AAS 2013 Annual Report

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KEY MESSAGES

The CGIAR Research Program on Aquatic Agricultural Systems (AAS) takes an innovative approach to improving the lives of poor and vulnerable rural households. Through our work, we aim to directly benefit some 6 million people (in Asia's mega deltas, the island systems of the Pacific and Southeast Asia, and Africa's inland waters), and through scaling with partners to reach 15 million more. By sharing our learning, we aim to extend the benefits of our approaches to many more people living in other complex systems.

In 2013, the program agreed on a set of intermediate development outcomes (IDOs) together with associated draft indicators and targets, a program-level theory of change, and a set of three scaling pathways through which we believe the program can achieve outcomes at scale. These have played a central role in guiding investments in the program in 2013 and plans for 2014, while recognizing that this overarching outcome framework for the program will be refined as the CGIAR's approach to IDOs and performance-based management is developed further in 2014–15.

By the end of 2013, the AAS program had completed two full years, with the first phases of implementation concluded in five hubs: southern polder zone (Bangladesh), Tonle Sap (Cambodia), Visayas-Mindanao (Philippines), Malaita (Solomon Islands) and Barotse Floodplain (Zambia). Detailed research design is now well advanced in all hubs, and implementation is underway. While this is still a formative stage (for what is a different type of research program for the CGIAR), and a first full analysis of early program outcomes in these hubs will only be undertaken in 2014, progress so far has been encouraging. Documented program outcomes in 2013 illustrate (i) the contribution of bilaterally funded projects to developing and delivering improved technologies within a wider AAS program framework that can foster both sustainability and wider outcomes at scale; (ii) the role of the program's participatory methodology and transformative approaches in helping to foster conditions for socio-ecological change in the program's hubs; and (iii) the importance of effective partnerships in taking outcomes to scale.

These outcomes are supported by a large volume of program output. A total of 80 knowledge tools and 29 Institute for Scientific Information (ISI) publications were produced during the course of the year, and five open-access databases were maintained. Forty-five of the tools were in the form of targeted guidance materials for program stakeholders engaged in specific farming and resource-use practices, 22 were training materials, 9 were research tools, and 4 were policy briefs. Of the 29 ISI publications, 45% (13) concerned the program's productivity theme, 35% (10) concerned resilience and 14% (4) concerned markets. The program's website was formally launched and serves as the primary platform for accessing the program's publications.

Emerging evidence from our research in focal hubs shows that the program's use of participatory processes in research design and our research focus on fostering, the conditions required for socio-ecological transformation, have led to strong community ownership and engagement in a range of both research and institutional processes. For example, first analysis of community concerns about fisheries governance in the Barotse Floodplain in Zambia is being used to inform policy debate on community-based fisheries management there. Similarly, research on institutional innovations in support of fisheries management in Cambodia has led to significant improvements in community engagement in fisheries management in the Tonle Sap Lake. And in Bangladesh, initial results from participatory action research with women growing vegetables indicate improving confidence and knowledge, resulting in improved ability to bargain for control of assets within the household. These results are discussed further in this report, and more in-depth analysis of this early evidence will be conducted in 2014.

Complementing the program design process in each hub, we have worked to align and integrate bilaterally funded projects with a view to reaching significant numbers of households and laying the basis for achieving sustainable outcomes at larger scale in the future. An important highlight in 2013 has been Bangladesh, where our research has brought benefits to over 500,000 farmers, increased total annual income by US$ 92 million, generated US$ 300 in profit for each homestead pond and raised household income by 20%: US$ 6000 per hectare from commercial fish ponds and US$ 2000 per hectare from commercial shrimp ponds. These benefits are the result of research on improved fish strains, fish seed dissemination systems, integrated aquaculture-agriculture farming technologies and shrimp disease control, combined with effective partnerships and outreach. This strong progress supports the program's approach to scaling technologies within a systems CGIAR research program; while such large numbers will not be possible in all countries or in all research areas, it supports the strategy of integrating appropriate bilateral projects, where possible, into the program's focal hubs. As the program develops, a major focus of our work is on continuing to integrate this technology research with the program's systems approach, thus strengthening the quality and sustainability of these technology-related outcomes.

Consistent with the program's growth in 2013, expenditures increased to US$ 26.5 million for the year, with W1/W2 funding contributing US$ 12.8 million and W3 and bilateral funding contributing US$ 13.7 million. These expenditures focused in particular on effective implementation in the program's focal hubs, while building the program's gender and knowledge sharing and learning research capacity. There was also a significant increase in investment in our hub, national and global partners.

Farmer on flood plain, Mongu, western Zambia

KEY MESSAGES

IMPACT PATHWAY AND INTERMEDIATE DEVELOPMENT OUTCOMES

The AAS program has been designed to improve the contribution of aquatic agricultural systems to reducing poverty and improving food security. We seek to do this by fostering technological and organizational innovations that both harness the productivity and diversity of these systems and increase the inherent capacity of smallholder farmers to experiment and innovate. This approach is reflected in the program's IDOs, as well as the overall program impact pathway and theory of change. Our seven IDOs are (i) increased and more equitable income from agricultural and natural resources management; (ii) improved productivity in pro-poor farming systems; (iii) improved diet quality of nutritionally vulnerable populations, especially women and children; (iv) increased control over resources and participation in decision-making by women and other marginalized groups; (v) increased capacity for innovation within low-income and vulnerable households; (vi) increased capacity in low-income communities to adapt to environmental and economic variability, shocks and long-term changes; and (vii) greater resilience of aquatic agricultural systems for enhanced ecosystem services. These provide the focus for the program's "refresh" proposal for 2015–16.

Our approach to delivering these IDOs builds on the theory of change set out in the original proposal. Under this theory we have identified three pathways to achieve development outcomes at scale:

- **Pathway 1. Scaling innovation in program hubs**. This pathway focuses on our work with communities and partners in hubs to scale research outcomes through adoption of technological and organizational innovations.

- **Pathway 2. Fostering conditions for socio-ecological change in hubs**. This pathway focuses on our work in hubs to (i) improve knowledge and information systems; (ii) build capacity; (iii) transform power relations and gender norms; (iv) inform policy reform; and (v) build effective coalitions of stakeholders.

- **Pathway 3. Influencing research in development practice**. This pathway focuses on national, regional and global scaling—working with networks of key partners at multiple levels to co-develop and apply learning to improve development policies, strategies and practice—within aquatic agricultural systems and beyond.

Photo credit: WorldFish

Fishers, Bangladesh

PROGRESS ALONG THE IMPACT PATHWAY

The AAS program-level theory of change and impact pathway towards intermediate development outcomes starts with the program's research approach and continues along our scaling pathways. Within this overarching programmatic framework, our work in 2013 has focused on four main categories of research activity: (i) initial implementation of the program's integrated research agenda in our first three focal countries and hubs (Bangladesh, Solomon Islands and Zambia); (ii) design of the program's research agenda in the next two countries and hubs (Cambodia and the Philippines); (iii) continued global research synthesis on selected themes to help frame the agenda and underpin and strengthen the detailed design of the program at country and hub level; and (iv) other research in focal countries and related aquatic agricultural systems designed to generate outputs and outcomes that contribute to the program's development objectives, generating learning and technologies that the program will draw upon as it moves forward. Progress under these four areas of research is summarized below in terms of outputs, progress towards outcomes and progress towards impact.

C.1 Outputs

The program's outputs for 2013 are summarized in Annex 1, Table 1. Documentation of these outputs is found in project reports, websites and publications available at www.aas.cgiar.org. Highlights from each of the three most important categories of output are provided below. This forms a substantial body of output, with bilaterally funded projects playing a critically important role. Overall, we believe that the balance between knowledge tools and ISI publications is broadly appropriate at this stage in the program. However, we envisage that the number of policy briefs and other materials designed to influence policy and practice will increase in future years. We also envisage an increase in ISI publications relating to gender equality and knowledge sharing and learning. The productivity theme is likely to continue to lead in publications in view of its prominent role in the program and the diversity of technologies we are pursuing.

Knowledge tools. A total of 80 methods guides and other knowledge tools were generated during the year (Annex 1, Table 1, indicators #1 and #4). Forty-five of these were in the form of targeted guidance materials for program stakeholders engaged in specific farming and resource-use practices. Examples include farmer's guidebooks on commercial carp farming and dike vegetable cropping, carp and tilapia nursery management, and *bagda* (shrimp) farming, and a technology manual for integrated culture of carp and small indigenous fish species. A further 22 outputs were manuals used in the program's training events, covering topics such as integration of rice-fish-horticulture, cage aquaculture, fish fry maintenance and sale, and use of disease-free shrimp post larvae. The largest number of these tools were developed in support of the program's farm productivity improvement efforts, particularly in Bangladesh, where significant bilateral funding has allowed the program to progress more rapidly and across a wider number of communities than originally envisaged. The outcomes from using these tools are highlighted in Section C2 under Scaling Pathway 1.

Nine knowledge products took the form of specific research tools for use by different research team members, including farmer researchers. These included record books and data collection templates for farmers, a participatory action research process documentation template, community-based hazard mapping, and a community-based resource management facilitator's manual. These tools are designed to improve the quality and consistency of the research conducted through the program. They also play a critical role in the program's work to engage with and empower communities. Early indicators of success from this approach are discussed further in Section C2 under Scaling Pathway 2.

Four policy briefs were also produced covering improved fisheries management in the Barotse Floodplain, mangrove management in the Solomon Islands, transformative change, and transforming gender relations. These policy briefs contribute to the program's work across all three scaling pathways, but with greater emphasis on Scaling Pathway 3 than other knowledge products.

Publications in ISI journals. Sixty-six science publications were completed during the course of the year. Of these, 29 were submitted for publication or published in ISI journals (Annex 1, Table 1, indicator #9), 8 were in books or non-ISI journals, 12 were working papers, 13 were reports, and 3 were popular articles. The largest number of ISI publications (13 = 45%) concerned the program's productivity theme, 35% (10) concerned resilience and 14% (4) concerned markets (Table A). A full list of publications is provided in Annex 2.

Drawing upon the science publications produced in 2012 and 2013, we produced the first draft of the AAS science handbook in 2013. This distills the program's science approach and findings into a series of short synthesis chapters with the source publications as supporting annexes. The purpose of this document is to provide a readily accessible primer for stakeholders on the key foundational elements of the program's approach. The handbook will be updated annually as learning from the program leads to further development of the theory and practice.

Open-access databases. Five open-access websites, all linked to relational databases, are maintained through the program. The BioFresh and FishBase portals collate data, models, tools and indices for both freshwater and marine biodiversity research. The program also supports ReefBase and its two sister sites, the Coral Triangle Atlas and the Bay of Bengal Marine Protected Area Atlas. In addition, a development server for aquatic agricultural systems (AqSysNet) was set up during 2013. This will contain geographic information on AAS countries and hubs; it will go live in 2014 following further testing and consultation with users. These websites and databases provide sources of comprehensive, global information to aid in the management of aquatic systems and their associated economic resources. In supporting this work, the program is committed to using open-source software and solutions, which all of these systems currently exploit.

	Research theme						
Type of publication	System productivity	Access to markets	Resilience and adaptive capacity	Gender equity	Policies and institutions	Knowledge sharing and learning	**Total**
ISI	13	4	10	0	2	0	29
Others (working papers, reports, policy briefs)	10	3	7	3	5	9	37
Total	**23**	**7**	**17**	**3**	**7**	**9**	**66**

Table A. Summary of AAS science publications in 2013.

C.2 Progress towards the achievement of research outcomes and IDOs

The program's three scaling pathways identify distinct processes through which our research outputs will be used by stakeholders and partners in ways that produce research outcomes and ultimately IDOs at scale. While the AAS program is still at an early stage of implementation, a growing body of evidence is emerging to illustrate how this programmatic theory of change is working in practice. Examples of evidence from each of the scaling pathways are provided below, and illustrate work under several of the program's research themes.

Pathway 1. Scaling innovation in hubs. As detailed in Annex 1, Table 1, indicator #4, the AAS program is generating a range of tools and methodologies in the hubs where we work, and these in turn are being used by stakeholders and partners to achieve outcomes. Participatory diagnosis and design has been used in each of the five hubs to develop the program's research agenda there. These hub research agendas identify most promising opportunities for improving livelihoods, and we pursue these with focal communities, building on the opportunities provided by bilateral projects and integrating these into the program where possible. In 2013, a major focus of these research outputs was improved system productivity in the program's hub in the southern polder zone of Bangladesh. This investment resulted in improved production practices by farmers and hatchery operators, reaching over 500,000 farmers by the end of 2013. As in 2012, this work was pursued in partnership with Save the Children and two local nongovernmental organizations (NGOs), Codec and SpeedTrust, as well as selected private-sector operators and the Department of Fisheries. Activities have focused on supporting adoption of vegetable production at household level, providing improved quality fish seed at scale, and providing aquaculture training for both men and women farmers managing both household fishponds and higher intensity commercial tilapia and shrimp production. The latter included training in use of disease-resistant shrimp post larvae that resulted in a 70% increase in production of shrimp. A total of 48,000 men and 52,000 women from 100,000 households were trained in these approaches in 2013, and monitoring of these households has shown 102,000 ha under improved practice. Farmer field days have expanded this reach further by fostering intra- and inter-community learning. In addition, as a result of the strong focus on women in this work, many women farmers have now formed farmers groups and are conducting research on vegetables, including red amaranth, okra and *kangkong* (water spinach). This has not only increased their knowledge of vegetable cultivation, but has noticeably boosted their self-confidence (see Pathway 2 below).

