PH1547DST) Philippines - Final technical report 'Food Production Assistance in Coastal and Inland Aquaculture'; 2 hatcheries upgraded/established in Mindoro provinces; 3 unit multi-commodity solar tunnel dryer provided in Camarines Norte benefiting 65 members of the community; 7 training events conducted for project beneficiaries. (PH2353SCA) Solomons - Two economic evaluation tools developed for Sandfish pond culture and ranching (NR1511ACI). *IWMI Outputs* Research papers focusing on the implications of climate change on Asian deltas with specific reference to agriculture, aquaculture and fisheries production. Methods for participatory assessment of management options for wetlands in context of competing uses in GaMampa, South Africa Philippines - Training to support an ecosystem based approach to biodiversity conservation and development: Refresher course on Biodiversity Conservation for PSC (22 participants); Mangrove Rehabilitation (60 participants); Livelihood training (120 participants). (PH3725USA)
2. Equitable access to markets	Bangladesh - Report - 'Enhancing the Impacts of Decentralized (Fish) Seed Production' (Final evaluation report); International workshop (for project sharing and policy dialogue). (SA1557DFI)

THEME	SCIENCE OUTPUTS IDENTIFIED IN 2011
3. Social-ecological resilience and adaptive capacity	*WorldFish Outputs* Africa (Malawi: Lake Chilwa Basin) - Communities trained in implementation of management plans (3 events and 90 participants); Report with a value chain analysis of firewood; Basin scale vulnerability maps produced and updated; Report on livelihood historical trends in the basin; Training materials developed and training conducted; Report - market survey; Report - An evaluation of the processing and economic performance of solar fish dryers. (AF2359NOR) Africa (Ghana) - Report 'Smoked marine fish from Western Region, Ghana: a value chain assessment'; training module delivered. (WA1684USA) Asia - Report - Climate change impacts, vulnerability assessments, economic and policy analysis of adaptation strategies in selected coastal areas in Indonesia, Philippines and Vietnam (First Technical Progress Report). (PH3813EEP) Bangladesh - Third Round Report of the FRSP on Fish Catch and Bio-diversity Monitoring; A fish pictorial has been published titled "Introduction to Fish Species Diversity Sunamganj Haor region within CBRMP's working area". (SA1033LGE) Cambodia - 5 workshops supporting integrated fisheries management and RAMSAR wetlands conservation. (CA3806CEP) Pacific - a bi-language interactive DVD to support the Coral Reef Initiatives for the South Pacific Philippines - 14 training programs delivered on a variety of topics (e.g. coastal resource mgmt, ecosystem approach to fisheries and aquaculture, high value species) with 610 attendees. (PH3729APL) Philippines - Report - State of the Coral Triangle Report (SCTR); Report - 'Improving the collection of fish-catch statistics in the Philippines with emphasis on small-scale fisheries'. (PH3724UNQ) Solomons - Report - Improving resilience and adaptive capacity of fisheries-dependent communities in Solomon Islands (PA1058ACI) *IWMI Outputs* Easy to utilize method that enables flow regulating functions of floodplains, headwater wetlands and forests in the Zambezi basin to be compared with and without the presence of a specific ecosystem type. A water resources assessment framework for water allocation to small scale irrigation and aquaculture in Malawi A commune agroecosystem analysis guidance manual that can be used for better planning at the commune level in Cambodia A report reviewing PES in the Mekong - with a focus on Laos PDR and Vietnam. Method that quantifies impact of natural ecosystems on flood and low flows that can help reduce flood and drought risk for households in the Zambezi Improved strategies on integrated water management through small storages at famer level that could ensure sustainable development and preventing potential conflicts among famers in Mali
4. Gender & Equity	Bangladesh - Report 'A Rapid Assessment of Gender in Agriculture of Bangladesh'. (BA3746IRR)
5. Policies and institutions to empower AAS users	Cambodia - Multi-stakeholder workshop on resource competition, governance, and livelihoods in Tonle Sap fisheries. (PE3810AED) Philippines - Report - Identification of appropriate schemes/options for location-specific improvement in management of coastal fisheries and aquaculture; Report - 'Towards Sustainable Development of Small Scale Fisheries in the Philippines: Project Highlights, Lessons Learned and Strategic Directions'. (ES1070BAR) Philippines - Training to support capacity building on fisheries socioeconomic assessments and analysis (5 days and 43 participants including trainers). (PH3811NFR)
6. Knowledge Sharing and Learning	

RESEARCH
PROGRAM ON
Aquatic
Agricultural
Systems

CGIAR

The CGIAR Research Program on Aquatic Agricultural Systems is a multi-year research initiative launched in July 2011. It is designed to pursue community based approaches to agricultural research and development that target the poorest and most vulnerable rural households in aquatic agricultural systems. The Program is partnering with diverse organizations working at local, national and global levels to help achieve impacts at scale. The CGIAR Lead Center of the Program is the WorldFish Center in Penang, Malaysia. For more information, visit *aas.cgiar.org*

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