Pathway 2. Fostering conditions for socio-ecological change in hubs. The rationale for this scaling pathway lies in the growing body of evidence that agricultural research and development needs to be conducted differently if it is to have sustainable outcomes at scale in the complex systems used by most smallholder farmers and natural resource users.[1] The AAS program is designed as a program of systems research that not only develops new technologies and methodologies to improve development outcomes in aquatic agricultural systems, but does so in ways that help foster conditions for wider socio-ecological change and sustained innovation by smallholders. To do so, the AAS research in development approach emphasizes partnership approaches to research design and implementation, and testing methodologies for agricultural and natural resource management research that can bring about transformative change.

The research in development approach was used in program rollout in Bangladesh, Solomon Islands and Zambia in 2012, and in 2013 to design detailed research initiatives in these three hubs. Similarly, it has been used to roll out the program in Cambodia and the Philippines in 2013. While a detailed study of early program outcomes in these hubs will only be undertaken in 2014, initial evidence from both Bangladesh and Zambia indicates that the processes used in rollout and design have led to strong community engagement with the program. For example, in Zambia people from three of the program's focal communities have mobilized around the topic of "canal improvement" as a means to boost crop production, improve food security, and

PROGRESS ALONG THE IMPACT PATHWAY

increase income through crop and vegetable sales. This responds to a long-standing constraint for people who try to farm on the Barotse Floodplain, with many earlier attempts to address it having failed. While it would be premature to be confident that the AAS program will succeed where others have failed, our first assessment of progress has identified a different level of community engagement that is attributed to the program's approach. Reporting on the community mobilization process, participants commented that "the change of attitude among communities" led to willingness to take responsibility for canal clearance, that "it became easy to mobilize people for action because the foundation had been laid through the [AAS] visioning exercise and people were eager to begin taking action," and that this was recognized and celebrated—"we take responsibility and own problems ourselves." Similarly in Bangladesh, participatory action research with women growing vegetables is credited with improving confidence and knowledge and so improving their ability to bargain for control over assets within the household. These early indicators of outcomes will be analyzed fully in 2014.

As we pursue the program's research in development approach to fostering socio-ecological change, the AAS program will also build on the outcomes being generated in the hubs through bilaterally funded research. For example, in the program's Tonle Sap hub in Cambodia, the Strengthening Aquatic Resource Governance (STARGO) partnership has been working in support of recent State reforms designed to expand community-based fisheries management. Through an extensive process of dialogue at local and provincial levels across the lake basin, WorldFish, civil society and government partners have facilitated institutional innovations among concerned communities. This has resulted in notable outcomes such as joint patrolling by community fishery organization members and fishery officers. Similarly, community fishery organization committees cite improved collaboration across different local management areas. This includes collaboration with village and commune authorities and local police in cracking down on illegal fishing, as well as raising awareness about fisheries regulations. Similarly, dialogue has helped reduce conflict between fishers and dry-season rice farmers. A local dialogue in Kampong Kor Commune resulted in a negotiated agreement on water allocation between dry-season rice farming and maintaining water for fisheries. In addition, the dialogue has helped community fishery organization members become more aware and articulate about how flooded forest clearing affects habitat for fish spawning, sedimentation and the availability of water for irrigation in the dry season.

As the program's research agenda develops in each hub, we aim to use the program's participatory action research approaches to increase the scope and depth of these processes that foster conditions for socio-ecological change. This will be accompanied by intensified monitoring and evaluation with a focus upon harnessing outcomes, learning from these, and refining and expanding our approach.

Pathway 3. Influencing research in development practice. We are pursuing Pathway 3 by contributing to national, regional and global policy dialogue. While it is expected that these investments and their outcomes will grow as the program matures, some early outcomes from 2013 include integration of local-level learning into national policy implementation. For example, in the case of Tonle Sap described under Pathway 2, the Cambodian national fisheries administration is now using evidence of successful collaboration between government and communities provided through the STARGO partnership to inform new policy implementation for community-based fisheries management. Similarly, the Zambian fisheries department is using learning from AAS work in the Barotse hub, in particular initial analyses of fisheries management challenges there, to inform the national policy debate on community engagement in fisheries management. In the Philippines, national government agencies are looking to the Iligan Bay Alliance in the Visayas-Mindanao hub as a model of innovation in governance, based on the high degree of community engagement in AAS diagnosis and design. This has helped enable coordination across multiple municipal jurisdictions to help identify opportunities to rebuild livelihoods in the wake of Typhoon Haiyan.

On a larger scale, lessons from the AAS program are being used in several other CGIAR research program processes. For example, the AAS participatory scoping methodology was used to design scoping for the CGIAR Research Program on Water, Land and Ecosystems (WLE) in the Volta Basin in 2013. Similarly, the AAS community and livelihoods focus has been used to prepare a joint AAS-WLE-Global Rice Science Partnership scoping mission in Myanmar's Ayeyarwady Delta. The program's gender-transformative approach has also been drawn upon by other CGIAR research programs as they developed their gender strategies in 2013, and we are building upon this through increased cross-program collaboration on gender.

More widely, the program has contributed its experience and learning to a range of events and partnerships designed to improve investment in innovation in agricultural research and development. Examples include the *Deutsche Gesellschaft für Internationale Zusammenarbeit* (GIZ)-CGIAR initiative on agricultural innovation, and a partnership with the French Agricultural Research Centre for International Development (CIRAD) on impact assessment for capacity to innovate. As part of this work, the program is working with other systems CGIAR research programs to lead development of the CGIAR's approach to the "capacity to innovate" IDO. This will be developed further through a workshop in March 2014.

At regional level, the AAS program is working closely with key regional partners to integrate learning from the AAS program into their work. Progress on this in 2013 included a memorandum of understanding with the African Union's New Partnership for Africa's Development (NEPAD) Agency with a view to fostering learning from the AAS program through NEPAD's Rural Futures initiative, the Comprehensive Africa Agriculture Development Program and the Program on African Fisheries, and agreement with the Forum for Agricultural Research in Africa (FARA) to develop a learning platform on aquatic agricultural systems. More information on these initiatives is provided under Section E.

C.3 Progress towards impact

While the program is still in the early stages of implementation, the evidence of achievements, outputs and outcomes in 2013 give us grounds for confidence that the program's approach will contribute to significant impact over time. In particular, the results reported here provide tangible evidence of the role of our research in pursuing the program's three scaling pathways. After only 2.5 years of operation, the program has been able to leverage bilateral funding to reach 500,000 farmers in Bangladesh alone, with improved production practices raising incomes significantly. Over the full range of activities pursued through this work in Bangladesh (see Sections C1 and C2), total annual income in one group of targeted communities was increased by US$ 92 million, with an average of US$ 300 in profit generated for each homestead pond and household income raised by 20%, US$ 6000 per hectare from commercial fishponds and US$ 2000 per hectare from commercial shrimp ponds. More detail on this work is available in the USAID-Aquaculture for Income and Nutrition 2013 annual progress report. While these results concern only one part of one country, they illustrate the potential of the AAS program to improve the lives of large numbers of people. At the same time, early results from our use of the AAS research in development approach to fostering socio-ecological change through program rollout, research design and implementation, suggest that innovation in how we do research can foster the socio-ecological change that we believe is required to make our technology successes sustainable, and contribute to achieving outcomes at scale. Testing this hypothesis remains a core focus of the program, and we will increase our investment in monitoring and evaluation in 2014 to help us do so.

GENDER RESEARCH ACHIEVEMENTS

The AAS Gender Strategy approved in March 2013 focuses on understanding how gender norms influence outcomes in the places we work, identifying ways to facilitate change in these norms, designing ways to reduce gender inequality in the livelihoods choices available through our work, and learning from this research with a view to fostering change at scale. The strategy is intended to guide the program's contribution to achieving the IDO on gender and empowerment and, in turn, to other IDOs. Draft indicators have been developed for the gender (empowerment) IDO, and gender has been integrated into other IDOs. These will be refined in 2014 through the Consortium's gender network initiative, and targets will be developed.

As we implement the strategy, our gender research has focused upon effective integration of gender analysis into the work we do in the program's focal countries and hubs, complemented by strategic research designed to inform further development of our approach. In 2013, this work resulted in integration of gender dimensions in the design of research initiatives in the program's hubs in Bangladesh, Solomon Islands and Zambia, and in the rollout process in Cambodia and the Philippines. In support, we have integrated gender considerations into methods and tools being used by the program, including guidelines to facilitate integration of gender priorities in rollout and implementation processes (e.g. community visioning), design and implementation of research initiatives (e.g. participatory action research, fish value chain analysis, nutrition), and monitoring. Similarly, a number of tools and training materials (see Annex 1, Table 1, indicator #4) focusing on household pond aquaculture, vegetable production and small fish for nutrition have been produced targeting women farmers; e.g. a training manual for women farmers on integrated aquaculture and vegetable dike cropping in Bangladesh. This integrated approach to gender is now reflected in the AAS program of work and budget for 2014.

Some early results from this research highlight the complexity of gender issues in the program hubs and the need to understand how to engage effectively with these as we pursue our IDOs. For example, preliminary results from the social and gender analysis in Barotse show how gendered access to natural resources enables larger cash-earning potential for men and older boys. While women harvest seasonal natural resources to generate income and supplement food stocks, they supplement this by brewing liquor and engaging in casual labor. Similarly, while women have access to land in both their natal villages and in those of their husbands, they are generally able to only cultivate land in the latter, limiting their agricultural opportunities. In Bangladesh, a survey of 1000 households and 44 water management organizations examined the needs and interests of different social groups and the variable participation of men and women in water management. This survey highlighted how economic and social discrimination towards women channels their activity towards household domestic chores. This in turn constrains their involvement in income-generating activities and in social groups such as those concerned with water management. The detailed design of the program's gender-transformative research activities in the hubs will build on these analyses.

At the strategic level, our work this year built upon the 2012 dialogue on gender transformative research to focus on deepening understanding of gender-transformative approaches and how change happens, assessing approaches to monitoring and evaluation of gender-transformative change, understanding better the linkages between gender norms and poverty, and understanding the organizational change required to support and sustain effective engagement on gender equity. Key outputs from this work in 2013 include (i) a scoping analysis of the range of evidence on gender-transformative outcomes delivered from agriculture research in development; (ii) a preliminary report entitled *Theory of Gender Transformative Change*; and (iii) a draft working paper called *Measuring Gender Transformative Change*.

In addition, the program took important steps to strengthen partnerships for scaling. For example, an analysis of the organizations working on gender in agriculture and related sectors has been conducted in all hubs. Building upon these analyses, dialogues to raise awareness and build coalitions in the Philippines and Zambia have been initiated with hub- and national-level research and development partners and program staff. Similarly, we have worked with Helen Keller International to initiate a National Gender Working Group in Bangladesh to provide a platform for enhanced coordination and cooperation among development partners, raise awareness on gender issues, address gender concerns in development work, and provide guidance and support on gender mainstreaming in project and program implementation. The group will provide an important forum for the program as we pursue our gender work in Bangladesh.

Gender equality targets defined: Building upon the work described above, gendered theories of change are being developed at hub and initiative levels, and a two-phase social and gender analysis methodology has been designed. The first phase of this methodology has been piloted in one hub (Barotse), and the design has been revised based on that experience. This methodology will use the tools being developed for the global study Innovation and Development Through Transformation of Gender Norms in Agriculture and Natural Resource Management, led by the CGIAR gender network. The full gender and social analysis will be implemented in all hubs in 2014 and will provide gender benchmarks and targets for the program's contribution to the IDOs. gender-disaggregated data being generated through several studies (e.g. nutrition baseline survey in Malaita Hub; productivity data on aquaculture in Bangladesh) will contribute to establishing these IDO targets.

Institutional architecture for gender in place: In pursuit of these objectives, the program continued in 2013 to make the financial and staff investments required. Some 20% of budget in 2013 was allocated to our gender work, and by the end of the year, dedicated staff capacity totaled 11 staff (two senior scientists, three postdoctoral fellows and six national research analysts). To complement this investment and help increase social science and gender research capacity in the focal countries, the program convened a summer school on gender analysis in partnership with the University of East Anglia. This brought together staff from CGIAR centers and partners (CARE, Catholic Relief Services, other local NGOs) in focal countries, and has been followed by distance coaching and mentoring. Similarly, the program is working in partnership with the Johns Hopkins University Center for Communication Programs to ensure that the AAS design and implementation of transformative change strategies build upon the best available expertise and learning from the health sector. In addition, the program is developing a gender capacity development and organizational change approach and action plan to strengthen capacities among staff and partners to integrate gender-transformative approaches and gender analysis effectively in the program. The AAS monitoring, evaluation and learning framework that has been developed integrates gender considerations into reporting of flagship, cluster and activity-level outputs and outcomes and is being operationalized in 2014. This framework will be reviewed periodically and adapted as appropriate.

GENDER RESEARCH ACHIEVEMENTS

PARTNERSHIPS BUILDING ACHIEVEMENTS

Effective partnerships are central to the AAS approach and an essential dimension of our impact pathways and theories of change. Put simply, without effective partnerships at multiple levels, the AAS program will not succeed. Reflecting this focus, national partners have participated in program scoping, diagnosis and design in each focal country and are now playing central roles in implementation. Similarly, strong partnerships are being developed at regional level in Africa, Asia and the Pacific. At global level, a wide range of research and development partners play key roles in the program, including CARE and Catholic Relief Services, who are represented in the Program Leadership Team. Likewise, the program has worked closely with colleagues from a range of universities and research institutes in pursuing key strategic initiatives on gender and innovation systems. As the program moves forward, we expect these collaborations to grow into strong institutional relationships. Some highlights are summarized below.

At national level, the AAS work in Cambodia illustrates how we are developing strong partnerships in implementation and are aligning with national policies. In developing our work in Tonle Sap, we have worked closely with Oxfam, CARE, Catholic Relief Services, the Ministry of Fisheries and Forestry, the Ministry of Woman Affairs, and the Tonle Sap Authority. For example, together with the Tonle Sap Authority, we conducted a diagnostic survey on community water, access, availability and management and are now working with a multisector best practice committee to test most promising innovations through community-based participatory action research. Similarly, we have worked with the Fishery Administration and Inland Fisheries Research and Development Institute of the Ministry of Fisheries and Forestry to align AAS research outputs with targets in the Ministry's Strategic Planning Framework for Fisheries 2010–19, including increased aquaculture production and strengthened community fishery committees. The program is working with the fishery administration to align specific AAS outputs to the strategic planning framework and track these through the fishery administration's annual plan. In 2014, we will work together to monitor progress in delivering these outputs.

Similar processes of national-level engagement and partnership are underway in Solomon Islands, where we have aligned our work with the priorities of both national and provincial governments. In the program's Malaita hub, the Malaita Province Partnership for Development network, co-ordinated by the Malaita provincial government, serves as a steering committee for the AAS program in the province. Annual hub after-action reviews as part of the AAS monitoring and evaluation for learning involve the Malaita Province Partnership for Development and serve as an important mechanism to increase alignment. Building upon this collaboration, a joint research initiative between World Vision, the AAS program and the Malaita Province Partnership for Development is now underway using a theory of change approach to learn how provincial networks led by provincial governments can help trigger innovation through improved partnerships, better information-sharing, more effective use of resources and improving the enabling conditions for communities seeking support. Similar close collaboration is underway in Western Province, where participation of provincial executive members in the AAS stakeholder consultation coincided with the preparation of the first Provincial Development Strategy. As a result, the program's priorities in Western Province reflect the priorities of the Provincial Development Strategy, and the AAS program is viewed as a mechanism for implementing this strategy.

Significant efforts have also been made in 2013 to strengthen regional partnerships in order to align effectively with regional priorities and to work towards long-term scaling. Of particular importance is the strong collaboration with the African Union's NEPAD agency and with FARA to align the future development of the AAS program in Africa with the priorities and approaches of these key institutions. A regional consultation on the role of the AAS program in Africa was convened jointly between NEPAD, FARA and the CGIAR from 14 to 16 May 2013 in Lusaka, Zambia. This was followed up with a memorandum of understanding between NEPAD and the AAS program that was signed during the course of the Africa Agriculture Science Week in Accra in July, and by the development of a NEPAD-AAS Action Plan for 2013–14. Building on the Lusaka meeting, a workshop on strengthening capacity for innovation in aquatic agricultural systems was also held at the Africa Agriculture Science Week, and agreement was reached to pursue a FARA information and capacity platform for the AAS program in Africa. This platform will be pursued in 2015–16.

Similar regional partnerships are being developed in the Pacific, where a memorandum of understanding was signed with the Secretariat of the Pacific Community to serve as a basis for long-term collaboration through exchange of learning and scaling. In addition, memoranda of understanding were signed with two Australian universities that are leaders in Pacific science and policy research: James Cook University and the Australian National Centre for Ocean Resources and Security. Similarly, in Southeast Asia, the program has strengthened its policy partnerships with the Association of Southeast Asian Nations and the Southeast Asian Regional Center for Graduate Study and Research in Agriculture through engagement in policy events and engagement of the regional center in program rollout in the Philippines. These partnerships will be developed further to support scaling plans, in particular through Scaling Pathway 3.

At global level, the program has continued to build strong partnerships to address key areas of science. Examples of partners in progress in 2013 include the University of East Anglia, which co-organized the gender and social science research summer school in July; Johns Hopkins University Center for Communications Program, which is helping to guide the design of our gender-transformative approaches; and CIRAD, with whom a workshop was held to explore collaboration on impact assessment for capacity to innovate.

Partnerships with other CGIAR research programs have also grown in 2013. Of particular importance are steps to foster collaboration between the three system CGIAR research programs, including a joint presentation on these to the IDO meeting in Montpellier in June, and a regular series of virtual and some face-to-face meetings between the CGIAR research program directors; these include joint attendance at key events such as the GIZ-CGIAR meeting on innovation systems (Feldafing, November) and a joint partnership visit to the Swedish Agricultural University in December. Similarly, the AAS program has worked closely with the CGIAR Research Program on Livestock and Fish (L&F) to foster integration in the AAS program hub in Bangladesh, and to scope opportunities for joint programming (with NEPAD) in Ghana, including a joint NEPAD-AAS-L&F mission to Ghana in October 2013 to assess opportunities for scaling the AAS program in Ghana in alignment with NEPAD's priorities in the next phases of the program. Other opportunities for cross-collaboration have been discussed with the CGIAR Research Program on Agriculture for Nutrition and Health (Zambia and Bangladesh), the CGIAR Research Program on Forests, Trees and Agroforestry (Zambia), the WLE program (Bangladesh, Zambia and Cambodia), and the CGIAR Research Program on Climate Change, Agriculture and Food Security (Bangladesh and the Pacific). These partnerships will be developed further in 2014 and in the transition phase 2015–16. Further details on the program's approach to partnerships are available in a policy brief.

PARTNERSHIPS BUILDING ACHIEVEMENTS

CAPACITY BUILDING

Pelekelo Mubuyaeta leaves her maize and sugar cane field at midday after working from 6 am to prepare lunch for her family in the Barotse Floodplain, Zambia

Improved capacity at multiple levels is essential to the program's theories of change. Reflecting this importance, capacity building at community level is a program priority and one where we expect investment to grow steadily in the coming years. In 2013, the program provided short-term training for a total of 58,000 female and 56,000 male farmers and resource users, and helped improve practice on 240,000 ha (Annex 1, Table 1: indicators #13, #14 and #33).

Complementing this capacity building at community level, the program is also making significant investments to improve the personal and institutional capacities of researchers and partners to foster innovation and learning in the program. This was identified as a key issue by the international Dialogue on Agricultural Research in Development held in Penang in January 2013 and has been incorporated as one of the key elements of the program's research in development approach. This focus on capacity building includes building competence in (i) process management and facilitation; (ii) designing and implementing plans of action using a theory of change; and (iii) systems thinking and analysis, including the role of gender and ability to engage in critical reflection. This work began in 2013 with partnerships developed with ICRA and Constellation, and leadership training was provided for hub teams. It will be expanded in 2014 in line with the growing needs of the program.

RISK MANAGEMENT

The Program Oversight Panel reviews the AAS risk inventory on an annual basis. The top three risks identified in 2013 are listed below, together with mitigating actions. The next review is scheduled for July 2014.

Risk factor 1 – Lack of capacity in hubs. A systematic review of capacity to implement the program's approach to research in development is currently underway. This review will assess current capacities, identify gaps and create a response plan for each of the five hubs. These plans will be implemented in the second half of 2014 and in 2015. Additionally, initiatives are underway to identify leadership and management capacity gaps and develop tailored responses as required.

Risk factor 2 – Failure to get marginalized communities on the political agenda. The approach to addressing this risk has varied between countries and regions. In Africa, our partnership with NEPAD emphasizes the African Rural Futures initiative that focuses explicitly on the needs of rural people, including the marginalized. Reflecting this partnership, the Barotse hub has been identified as a focal hub for the NEPAD Rural Futures work. In the Philippines, the program is building on the attention given to the Visayas region in the aftermath of Typhoon Haiyan to stress the interplay between vulnerability, adaptive capacity and resilience in these communities. This risk is believed to be less of an issue in the other current focal countries, but similar approaches will be developed as needed.

Risk factor 3 – Failure to sustain community interest and participation. An after-action review of rollout and implementation in 2013 was completed in January 2014. This highlighted a number of initiatives to improve program implementation, and these are being pursued in 2014, including steps to ensure that engagement with communities does not lead to "research fatigue."

A farmer planting rice in Aceh, Indonesia

LESSONS LEARNED

Indicators. The indicators listed in Table 1 provide a useful overview of the program's achievements through both W1/W2 and bilaterally funded activities. At present, however, the metrics are somewhat limited, emphasizing progress in more traditional productivity-focused components of the program's research. New metrics are required to give further emphasis to the other areas of innovation in the program. The AAS program is working to do this through our engagement in the IDO Working Group and leadership of the work to develop indicators and metrics for the "capacity to innovate" IDO. As this work progresses, and indicators and metrics for all IDOs are agreed upon, we look forward to updating our approach.

Program learning. The first years of the program have been rich in learning. We highlight here seven areas where learning has been especially important in 2013 and has influenced program focus in 2014.

Program outcomes. The program's outcomes along all three scaling pathways are encouraging. Those along Pathway 1 highlight the importance of continuing to use bilaterally funded projects as a means to develop and deliver improved technologies within a wider AAS program framework that can foster both sustainability and wider outcomes at scale. The early outcomes under Pathway 2 provide important evidence that the program's participatory methodology and transformative approaches are helping to foster conditions for socio-ecological change in the program's hubs. Much greater attention is, however, required to capture this learning most effectively, and this is a priority for 2014. Progress along Pathway 3 highlights the importance of both communicating our learning effectively and developing even stronger partnerships. These are dealt with in further detail below.

Science focus. Program rollout and design have highlighted the differences in research priorities identified by stakeholders in the different aquatic systems we work in and the consequent variation in geographical focus of the program's six science themes. This emphasizes the value of the participatory design approach that has been taken by the program, as well as the need to deploy science capacity accordingly.

Monitoring and evaluation. Despite the encouraging outcomes so far, one of the lessons learned from 2013 is that the program needs to increase investment in monitoring and evaluation. In response, we have strengthened the program's already comprehensive monitoring and evaluation system with a special focus on outcomes and learning. This includes a cycle of theory of change workshops for priority program elements that began in 2013 and will continue in 2014. In support of this, further guidance and capacity building on monitoring and evaluation is planned with a view to strengthening this learning culture as a routine part of program implementation.

Science output and communications. Although the program has generated a substantial body of learning already in its first few years, this needs to be brought together in ways that make it more accessible to program staff and partners, and in turn to a wider audience. The program's science handbook is an important step in achieving this and will be complemented in 2014 by the development of a set of priority publications for the primary literature. These will in turn drive the program's external communications efforts.

Including vegetables for a balanced diet, Mongu, western Zambia

Gender. Significant progress on gender in 2013 includes enhanced awareness about gender-transformative approaches among the program staff and key partners, initiation of efforts to strengthen the gender and social science research capacity, gradual integration of gender-transformative approaches into a range of technical research in development initiatives, and strengthened partnerships at various levels to implement the gender research in development agenda and lay foundations for scaling. Nevertheless, our experience this year has highlighted that achieving effective integration of our research with a gender-transformative perspective requires time, know-how, and individual and collective efforts by gender specialists and other researchers working on specific technical themes. While we have begun to address this by fostering integrated teamwork in design and implementation of field research, and analysis and writing, sustained investment in strengthening leadership capacity for integration and influence is required if we are to bring about lasting change in mind-sets and research practice.

Partnerships. The quality of the program's partnerships was viewed as one of the program's successes in 2011–12, and this is highlighted again in 2013. However, the increased focus on the program's IDOs in 2013, as well as the crucial role of partnerships in the program's scaling pathways, has highlighted the need to strengthen both the scope and quality of our partnerships even further. For this reason, the program leadership team has developed an initiative to strengthen partnerships in 2014, and this will be linked to the results-based management pilot being pursued by the AAS program.

Capacity building. The innovative nature of the AAS approach highlights the importance of building capacity of staff, partners and other stakeholders. While this has been an area of focus since the start of the program, 2013 has highlighted the need for sustained investment in capacity development. This is planned for 2014.

LESSONS LEARNED

ANNEX 1. CGIAR RESEARCH PROGRAM INDICATORS OF PROGRESS, WITH GLOSSARY AND TARGETS

CGIAR research programs concerned by this indicator	Indicator	Glossary/guidelines for defining and measuring the indicator, and description of what the CGIAR research program includes in the indicator measured, based upon the glossary	Deviation narrative (if actual is more than 10% away from target)	2012		2013		2014
				Target (if available for 2012)	Actual	Target	Actual	Target
KNOWLEDGE, TOOLS, DATA								
All	1. Number of flagship "products" produced by CGIAR research programs	Includes methods guides and other knowledge tools, including farmer guidebooks, research tools and policy briefs			0		7	8
All	2. % of flagship products produced that have explicit target of women farmers/ natural resource managers				0		43%	25%
All	3. % of flagship products produced that have been assessed for likely gender-disaggregated impact				0		29%	12.5%
All	4. Number of tools produced by CGIAR research programs				8		80	53
All	5. % of tools that have an explicit target of women farmers				0		21%	21%
All	6. % of tools assessed for likely gender-disaggregated impact						0%	15%
All	7. Number of open-access databases maintained by CGIAR research programs				5		5	5
All	8. Total number of users of these open-access databases						unknown	
All	9. Number of publications in ISI journals produced by CGIAR research programs			51	30		29	45
1, 2, 3, 4, 6	10. Number of strategic value chains analyzed by CGIAR research programs				9		3	13
1, 5, 6, 7	11. Number of targeted agro-ecosystems analyzed/characterized by CGIAR research programs			3	3		5	5
1, 5, 6, 7	12. Estimated population of above-mentioned agro-ecosystems			35 million	35 million		45 million	45 million

CGIAR research programs concerned by this indicator	Indicator	Glossary/guidelines for defining and measuring the indicator, and description of what the CGIAR research program includes in the indicator measured, based upon the glossary	Deviation narrative (if actual is more than 10% away from target)	2012		2013		2014
				Target (if available for 2012)	Actual	Target	Actual	Target
CAPACITY ENHANCEMENT AND INNOVATION PLATFORMS								
All	13. Number of trainees in short-term programs facilitated by CGIAR research programs (male)			51,088	34,918		55,827	86,683
All	14. Number of trainees in short-term programs facilitated by CGIAR research programs (female)			51,097	37,197		57,969	52,769
All	15. Number of trainees in long-term programs facilitated by CGIAR research programs (male)				4		9	
All	16. Number of trainees in long-term programs facilitated by CGIAR research programs (female)				1		0	3
1, 5, 6, 7	17. Number of multistakeholder research for development innovation platforms established for the targeted agro-ecosystems by the CGIAR research programs			5	5		5	15

CGIAR research programs concerned by this indicator	Indicator	Glossary/guidelines for defining and measuring the indicator, and description of what the CGIAR research program includes in the indicator measured, based upon the glossary	Deviation narrative (if actual is more than 10% away from target)	2012		2013		2014
				Target (if available for 2012)	Actual	Target	Actual	Target
TECHNOLOGIES/PRACTICES IN VARIOUS STAGES OF DEVELOPMENT								
All	18. Number of technologies/natural resource management practices under research in the CGIAR research programs (Phase I)				1		41	42
All	19. % of technologies under research that have an explicit target of women farmers			0	0		22%	24%
All	20. % of technologies under research that have been assessed for likely gender-disaggregated impact			0	0		0%	40%
1, 5, 6, 7	21. Number of agro-ecosystems for which CGIAR research programs have identified feasible approaches for improving ecosystem services and for establishing positive incentives for farmers to improve ecosystem functions as per the CGIAR research programs' recommendations			3	3		3	5
1, 5, 6, 7	22. Number of people who will potentially benefit from plans, once finalized, for the scaling up of strategies	Indicate the potential number of both women and men. Note: The reduction in number of people reflects data from an analysis of numbers of people dependent on aquatic agricultural systems conducted in 2013 and a reassessment of the proportion of these that can benefit from the program's scaling strategy during the program's lifespan.			96 million		21 million	21 million
All, except 2	23. Number of technologies/natural resource management practices field tested (Phase II)				20		16	15
1, 5, 6, 7	24. Number of agro-ecosystems for which innovations (technologies, policies, practices, integrative approaches) and options for improvement at system level have been developed and are being field tested (Phase II)			3	3		3	5
1, 5, 6, 7	25. % of above innovations/approaches/ options that are targeted at decreasing inequality between men and women				1.67%		75%	87%
1, 5, 6, 7	26. Number of published research outputs from CGIAR research programs utilized in targeted agro-ecosystems				54		124	235
All, except 2	27. Number of technologies/natural resource management practices released by public and private sector partners globally (Phase III)				0		0	0

ANNEX 1

CGIAR research programs concerned by this indicator	Indicator	Glossary/guidelines for defining and measuring the indicator, and description of what the CGIAR research program includes in the indicator measured, based upon the glossary	Deviation narrative (if actual is more than 10% away from target)	2012		2013		2014
				Target (if available for 2012)	Actual	Target	Actual	Target
POLICIES IN VARIOUS STAGES OF DEVELOPMENT								
All	28. Numbers of policies/regulations/ administrative procedures analyzed (Stage 1)				2		8	5
All	29. Number of policies/regulations/ administrative procedures drafted and presented for public/stakeholder consultation (Stage 2)				2		5	
All	30. Number of policies/regulations/ administrative procedures presented for legislation (Stage 3)				0		1	
All	31. Number of policies/regulations/ administrative procedures prepared passed/approved (Stage 4)				0		1	
All	32. Number of policies/regulations/ administrative procedures passed for which implementation has begun (Stage 5)				0		1	
OUTCOMES ON THE GROUND								
All	33. Number of hectares under improved technologies or management practices as a result of CGIAR research program research	Clearly identify in this cell the geographic locations where this is occurring and whether the application of technologies is on a new or continuing area		27,900	105,344		242,133	102,594
All	34. Number of farmers and others who have applied new technologies or management practices as a result of CGIAR research program research	Clearly identify in this cell the geographic location of these farmers and whether the application of technologies is on a new or continuing area and indicate: 34(a) number of women farmers concerned 34(b) number of male farmers concerned		45,587	47,035		a) 52,928 b) 531,925	777,607 (not broken down by gender)

Table 1: CGIAR research program indicators of progress, with glossary and targets

ANNEX 1

ANNEX 2. AAS PUBLICATIONS 2013

Theme	Publications in 2013
1. Sustainable increases in system productivity	Andersen AB, Pant J and Thilsted SH. 2013. Food and nutrition security in Timor-Leste. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Project Report: AAS-2013-29. http://www.worldfishcenter.org/resource_centre/AAS-2013-29.pdf Andersen AB, Thilsted SH and Schwarz AM. 2013. Food and nutrition security in Solomon Islands. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Working Paper: AAS-2013-06. http://aas.cgiar.org/sites/default/files/publications/files/WF_3544.pdf Belton B. 2013. Small-scale aquaculture, development and poverty: A reassessment. *In* Bondad-Reantaso MG and Subasinghe RP, eds. Enhancing the contribution of smallscale aquaculture to food security, poverty alleviation and socio-economic development. FAO Fisheries and Aquaculture Proceedings No. 31. Rome: FAO. 93–108. http://www.fao.org/docrep/019/i3118e/i3118e.pdf Belton B and Thilsted SH. 2013. Fisheries in transition: Food and nutrition security implications for the Global South. *Global Food Security*. http://www.sciencedirect.com/science/article/pii/S2211912413000515 Beveridge MCM, Thilsted SH, Phillips MJ, Metian M, Troell M and Hall SJ. 2013. Meeting the food and nutrition needs of the poor: The role of fish and the opportunities and constraints emerging from the rise of aquaculture. *Journal of Fisheries Biology* 83(4):1067–84. http://onlinelibrary.wiley.com/doi/10.1111/jfb.12187/abstract Castine SA, Sellamuttu SS, Cohen P, Chandrabalan D and Phillips M. 2013. Increasing productivity and improving livelihoods in aquatic agricultural systems: A review of interventions. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Working Paper: AAS-2013-30. Cleasby N, Schwarz AM, Phillips M, Paul C, Pant J, Oeta J, Pickering T, Meloty A, Laumani M and Korr M. 2014. The socio-economic context for improving food security through land based aquaculture in Solomon Islands: A peri-urban case study. *Marine Policy* 45:89–97. http://www.sciencedirect.com/science/article/pii/S0308597X13002741 Debnath P, Karim M and Belton B. 2014. Comparative study of the reproductive performance and White Spot Syndrome Virus (WSSV) status of Black Tiger Shrimp (Penaeus monodon) collected from the Bay of Bengal. *Aquaculture* 424–425:71–77. http://www.sciencedirect.com/science/article/pii/S0044848613006911 Dey MM, Spielman DJ, Haque ABMM, Rahman MS and Valmonte-Santos R. 2013. Change and diversity in smallholder rice-fish systems: Recent evidence and policy lessons from Bangladesh. *Food Policy* 43:108–17. http://www.worldfishcenter.org/resources/publications/change-and-diversity-smallholder-rice-fish-systems-recent-evidence-and-policy-lessons-bangladesh Faruque G, Karim M, Sawyer R, Phillips M, Collis WJ and Belton B. 2013. Adapting to salinity in the aquatic agricultural systems of southwest Bangladesh. *Ocean and Coastal Management* [Submitted].

Theme	Publications in 2013
1. Sustainable increases in system productivity	Hall SJ, Hilborn R, Andrew NL and Allison EH. 2013. Innovations in capture fisheries are an imperative for nutrition security in the developing world. *Proceedings of the National Academy of Sciences USA* 110(21):8393–98. http://www.pnas.org/content/early/2013/05/08/1208067110.abstract Johnstone G. 2013. Learning and earning (using community science to sustain the adoption of small-scale aquaculture as an alternative livelihood and contributor to better management of wetland resources in north east Cambodia). *New Agriculturist*. http://www.new-ag.info/en/focus/focusItem.php?a=2932 Karim M, Sawyer R, Phillips M and Belton B. 2014. Profitability and adoption of improved shrimp farming technologies in the aquatic agricultural systems of Southwestern Bangladesh. *Aquaculture* 428–429:61–70. http://www.sciencedirect.com/science/article/pii/S0044848614000921 Karim M, Meisner C and Phillips M. 2013. Shrimp *(Penaeus monodon)* farming in the coastal areas of Bangladesh: Challenges and prospects towards sustainable development. In Delany CA, ed. Shrimp: Evolutionary history, ecological significance and effects on dietary consumption. Nova Publishers. https://www.novapublishers.com/catalog/product_info.php?products_id=46447&osCsid=ed5d383fc51ffaf1b08d55fabf60bbe8 Longley C, Thilsted SH, Beveridge M, Cole S, Nyirenda DB, Heck S and Hother A-L. 2013. The role of fish in the first 1,000 days in Zambia. 2013 IDS Bulletin [Submitted]. McCartney M, Cai X and Smakhtin V. 2013. Evaluating the flow regulating functions of natural ecosystems in the Zambezi River Basin. IWMI Research Report 148. Colombo, Sri Lanka: International Water Management Institute (IWMI). http://www.worldfishcenter.org/resource_centre/AAS-IWMI-148.pdf Mamun-Ur-Rashid M, Belton B, Phillips M and Rosentrater KA. 2013. Improving aquaculture feed in Bangladesh: From feed ingredients to farmer profit to safe consumption. Penang, Malaysia: WorldFish. Working Paper: 2013-34. http://www.worldfishcenter.org/resource_centre/WF-2013-34.pdf Rashid M, Belton B, Phillips M and Karim M. 2013. The current status of aquaculture and aquafeed production in Bangladesh. *World Aquaculture* 44(4):23–27. http://www.worldfishcenter.org/worldfish-publications/current-status-aquaculture-and-aquafeed-production-bangladesh Pant J, Barman BK, Murshed-E-Jahan K, Belton B and Beveridge M. 2013. Can aquaculture benefit the extreme poor? A case study of landless and socially marginalized Adivasi (ethnic) communities in Bangladesh. ISSN 0044-8486. *Aquaculture* 418–419:1–10. http://www.sciencedirect.com/science/article/pii/S0044848613004857 Pant M, Shrestha K and Phillips MJ. 2013. Poverty alleviation and women's empowerment through aquaculture: An experience from Nepal. *In* Bondad-Reantaso MG and Subasinghe RP, eds. Enhancing the contribution of small-scale aquaculture to food security, poverty alleviation and socio-economic development. FAO Fisheries and Aquaculture Proceedings No. 31. Rome: FAO. 181–87. http://www.fao.org/docrep/019/i3118e/i3118e.pdf

Theme	Publications in 2013
1. Sustainable increases in system productivity	Rogers W, Beveridge M and Phillips M. July 2013. Smallholder aquaculture: Sustaining the impact of private investment. *New Agriculturist*. http://www.new-ag.info/en/research/innovationItem.php?a=3040 Thilsted SH. 2013. Fish diversity and fish consumption in Bangladesh. In Fanzo J, Hunter D, Borelli T, and Mattei F, eds. Diversifying food and diets: Using agricultural biodiversity to improve nutrition and health. Routledge. 270–82. http://www.worldfishcenter.org/resources/publications/fish-diversity-and-fish-consumption-bangladesh Wahab MA, Phillips MJ and Mohammed EY. 2013. Payments for hilsa fish *(Tenualosa ilisha)* conservation in Bangladesh. In Mohammed EY, ed. Economic incentives for marine and coastal conservation: Prospects, challenges and policy implications. Routledge. http://www.routledgementalhealth.com/books/details/9780415855983/
2. Equitable access to markets	Belton B and Bush SR. 2013. Beyond net deficits: New priorities for an aquacultural geography. *Journal of Applied Aquaculture* 25:227–38. http://vlib.wf.cslive.org/dbtw-wpd/Pdf/Staff/WF-3624.pdf Belton B, van Asseldonk IJM and Thilsted SH. 2014. Faltering fisheries and ascendant aquaculture: Implications for food and nutrition security in Bangladesh. *Food Policy* 44:77–87. http://ac.els-cdn.com/S0306919213001632/1-s2.0-S0306919213001632-main.pdf?_tid=a690d4b0-9dbb-11e3-8c73-00000aacb35e&acdnat=1393291683_2de32d89218666808d54792039b71351 Gordon A, Finegold C, Crissman C and Pulis A. 2013. Fish production, consumption, and trade in sub-Saharan Africa: A review analysis. Internal Working Paper. Washington, D.C.: World Bank Group. http://www.worldfishcenter.org/resource_centre/WF-3692.pdf Kruijssen F. 2013. Analyzing livelihoods from a value chain perspective: Conceptual tools and possible applications to aquaculture in AAS. [Submitted]. Tran N, Bailey C, Wilson N and Phillips M. 2013. Governance of global value chains in response to food safety and certification standards: The case of shrimp from Vietnam. ISSN 0305-750X. *World Development* 45:325–38. http://vlib.wf.cslive.org/dbtw-wpd/Pdf/Staff/WF_3463.pdf Tran N, Nguyen A and Wilson NL. 2013. The differential effects of food safety regulations on animal products trade: The case of crustacean product trade. *Agribusiness*. http://vlib.wf.cslive.org/dbtw-wpd/Pdf/Staff/WF-3627.pdf Tran N, Wilson N and Hite D. 2013. Choosing the best model in the presence of zero trade: A fish product analysis. In Beghin JC, ed. Nontariff measures with market imperfections: Trade and welfare implications. *Frontiers of Economics and Globalization* 12:127–48. http://vlib.wf.cslive.org/dbtw-wpd/Pdf/Staff/WF-3628.pdf

Theme	Publications in 2013
3. Socio-ecological resilience and adaptive capacity	Ahmed T. 2013. Scoping report: Current status of index-based insurance in Bangladesh. Penang, Malaysia: WorldFish. Project Report: 2013-38. http://aas.cgiar.org/sites/default/files/publications/files/WF-2013-38.pdf Bush SR, Belton B, Hall D, Vandergeest P, Murray FJ, Ponte S, Oosterveer P, Islam MS, Mol APJ, Hatanaka M, Kruijssen F, Ha TTT, Little DC and Kusumawati R. 2013. Certify sustainable aquaculture? *Science* 341(6150):1067–68. http://www.sciencemag.org/content/341/6150/1067 Brummett RE, Beveridge MCM and Cowx IG. 2013. Functional aquatic ecosystems, inland fisheries and the Millennium Development Goals. ISSN 1467-2960. *Fish and Fisheries* 14(3):312–24. http://www.worldfishcenter.org/publications/functional-aquatic-ecosystems-inland-fisheries-and-millennium-development-goals Cohen PJ and Alexander TJ. 2013. Catch rates, composition and fish size from reefs managed with periodically-harvested closures. *PLoS ONE* 8(9):e73383. http://www.plosone.org/article/fetchObject.action?uri=info%3Adoi%2F10.1371%2Fjournal.pone.0073383&representation=PDF Cohen PJ, Cinner JE and Foale S. 2013. Fishing dynamics associated with periodically harvested marine closures. *Global Environmental Change* 23(6):1702–13. http://www.sciencedirect.com/science/article/pii/S0959378013001453 Faulkner L. 2013. SmartFarm monitoring and evaluation framework and strategy. Penang, Malaysia: WorldFish. White Paper: 2013-47. http://www.worldfishcenter.org/resource_centre/WF-2013-47.pdf Foale S, Adhuri D, Aliño P, Allison EH, Andrew N, Cohen P, Evans L, Fabinyi M, Fidelman P, Gregory C, Stacey N, Tanzer J and Weeratunge N. 2013. Food security and the Coral Triangle Initiative. ISSN 0308-597X. *Marine Policy* 38:174–83. http://aas.cgiar.org/publications/food-security-and-coral-triangle-initiative#.UvN1z2KSzdc Goulden MC, Adger WN, Allison EH and Conway D. 2013. Limits to resilience from livelihood diversification and social capital in lake social-ecological systems. *Annals of the Association of American Geographers* 103(4):906–24. http://www.tandfonline.com/doi/abs/10.1080/00045608.2013.765771#.Ux64Gz-SwZM Garces LR, Perez ML, Alolod AC, Buendia ILJ, Callanta LS, Santos LB, Ramirez PJB and Pido MD. 2014. Operationalizing the ecosystem approach to small-scale fisheries management in the Philippines: The Iligan Bay Alliance of Misamis Occidental (IBAMO). *Asian Journal of Agriculture and Development* 10(2):16–38. http://searca.org/ajad/home.php Garces LR, Pido MD, Tupper MH and Silvestre GT. 2013. Evaluating the management effectiveness of three marine protected areas in the Calamianes Islands, Palawan Province, Philippines: Process, selected results and their implications for planning and management. ISSN 0964-5691. *Ocean and Coastal Management* 81:49–57. http://www.worldfishcenter.org/resources/publications/evaluating-management-effectiveness-three-marine-protected-areas

Theme	Publications in 2013
3. Socio-ecological resilience and adaptive capacity	Islam AS, Attwood S, Braun M, Kamp K and Aggarwal P. 2013. Assessment of capabilities, needs of communities, opportunities and limitations of weather forecasting for coastal regions of Bangladesh. Penang, Malaysia: WorldFish. Project Report 2013-35. http://www.worldfishcenter.org/resource_centre/WF-2013-35.pdf Kam SP, Cai X, Sood A, Hoanh CT, Yen BT, Nagoli J and Chijere A. 2013. Decision support for water management for integrating aquaculture in small-scale irrigation systems: A case for the Chingale Catchment in Malawi. Penang, Malaysia: WorldFish. Project Brief: 2013-40. http://www.worldfishcenter.org/resource_centre/WF-2013-40.pdf McClanahan T, Allison EH and Cinner JE. 2013. Managing fisheries for human and food security. *Fish and Fisheries*. http://onlinelibrary.wiley.com/doi/10.1111/faf.12045/abstract Mills M, Álvarez-Romero JG, Vance-Borland K, Cohen P, Pressey RL, Guerrero AM and Ernstson H. 2014. Linking regional planning and local action: Towards using social network analysis in systematic conservation planning. *Biological Conservation* 169:6–13. http://www.sciencedirect.com/science/article/pii/S0006320713003704 Pido MD, Perez ML, Garces LR and Salayo ND. 2013. Re-thinking sustainable development of small-scale fisheries in the Philippines: Past initiatives, lessons learned and strategic directions. *Asian Journal of Agriculture and Development* [Submitted]. Wise RM, Fazey I, Stafford Smith M, Park SE, Eakin HC, Archer Van Garderen ERM and Campbell B. 2014. Re-conceptualising adaptation to climate change as part of pathways of change and response. *Global Environmental Change*. http://dx.doi.org/10.1016/j.gloenvcha.2013.12.002 WorldFish. 2013. Community-based marine resource management in Solomon Islands, a facilitator's guide: Based on lessons from implementing CBRM with rural coastal communities in Solomon Islands (2005–2013). Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Manual: AAS-2013-17. http://www.worldfishcenter.org/resource_centre/AAS-2013-17.pdf
4. Gender equity	Cole S, Puskur R, Rajaratnam S and Zulu F. Sorting cause from consequence: Examining poverty from both sides of the "equation" with gender research in an aquatic agricultural system in Zambia. Paper presented and submitted to be published in the Proceedings of AAA 2013 Annual Meeting, Nov. 2013. Kruijssen F, Albert JA, Morgan M, Boso D, Siota F, Sibiti S and Schwarz AJ. 2013. Livelihoods, markets, and gender roles in Solomon Islands: Case studies from Western and Isabel provinces. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Project Report: AAS-2013-22. http://aas.cgiar.org/sites/default/files/publications/files/AAS-2013-22_0.pdf Johnstone G. 2013. Learning and earning: Women in aquaculture. *New Agriculturist*. http://www.new-ag.info/en/focus/focusItem.php?a=2932

Theme	Publications in 2013
5. Policies and institutions to empower aquatic agricultural systems users	Govan H, Schwarz AM, Harohau D, Oeta J, Orirana G and Ratner BD. 2013. Solomon Islands: Essential aspects of governance for aquatic agricultural systems in Malaita hub. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Project Report: AAS-2013-19. http://aas.cgiar.org/sites/default/files/publications/files/AAS-2013-19.pdf Jahan KM, Crissman C and Antle J. 2013. Economic and social impacts of integrated aquaculture-agriculture technologies in Bangladesh. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Working Paper: AAS-2013-02. http://aas.cgiar.org/sites/default/files/publications/files/WF_3452.pdf Madzudzo E, Mulanda A, Nagoli J, Lunda J and Ratner BD. 2013. A governance analysis of the Barotse Floodplain system, Zambia: Identifying obstacles and opportunities. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Project Report: AAS-2013-26. http://aas.cgiar.org/sites/default/files/publications/files/AAS-2013-26.pdf Ratner BD, Burnley C, Mugisha S, Madzudzo E, Oeur I, Kosal M, Rüttinger L and Adriazola P. 2013. Collaborating for resilience in complex aquatic resource commons: Lessons for policy and practice. Penang, Malaysia: WorldFish. White Paper: 2013-62. http://www.worldfishcenter.org/resource_centre/WF-2013-62.pdf Ratner BD, Cohen P, Barman B, Mam K, Nagoli J and Allison EH. 2013. Governance of aquatic agricultural systems: Analyzing representation, power, and accountability. *Ecology and Society* 18(4):59. http://www.ecologyandsociety.org/vol18/iss4/art59/ES-2013-6043.pdf Ratner BD, Meinzen-Dick R, Hellin J, Mapedza E, Unruh J, Veening W, Haglund E, May C and Bruch C. 2013. Natural resource conflict and collective action: A synthesis of experience and principles for intervention. Collective Action and Property Rights Working Paper Series. Washington, D.C.: International Food Policy Research Institute. Ratner BD. 2013. Collaborative governance assessment. Penang, Malaysia: WorldFish. Guidance Note: AAS-2012-27. http://www.worldfishcenter.org/resource_centre/WF_3465.pdf

Theme	Publications in 2013
6. Knowledge sharing and learning	Apgar M and Douthwaite B. 2013. Participatory action research in the CGIAR Research Program on Aquatic Agricultural Systems. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Program Brief: AAS-2013-27. http://aas.cgiar.org/sites/default/files/publications/files/AAS-2013-27.pdf Crissman CC, Abernethy K, Delaporte A and Timmers B. 2013. A practical guide for ex-ante impact evaluation in fisheries and aquaculture. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Guidelines: AAS-2013-04. http://aas.cgiar.org/sites/default/files/publications/files/AAS-2013-04%20IFAD%20Guide%20to%20Ex-Ante%20Evaluations%20rnd8%20FA%20low%20res%20new%20links.pdf Douthwaite B, Kamp K, Longley C, Kruijssen F, Puskur R, Chiuta T, Apgar M and Dugan P. 2013. Using theory of change to achieve impact in AAS. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Working Paper. http://aas.cgiar.org/sites/default/files/publications/files/AAS-theory-of-change-impact.pdf Dugan P, Apgar M and Douthwaite B. 2013. Research in development: The approach of AAS. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Working Paper. http://aas.cgiar.org/sites/default/files/publications/files/AAS-RIND-Approach.pdf CGIAR Research Program on Aquatic Agricultural Systems. 2013. AAS practice brief: Evaluating natural resource management programs. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Practice Brief: AAS-2013-23. http://aas.cgiar.org/sites/default/files/publications/files/AAS-2013-23.pdf CGIAR Research Program on Aquatic Agricultural Systems. 2013. Ex-ante impact evaluation: Case studies from Malawi, Bangladesh and Ghana. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Working Paper: AAS-2013-05. http://aas.cgiar.org/sites/default/files/publications/files/WF_3540.pdf CGIAR Research Program on Aquatic Agricultural Systems. (2013). Learning from implementation of community selection in Zambia, Solomon Islands, and Bangladesh AAS hubs. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Evaluation and Learning Series Paper: AAS-2013-24. http://aas.cgiar.org/sites/default/files/publications/files/AAS-2013-24_0.pdf Mayne J and Stern E. 2013. Impact evaluation of natural resource management research programs: A broader view. ACIAR Impact Assessment Series Report No. 84. Canberra, Australia: Australian Centre for International Agricultural Research. Tran N, Crissman C, Chijere A, Hong MC, Teoh SJ and Valdivia RO. 2013. Ex-ante assessment of integrated aquaculture-agriculture adoption and impact in Southern Malawi. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Working Paper: AAS-2013-03. http://aas.cgiar.org/sites/default/files/publications/files/WF_3453.pdf

Theme	Publications in 2013
7. Policy briefs	Albert JA and Schwarz AJ. 2013. Mangrove management in Solomon Islands: Case studies from Malaita Province. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Policy Brief: AAS-2013-14. http://aas.cgiar.org/sites/default/files/publications/files/AAS-2013-14.pdf CGIAR Research Program on Aquatic Agricultural Systems. (2013). Improved fisheries management in the Barotse floodplain of Zambia: An urgent call for action. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Brief: AAS-2013-40. http://aas.cgiar.org/sites/default/files/publications/files/AAS%20in%20Zambia%20Barotse%20Improved%20Fisheries%20Management%20Brief%20_FA_lowres.pdf Kantor P. 2013. Transforming gender relations: A key to lasting positive agricultural development outcomes. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Brief: AAS-2013-12. http://aas.cgiar.org/sites/default/files/publications/files/AAS-2013-12.pdf Kantor P and Apgar M. 2013. Transformative change in the CGIAR Research Program on Aquatic Agricultural Systems. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Program Brief: AAS-2013-25. http://aas.cgiar.org/sites/default/files/publications/files/AAS-2013-25_0.pdf
8. Program updates	CGIAR Research Program on Aquatic Agricultural Systems. 2013. 2012 annual report. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Annual Report: AAS-2013-11. http://aas.cgiar.org/sites/default/files/publications/files/AAS-2013-11.pdf CGIAR Research Program on Aquatic Agricultural Systems. 2013. Making a difference. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Poster: AAS-2013-38. http://www.worldfishcenter.org/resource_centre/AAS-3626.pdf Govan H, Schwarz AM, Harohau D and Oeta J. 2013. Solomon Islands national situation analysis. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Project Report: AAS-2013-16. http://aas.cgiar.org/sites/default/files/publications/files/AAS-2013-16.pdf Johnstone G et al. 2013. Tonle Sap scoping report. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Project Report: AAS-2013-28. http://aas.cgiar.org/sites/default/files/publications/files/AAS-2013-28.pdf Schwarz AM, Andrew N, Govan H, Harohau D and Oeta J. 2013. Solomon Islands Malaita hub scoping report. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Project Report: AAS-2013-18. http://aas.cgiar.org/sites/default/files/publications/files/AAS-2013-18.pdf Schwarz AM and Boso D. 2013. Solomon Islands aquatic agricultural systems program design document. Solomon Islands: CGIAR Research Program on Aquatic Agricultural Systems. http://aas.cgiar.org/sites/default/files/publications/files/AAS-3615.pdf

ANNEX 2

ANNEX 3. AAS FINANCIAL REPORT 2013

Cumulative Financial Summary

CRP 1.3 - Aquatic Agricultural Systems
Period: 01 January 2013 - 31 December 2013
Amounts in USD (000's)

Report Description
Name of Report: Cumuative Financial Summary (July 2011–June 2014)
Frequency/Period: Annual
Deadline: Every April 15th

Summary Report - by CG Partners	(a) Total POWB budget since inception					(b) Actual Cumulative Expenses					(c) Variance / Balance				
	Windows 1 & 2	Window 3	Bilateral Funding	Center Funds	Total Funding	Windows 1 & 2	Window 3	Bilateral Funding	Center Funds	Total Funding	Windows 1 & 2	Window 3	Bilateral Funding	Center Funds	Total Funding
1. AFRICA RICE					-					-	-	-	-	-	-
2. BIOVERSITY	727		127		854	711	-	112	-	823	16	-	15	-	31
3. CIAT					-					-	-	-	-	-	-
4. CIFOR					-					-	-	-	-	-	-
5. CIMMYT					-					-	-	-	-	-	-
6. CIP					-					-	-	-	-	-	-
7. ICARDA					-					-	-	-	-	-	-
8. ICRAF					-					-	-	-	-	-	-
9. ICRISAT					-					-	-	-	-	-	-
10. IFPRI					-					-	-	-	-	-	-
11. IITA					-					-	-	-	-	-	-
12. ILRI					-					-	-	-	-	-	-
13. IRRI					-					-	-	-	-	-	-
14. IWMI	695	-	931	-	1,626	581	-	789	-	1,370	114	-	141	-	255
15. WORLDFISH	30,623	9,345	29,416	1,543	70,927	21,613	5,271	23,435	1,543	51,862	9,010	4,075	5,981	-	19,065
Total for CRP	**32,045**	**9,345**	**30,474**	**1,543**	**73,407**	**22,905**	**5,271**	**24,336**	**1,543**	**54,055**	**9,139**	**4,075**	**6,138**	**-**	**19,352**
	44%	**13%**	**42%**	**2%**	**100%**	**42%**	**10%**	**45%**	**3%**	**100%**	**47%**	**21%**	**32%**	**0%**	**100%**

Note:
1. Cummulative budget represented above includes the total budget of CRP1.3: AAS for three years (up to June 2014)
2. In 2013, the budget of partners – CGIAR has been revised. The revised figures are shown in the above table.

ANNEX 3

Annual Funding Summary

CRP 1.3 - Aquatic Agricultural Systems
Period: 01 January 2013 - 31 December 2013
Amounts in USD (000's)

Report Description
Name of Report: Annual Funding Summary
Frequency/Period: Annual
Deadline: Every April 15th

PART 1 - Annual FINANCE PLAN (Totals for Windows 1 and 2 combined)					
Approved Level for Year - Initial Approval (as per PIA)					
Approved Level for Year - Final Amount					
PART 2 - Funding Summary for Year					
		2013 Actual Funding			
		Windows 1&2	**Window 3**	**Bilateral Funding**	**Total Funding**
1	CGIAR Fund	12,810			12,810
2	ACIAR			1,934	1,934
3	AIT			22	22
4	ANZDEC			73	73
5	BAR			136	136
6	BMZ			396	396
7	CARE			56	56
8	CEPF			57	57
9	CNRS			4	4
10	DANIDA			123	123
11	DOST			6	6
12	DOST II			12	12
13	DOST V			3	3
14	DOST VIII			4	4
15	EC		465	670	1,135
16	FAO			24	24
17	FINT			6	6
18	GIZ			187	187
19	IDRC			1,662	1,662
20	IFAD			121	121
21	Ifremer			11	11
22	IRISHAID			98	98
23	IRRI			1,337	1,337
24	IWMI			21	21
25	JAPAN			12	12
26	Korea			37	37
27	LGED			149	149
28	MECDM			69	69
29	MFMR			114	114

PART 1 - Annual FINANCE PLAN (Totals for Windows 1 and 2 combined)					
Approved Level for Year - Initial Approval (as per PIA)					
Approved Level for Year - Final Amount					
PART 2 - Funding Summary for Year					
		2013 Actual Funding			
		Windows 1&2	**Window 3**	**Bilateral Funding**	**Total Funding**
30	NIWA			94	94
31	NOR			165	165
32	PCAARRD			16	16
33	PRIMEX			52	52
34	RLF			1	1
35	SAVE			118	118
36	SIDA			209	209
37	SPIA			25	25
38	TNC			65	65
39	UNDP			40	40
40	University of Sussex			28	28
41	USAID		3,852	734	4,586
42	WI			48	48
43	WRI			10	10
44	WWF-DRC			41	41
45	Others < $? *		338		338
Total for CRP "X.X"		**12,810**	**4,654**	**8,992**	**26,456**

- This represents actual expenditure incurred by center which in L111 is shown as part of Center Funds. This is supported by the FS figure.

ANNEX 3

Annual Financial Summary by Centers

CRP 1.3 - Aquatic Agricultural Systems
Period: 01 January 2013 - 31 December 2013
Amounts in USD (000's)

Report Description
Name of Report: Annual Financial Summary by Centers & Other Participants
Frequency/Period: Annual
Deadline: Every April 15th

Summary Report - by CG Partners	(a) CRP 2013 POWB approved budget					(b) CRP 2013 Expenditure					(c) Variance this Year				
	Windows 1 & 2	Window 3	Bilateral Funding	Center Funds	Total Funding	Windows 1 & 2	Window 3	Bilateral Funding	Center Funds	Total Funding	Windows 1 & 2	Window 3	Bilateral Funding	Center Funds	Total Funding
1. AFRICA RICE					-					-	-	-	-	-	-
2. BIOVERSITY	537		52		589	521	-	37	-	558	16	-	15	-	31
3. CIAT					-					-	-	-	-	-	-
4. CIFOR					-					-	-	-	-	-	-
5. CIMMYT					-					-	-	-	-	-	-
6. CIP					-					-	-	-	-	-	-
7. ICARDA					-					-	-	-	-	-	-
8. ICRAF					-					-	-	-	-	-	-
9. ICRISAT					-					-	-	-	-	-	-
10. IFPRI					-					-	-	-	-	-	-
11. IITA					-					-	-	-	-	-	-
12. ILRI					-					-	-	-	-	-	-
13. IRRI					-					-	-	-	-	-	-
14. IWMI	350		632		982	236	-	208	-	444	114	-	424	-	538
15. WORLDFISH	11,923	4,324	9,491	338	26,075	12,053	4,317	8,747	338	25,454	(130)	7	743	-	621
Total for CRP	**12,810**	**4,324**	**10,174**	**338**	**27,646**	**12,810**	**4,317**	**8,992**	**338**	**26,456**	**0**	**7**	**1,182**	**-**	**1,190**
	46%	**16%**	**37%**	**1%**	**100%**	**48%**	**16%**	**34%**	**1%**	**100%**	**0%**	**1%**	**99%**	**0%**	**100%**

Note:
1. W1W2 budget represents the latest figures in the financing plan.
2. Window 3 & Bilateral budget figures represent the budget approved by donors for the reporting period.
3. Center funds represents the amount allocated by management for AAS projects.

ANNEX 3

Annual Financial Summary by Natural Classification

CRP 1.3 - Aquatic Agricultural Systems
Period: Period: 01 January 2013 - 31 December 2013
Amounts in USD (000's)

Report Description
Name of Report: Financial Summary by Natural Classification lines
Frequency/Period: Annual
Deadline: Every April 15th

	Windows 1&2	Window 3	Bilateral Funding	CenterFunds	Total Funding	Windows 1&2	Window 3	Bilateral Funding	Center Funds	Total Funding	Windows 1&2	Window 3	Bilateral Funding	Center Funds	Total Funding
Total CRP"1.3"	**POWB Approved Budget**					**Actual**					**Unspent/Variance**				
Personnel	6,797	1,084	3,995	44	11,919	7,299	1,098	3,598	44	12,038	(502)	(13)	397	-	(119)
Collaborators Costs - CGIAR Centers	705	-	-	-	705	757	-	-	-	757	(52)	-	-	-	(52)
Collaborator Costs - Partners	847	799	1,651	75	3,373	904	784	1,355	75	3,118	(57)	15	296	-	255
Supplies and Services	1,827	1,410	2,482	200	5,918	1,897	1,428	2,203	200	5,728	(70)	(18)	279	-	191
Operational Travel	769	161	919	20	1,869	774	175	822	20	1,791	(5)	(14)	98	-	79
Depreciation	22	113	30	-	165	23	84	30	-	137	(0)	29	(0)	-	28
Sub-total of Direct Costs	**10,966**	**3,569**	**9,077**	**338**	**23,949**	**11,653**	**3,569**	**8,008**	**338**	**23,568**	**(687)**	**(1)**	**1,069**	**-**	**382**
Indirect Costs	1,844	756	1,098	-	3,697	1,914	747	984	-	3,646	(71)	8	114	-	51
Total - All Costs	**12,810**	**4,324**	**10,174**	**338**	**27,646**	**13,567**	**4,317**	**8,992**	**338**	**27,213**	**(757)**	**7**	**1,182**	**-**	**433**
LESS Coll Costs CGIAR Centers	(705)	-	-	-	(705)	(757)	-	-	-	(757)	52	-	-	-	52
Total Net Costs	**12,105**	**4,324**	**10,174**	**338**	**26,941**	**12,810**	**4,317**	**8,992**	**338**	**26,456**	**(705)**	**7**	**1,182**	**-**	**485**

Amounts for each participating center below:

BIOVERSITY	**POWB Approved Budget**					**Actual**					**Unspent/Variance**				
Personnel	129	-	-		129	134		11		145	(5)	-	(11)	-	(16)
Collaborators Costs - CGIAR Centers	-	-	-		-	-		-		-	-	-	-	-	-
Collaborator Costs - Partners	17	-	-		17	17		5		22	-	-	(5)	-	(5)
Supplies and Services	243	-	21		264	236		12		248	7	-	9	-	16
Operational Travel	62	-	23		85	51		3		54	11	-	20	-	31
Depreciation	-	-			-	-		-		-	-	-	-	-	-
Sub-total of Direct Costs	**451**	**-**	**44**	**-**	**495**	**438**	**-**	**31**	**-**	**469**	**13**	**-**	**13**	**-**	**26**
Indirect Costs	86	-	8		94	83		6		89	3	-	2	-	5
Total - All Costs	**537**	**-**	**52**	**-**	**589**	**521**	**-**	**37**	**-**	**558**	**16**	**-**	**15**	**-**	**31**
LESS Coll Costs CGIAR Centers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Net Costs	**537**	**-**	**52**	**-**	**589**	**521**	**-**	**37**	**-**	**558**	**16**	**-**	**15**	**-**	**31**

ANNEX 3

Annual Financial Summary by Natural Classification

CRP 1.3 - Aquatic Agricultural Systems
Period: 01 January 2013 - 31 December 2013
Amounts in USD (000's)

Report Description
Name of Report: Financial Summary by Natural Classification lines
Frequency/Period: Annual
Deadline: Every April 15th

	Windows 1&2	Window 3	Bilateral Funding	Center funds	Total Funding	Windows 1&2	Window 3	Bilateral Funding	Center funds	Total Funding	Windows 1&2	Window 3	Bilateral Funding	Center funds	Total Funding
IWMI	**POWB Approved Budget**					**Actual**					**Unspent/Variance**				
Personnel	121		168		289	131		60		192	(10)	-	108	-	98
Collaborators Costs - CGIAR Centers	-		-		-	-		-		-	-	-	-	-	-
Collaborator Costs - Partners	7		278		285	3		84		87	5	-	194	-	198
Supplies and Services	68		122		190	32		35		67	36	-	86	-	123
Operational Travel	56		19		74	23		10		33	32	-	9	-	41
Depreciation	3		-		3	2		2		4	1	-	(2)	-	(1)
Sub-total of Direct Costs	**254**	**-**	**587**	**-**	**841**	**191**	**-**	**192**	**-**	**383**	**64**	**-**	**394**	**-**	**458**
Indirect Costs	96		45		141	46		15		61	50	-	30	-	80
Total - All Costs	**350**	**-**	**632**	**-**	**982**	**236**	**-**	**208**	**-**	**444**	**114**	**-**	**424**	**-**	**538**
LESS Coll Costs CGIAR Centers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Net Costs	**350**	**-**	**632**	**-**	**982**	**236**	**-**	**208**	**-**	**444**	**114**	**-**	**424**	**-**	**538**

Amounts for each participating center below:															
WorldFish	**POWB Approved Budget**					**Actual**					**Unspent/Variance**				
Personnel	6,547	1,084	3,826	44	11,501	7,034	1,098	3,527	44	11,701	(487)	(13)	300	-	(201)
Collaborators Costs - CGIAR Centers	705	-	-	-	705	757	-	-	-	757	(52)	-	-	-	(52)
Collaborator Costs - Partners	823	799	1,373	75	3,071	884	784	1,266	75	3,009	(61)	15	108	-	62
Supplies and Services	1,516	1,410	2,339	200	5,465	1,629	1,428	2,156	200	5,412	(113)	(18)	183	-	52
Operational Travel	651	161	878	20	1,710	700	175	809	20	1,704	(48)	(14)	69	-	6
Depreciation	19	113	30	-	162	21	84	27	-	132	(1)	29	2	-	30
Sub-total of Direct Costs	**10,261**	**3,569**	**8,446**	**338**	**22,613**	**11,024**	**3,569**	**7,784**	**338**	**22,716**	**(763)**	**(1)**	**662**	**-**	**(102)**
Indirect Costs	1,662	756	1,045	-	3,462	1,785	747	963	-	3,496	(124)	8	82	-	(33)
Total - All Costs	**11,923**	**4,324**	**9,491**	**338**	**26,075**	**12,810**	**4,317**	**8,747**	**338**	**26,211**	**(887)**	**7**	**743**	**-**	**(136)**
LESS Coll Costs CGIAR Centers		-	-	-	(705)	(757)	-	-	-	(757)	52	-	-	-	52
Total Net Costs	**11,923**	**4,324**	**9,491**	**338**	**25,371**	**12,053**	**4,317**	**8,747**	**338**	**25,454**	**(834)**	**7**	**743**	**-**	**(84)**

Annual Financial Summary by Themes

CRP 1.3 - Aquatic Agricultural Systems
Period: 01 January 2013 - 31 December 2013
Amounts in USD (000's)

Report Description
Name of Report: Financial Summary by Themes
Frequency/Period: Annual
Deadline: Every April 15th

	POWB Approved	Current Year Actual Expenditures	Unspent Budget
Summary Report - by Themes			
Theme 1 - Sustainable Increase in System Productivity	5,084	4,969	115
Theme 2 - Equitable Access to Markets	3,348	3,268	80
Theme 3 - Social-Ecological Resilience and Adaptive Capacity	2,491	1,989	502
Theme 4 - Gender and Equity	1,535	1,498	37
Theme 5 - Policies and Institutions to Empower AAS Users	2,801	2,734	67
Theme 6 - Knowledge Sharing, Learning and Innovation	2,874	2,757	117
Gender Strategies	-	-	-
CRP Management/Coordination	9,513	9,240	273
Total - All Costs	**27,646**	**26,456**	**1,190**

BIOVERSITY			
Theme 1 - Sustainable Increase in System Productivity	476	471	5
Theme 2 - Equitable Access to Markets			-
Theme 3 - Social-Ecological Resilience and Adaptive Capacity			-
Theme 4 - Gender and Equity			-
Theme 5 - Policies and Institutions to Empower AAS Users			-
Theme 6 - Knowledge Sharing, Learning and Innovation			
Gender Strategies			-
CRP Management/Coordination	113	87	26
Total - All Costs	589	558	31

IWMI			
Theme 1 - Sustainable Increase in System Productivity			-
Theme 2 - Equitable Access to Markets			-
Theme 3 - Social-Ecological Resilience and Adaptive Capacity	733	273	460
Theme 4 - Gender and Equity			-
Theme 5 - Policies and Institutions to Empower AAS Users			-
Theme 6 - Knowledge Sharing, Learning and Innovation	94	43	51
Gender Strategies			-
CRP Management/Coordination	155	128	27
Total - All Costs	**982**	**444**	**538**

	POWB Approved	Current Year Actual Expenditures	Unspent Budget
WORLDFISH			
Theme 1 - Sustainable Increase in System Productivity	4,608	4,498	110
Theme 2 - Equitable Access to Markets	3,348	3,268	80
Theme 3 - Social-Ecological Resilience and Adaptive Capacity	1,759	1,717	42
Theme 4 - Gender and Equity	1,535	1,498	37
Theme 5 - Policies and Institutions to Empower AAS Users	2,801	2,734	67
Theme 6 - Knowledge Sharing, Learning and Innovation	2,780	2,714	66
Gender Strategies	-	-	-
CRP Management/Coordination	9,245	9,025	220
Total - All Costs	26,075	25,454	621

CRP Partnership Report

CRP 1.3 - Aquatic Agricultural Systems
Period: 01 January 2013 - 31 December 2013
Amounts in USD (000's)

Report Description
Name of Report: CRP Partnerships Report
Frequency/Period: Annual
Deadline: Every April 15th

TOTAL FOR CRP "1.3"				Actual Expenses - This Year				
Item	**Institute Acronym**	**Institute Name**	**Country**	**Windows 1&2**	**Window 3**	**Bilateral**	**Center Funds**	**TOTAL**
1	GMBH	Adelphi Research Gemeinnutzige (GMBH)	Germany	-	-	71	-	71
2	Agro bioversity	Agro bioversity		4	-	-	-	4
3	AIDA	AIDA - Aida, Aid, Exchange and Development	Cambodia	15	-	-	-	15
4	ANKO	Akphivat Neary Khmer Organisation (ANKO)	Pursat, Cambodia	5	-	37	-	42
5	ADIC	Analyzing Development Issues Centre (ADIC)	Phnom Penh, Cambodia	15	-	2	-	17
6	AS	Aphivat Strey (AS)	Battambang, Cambodia	5	-	-	-	5
7	Baetoloa Farmer's Association	Baetoloa Farmer's Association	Solomon Islands	4	-	-	-	4
8	BAU	BAU	Bangladesh Agricultural University	17		5	-	22
9	BDS	BDS	Bangladesh	-	-	8	-	8
10	BFRF	BFRF	Bangladesh	-	6	-	-	6
11	BFRI	BFRI	Bangladesh	-	-	30	-	30
12	Bioversity	Bioversity	Italy	11				11
13	BMS	BMS	Bangladesh	-	-	3	-	3
14	BRAC	BRAC	Bangladesh	-	10	70	-	80
15	BRE	BRE	Zambia	17	-	-	-	17
16	BS	BS	Bangladesh	-	-	6	-	6
17	BSFF	BSFF	Bangladesh	-	86	-	-	86
18	COWS	Cambodia Organization for Women Support (COWS)	Kompong Thom, Cambodia	5	-	18	-	23
19	CARDI	Cambodian Agricultural Research and Development Institute (CARDI)	Cambodia	-	-	48	-	48
20	CTU	Can Tho University (CTU)	Vietnam	-	-	11	-	11
21	CARE	CARE	Bangladesh	30	12	-	-	42
22	CDRI	CDRI	Cambodia	-	-	2	-	2
23	CEAPRED	CEAPRED	Nepal	-	-	85	-	85
24	Luky	Center for Coastal Marine Resources Studies, Bogor Agricultural University (Luky)	Bogor, Indonesia	-	-	18	-	18
25	Central Luzon State University	Central Luzon State University	Philippines	-	-	-	21	21
26	CENTRAL VISAYAS INFO SHARING NETWORK FOUNDATION INC	CENTRAL VISAYAS INFO SHARING NETWORK FOUNDATION INC	Philippines	6	-	-	-	6
27	CIFOR	CIFOR	Zambia	-	-	38	-	38
28	CODEC	CODEC	Bangladesh	-	314	9	-	323
29	Constellation	Constellation	Belgium	196	-	-	-	196
30	COWS	COWS-Cambodia Organization for Women Support	Cambodia	-	-	18	-	18
31	CRS	CRS	Zambia	22	-	-	-	22
32	CRS	CRS - Catholic Relief Services	Cambodia	15	-	-	-	15
33	DKK	Dai Kou Kaksikor Organization (DKK)	Kompong Thom, Cambodia	5	-	-	-	5
34	Denmark Technical University	Denmark Technical University	Bangladesh	-	15	-	-	15
35	Dept of Agricultural Land Management	Dept of Agricultural Land Management	Laos			10		10

ANNEX 3

TOTAL FOR CRP "1.3"				Actual Expenses - This Year				
Item	**Institute Acronym**	**Institute Name**	**Country**	**Windows 1&2**	**Window 3**	**Bilateral**	**Center Funds**	**TOTAL**
36	DOF	Department of Fisheries, Ministry of Agriculture and Livestock (DOF)	Zambia	-	-	4	-	4
37	DOF	Department of Fisheries, Ministry of Livestock and Fisheries, of the Government of the Republic of The Union of Myanmar (DOF)	Myanmar	-	-	166	-	166
38	Department of Science and Technology VII	Department of Science and Technology VII	Philippines	4	-	-	-	4
39	FARMERS COMMUNITY DEVELOPMENT FOUNDATION INTERNATIONAL	FARMERS COMMUNITY DEVELOPMENT FOUNDATION INTERNATIONAL	Philippines	36	-	-	54	90
40	FACT	FISHERIES ACTION COALITION TEAM (FACT)	Cambodia	-	-	5	-	5
41	FIA	FISHERIES ADMINISTRATION (FIA)	Phnom Penh, Cambodia	22	-	3	-	25
42	Flinders University	Flinders University	Australia	-	14	-	-	14
43	GADC	Gender and Development for Cambodia (GADC)	Phnom Penh, Cambodia	32	-	-	-	32
44	Government of the People's Republic of Bangladesh	Government of the People's Republic of Bangladesh	Bangladesh	4	-	-	-	4
45	HURREDO	Human Resource and Rural Economic Development Organization (HURREDO)	Siem Reap, Cambodia	5	-	-	-	5
46	ICRA	ICRA - The International Centre for Development Oriented Research in Agriculture	The Netherlands	66	-	-	-	66
47	ICRAF	ICRAF - International Centre for Research in Agroforestry	Nairobi, Kenya	-	-	15	-	15
48	IFReDI	Inland Fisheries Research and Development Institute (IFReDI)	Cambodia	-	-	34	-	34
49	Institute of Water Modeling	Institute of Water Modeling	Bangladesh	-	15	-	-	15
50	IWMI	IWMI	Sri Lanka	3	-	70	-	74
51	JCF	JCF	Bangladesh	-	-	17	-	17
52	Khulna University	Khulna University	Bangladesh	-	12	-	-	12
53	Local Community Facilitators	Local Community Facilitators	Philippines	16	-	-	-	16
54	Malaita Provincial Government	Malaita Provincial Government	Solomon Islands	17	-	-	-	17
55	NARS	National Agriculture Research Systems (NARS)		-	-	13	-	13
56	National Agriculture and Forestry Research Institute	National Agriculture and Forestry Research Institute	Laos			9		9
57	Nature Care Foundation	Nature Care Foundation	Bangladesh	-	7	-	-	7
58	Oxfam America	Oxfam America	Cambodia	11	-	-	-	11
59	PACO	PACO	Zambia	15	-	-	-	15
60	Philippine Agriculture and Resources Research Foundation Inc.	Philippine Agriculture and Resources Research Foundation Inc.	Philippines	32	-	-	-	32
61	PK	Ponleur Kumar (PK)	Pursat, Cambodia	5	-	-	-	5
62	PPS	PPS	Zambia	28	-	-	-	28
63	Renaissance	Renaissance	Bangladesh	-	-	3	-	3
64	Research Center for Marine and Fisheries Socio-Economics Agency for Marine and Fisheries Research and Development Ministry of Marine Affairs and Fisheries Republic of Indonesia	Research Center for Marine and Fisheries Socio-Economics Agency for Marine and Fisheries Research and Development Ministry of Marine Affairs and Fisheries Republic of Indonesia	Indonesia	-	-	26	-	26
65	RSSS	RSSS	Bangladesh	-	-	1	-	1
67	Save the Children	Save the Children	Bangladesh	-	79	-	-	79
68	SDC	SDC	Bangladesh	-	-	9	-	9
69	SDC	SDC	Lithuania	-	-	4	-	4
70	SEARCA	SEARCA	Philippines	-	-	26	-	26

ANNEX 3

TOTAL FOR CRP "1.3"				Actual Expenses - This Year				
Item	**Institute Acronym**	**Institute Name**	**Country**	**Windows 1&2**	**Window 3**	**Bilateral**	**Center Funds**	**TOTAL**
71	Soils and Fertilizers Research Institute	Soils and Fertilizers Research Institute	Vietnam			21		21
72	Speed Trust	Speed Trust	Bangladesh	-	200	-	-	200
73	SSS	SSS	Bangladesh	-	-	11	-	11
74	Shushilan	Shushilan	Bangladesh	3				3
75	RUPP	The Royal University of Phnom Penh (RUPP)	Cambodia	-	-	11	-	11
76	The Secretariat of The Pacific Community	The Secretariat of The Pacific Community	New Caledonia	-	-	27	-	27
77	SEI	THE STOCKHOLM ENVIRONMENT INSTITUTE (SEI)	Sweden	12	-	-	-	12
78	UBU	The Ubon Ratchathani University (UBU)	Thailand	-	-	11	-	11
79	The University of Dar es Salaam	The University of Dar es Salaam	Tanzania	-	-	14	-	14
80	TMSS	TMSS	Bangladesh	-	-	23	-	23
81	TSA	Tonle Sap Authority (TSA)	Phnom Penh, Cambodia	30	-	-	-	30
82	TCO	Trailblazer Cambodia Organization (TCO)	Siem Reap, Cambodia	5	-	38	-	43
83	USER	Unit for Social and Environmental Research(USER)	Thailand			17		17
84	UNIVERSITY OF EAST ANGLIA	UNIVERSITY OF EAST ANGLIA	UK	150	-	-	-	150
85	University of Hohenheim	University of Hohenheim	Germany			15		15
86	University of Wallongong	University of Wallongong	Australia	-	-	141	-	141
87	USF	The University of Osnabrück's Institute of Environmental Systems Research (USF)		-	-	63	-	63
88	Vietnam - Institut de Recherche pour le Développement	Vietnam - Institut de Recherche pour le Développement	Vietnam			13		13
89	VSG	Village Support Group (VSG)	Battambang, Cambodia	5	-	30	-	35
90	VISCA FOUNDATION FOR AGRICULTURAL AND DEVELOPMENT	VISCA FOUNDATION FOR AGRICULTURAL AND DEVELOPMENT	Philippines	7	-	-	-	7
91		Others < $1,000		22	14	24	-	61
Total for CRP				**903**	**784**	**1,355**	**75**	**3,117**

2. BIOVERSITY				Actual Expenses - This Year				
Item	**Institute Acronym**	**Institute Name**	**Country**	**Windows 1&2**	**Window 3**	**Bilateral**	**Center Funds**	**TOTAL**
1	BAU	Bangladesh Agricultural University	Bangladesh	17		5		22
Total for CRP				**17**	**-**	**5**	**-**	**22**

14. IWMI				Actual Expenses - This Year				
Item	**Institute Acronym**	**Institute Name**	**Country**	**Windows 1&2**	**Window 3**	**Bilateral**	**Center Funds**	**TOTAL**
1		Shushilan	Bangladesh	3				3
2		University of Hohenheim	Germany			15		15
3		Vietnam - Institut de Recherche pour le Développement	Vietnam			13		13
4		Dept of Agricultural Land Management	Laos			10		10
5		Soils and Fertilizers Research Institute	Vietnam			21		21
6		National Agriculture and Forestry Research Institute	Laos			9		9
7		Unit for Social and Environmental Research(USER)	Thailand			17		17
Total for CRP				**3**	**-**	**84**	**-**	**87**

ANNEX 3

15. WORLDFISH				Actual Expenses - This Year				
Item	**Institute Acronym**	**Institute Name**	**Country**	**Windows 1&2**	**Window 3**	**Bilateral**	**Center Funds**	**TOTAL**
1	GMBH	Adelphi Research Gemeinnutzige (GMBH)	Germany	-	-	71	-	71
2	Agro bioversity	Agro bioversity		4	-	-	-	4
3	AIDA	AIDA - Aida, Aid, Exchange and Development	Cambodia	15	-	-	-	15
4	ANKO	Akphivat Neary Khmer Organisation (ANKO)	Pursat, Cambodia	5	-	37	-	42
5	ADIC	Analyzing Development Issues Centre (ADIC)	Phnom Penh, Cambodia	15	-	2	-	17
6	AS	Aphivat Strey (AS)	Battambang, Cambodia	5	-	-	-	5
7	Baetoloa Farmer's Association	Baetoloa Farmer's Association	Solomon Islands	4	-	-	-	4
8	BDS	BDS	Bangladesh	-	-	8	-	8
9	BFRF	BFRF	Bangladesh	-	6	-	-	6
10	BFRI	BFRI	Bangladesh	-	-	30	-	30
11	Bioversity	Bioversity	Italy	11				11
12	BMS	BMS	Bangladesh	-	-	3	-	3
13	BRAC	BRAC	Bangladesh	-	10	70	-	80
14	BRE	BRE	Zambia	17	-	-	-	17
15	BS	BS	Bangladesh	-	-	6	-	6
16	BSFF	BSFF	Bangladesh	-	86	-	-	86
17	COWS	Cambodia Organization for Women Support (COWS)	Kompong Thom, Cambodia	5	-	18	-	23
18	CARDI	Cambodian Agricultural Research and Development Institute (CARDI)	Cambodia	-	-	48	-	48
19	CTU	Can Tho University (CTU)	Vietnam	-	-	11	-	11
20	CARE	CARE	Bangladesh	30	12	-	-	42
21	CDRI	CDRI	Cambodia	-	-	2	-	2
22	CEAPRED	CEAPRED	Nepal	-	-	85	-	85
23	Luky	Center for Coastal Marine Resources Studies, Bogor Agricultural University (Luky)	Bogor, Indonesia	-	-	18	-	18
24	Central Luzon State University	Central Luzon State University	Philippines	-	-	-	21	21
25	CENTRAL VISAYAS INFO SHARING NETWORK FOUNDATION INC	CENTRAL VISAYAS INFO SHARING NETWORK FOUNDATION INC	Philippines	6	-	-	-	6
26	CIFOR	CIFOR	Zambia	-	-	38	-	38
27	CODEC	CODEC	Bangladesh	-	314	9	-	323
28	Constellation	Constellation	Belgium	196	-	-	-	196
29	COWS	COWS-Cambodia Organization for Women Support	Cambodia	-	-	18	-	18
30	CRS	CRS	Zambia	22	-	-	-	22
31	CRS	CRS - Catholic Relief Services	Cambodia	15	-	-	-	15
32	DKK	Dai Kou Kaksikor Organization (DKK)	Kompong Thom, Cambodia	5	-	-	-	5
33	Denmark Technical University	Denmark Technical University	Bangladesh	-	15	-	-	15
34	DOF	Department of Fisheries, Ministry of Agriculture and Livestock (DOF)	Zambia	-	-	4	-	4
35	DOF	Department of Fisheries, Ministry of Livestock and Fisheries, of the Government of the Republic of The Union of Myanmar (DOF)	Myanmar	-	-	166	-	166
36	Department of Science and Technology VII	Department of Science and Technology VII	Philippines	4	-	-	-	4
37	FARMERS COMMUNITY DEVELOPMENT FOUNDATION INTERNATIONAL	FARMERS COMMUNITY DEVELOPMENT FOUNDATION INTERNATIONAL	Philippines	36	-	-	54	90

ANNEX 3

15. WORLDFISH				Actual Expenses - This Year				
Item	**Institute Acronym**	**Institute Name**	**Country**	**Windows 1&2**	**Window 3**	**Bilateral**	**Center Funds**	**TOTAL**
38	FACT	FISHERIES ACTION COALITION TEAM (FACT)	Cambodia	-	-	5	-	5
39	FIA	FISHERIES ADMINISTRATION (FIA)	Phnom Penh, Cambodia	22	-	3	-	25
40	Flinders University	Flinders University	Australia	-	14	-	-	14
41	GADC	Gender and Development for Cambodia (GADC)	Phnom Penh, Cambodia	32	-	-	-	32
42	Government of the People's Republic of Bangladesh	Government of the People's Republic of Bangladesh	Bangladesh	4	-	-	-	4
43	HURREDO	Human Resource and Rural Economic Development Organization (HURREDO)	Siem Reap, Cambodia	5	-	-	-	5
44	ICRA	ICRA - The International Centre for Development Oriented Research in Agriculture	The Netherlands	66	-	-	-	66
45	ICRAF	ICRAF - International Centre for Research in Agroforestry	Nairobi, Kenya	-	-	15	-	15
46	IFReDI	Inland Fisheries Research and Development Institute (IFReDI)	Cambodia	-	-	34	-	34
47	Institute of Water Modeling	Institute of Water Modeling	Bangladesh	-	15	-	-	15
48	IWMI	IWMI	Sri Lanka	3	-	70	-	74
49	JCF	JCF	Bangladesh	-	-	17	-	17
50	Khulna University	Khulna University	Bangladesh	-	12	-	-	12
51	Local Community Facilitators	Local Community Facilitators	Philippines	16	-	-	-	16
52	Malaita Provincial Government	Malaita Provincial Government	Solomon Islands	17	-	-	-	17
53	NARS	National Agriculture Research Systems (NARS)		-	-	13	-	13
54	Nature Care Foundation	Nature Care Foundation	Bangladesh	-	7	-	-	7
55	Oxfam America	Oxfam America	Cambodia	11	-	-	-	11
56	PACO	PACO	Zambia	15	-	-	-	15
57	Philippine Agriculture and Resources Research Foundation Inc.	Philippine Agriculture and Resources Research Foundation Inc.	Philippines	32	-	-	-	32
58	PK	Ponleur Kumar (PK)	Pursat, Cambodia	5	-	-	-	5
59	PPS	PPS	Zambia	28	-	-	-	28
60	Renaissance	Renaissance	Bangladesh	-	-	3	-	3
61	Research Center for Marine and Fisheries Socio-Economics Agency for Marine and Fisheries Research and Development Ministry of Marine Affairs and Fisheries Republic of Indonesia	Research Center for Marine and Fisheries Socio-Economics Agency for Marine and Fisheries Research and Development Ministry of Marine Affairs and Fisheries Republic of Indonesia	Indonesia	-	-	26	-	26
62	RSSS	RSSS	Bangladesh	-	-	1	-	1
64	Save the Children	Save the Children	Bangladesh	-	79	-	-	79
65	SDC	SDC	Bangladesh	-	-	9	-	9
66	SDC	SDC	Lithuania	-	-	4	-	4
67	SEARCA	SEARCA	Philippines	-	-	26	-	26
68	Speed Trust	Speed Trust	Bangladesh	-	200	-	-	200
69	SSS	SSS	Bangladesh	-	-	11	-	11
70	RUPP	The Royal University of Phnom Penh (RUPP)	Cambodia	-	-	11	-	11
71	The Secretariat of The Pacific Community	The Secretariat of The Pacific Community	New Caledonia	-	-	27	-	27
72	SEI	THE STOCKHOLM ENVIRONMENT INSTITUTE (SEI)	Sweden	12	-	-	-	12
73	UBU	The Ubon Ratchathani University (UBU)	Thailand	-	-	11	-	11

ANNEX 3

15. WORLDFISH				Actual Expenses - This Year				
Item	**Institute Acronym**	**Institute Name**	**Country**	**Windows 1&2**	**Window 3**	**Bilateral**	**Center Funds**	**TOTAL**
74	The University of Dar es Salaam	The University of Dar es Salaam	Tanzania	-	-	14	-	14
75	TMSS	TMSS	Bangladesh	-	-	23	-	23
76	TSA	Tonle Sap Authority (TSA)	Phnom Penh, Cambodia	30	-	-	-	30
77	TCO	Trailblazer Cambodia Organization (TCO)	Siem Reap, Cambodia	5	-	38	-	43
78	UNIVERSITY OF EAST ANGLIA	UNIVERSITY OF EAST ANGLIA	UK	150	-	-	-	150
79	University of Wallongong	University of Wallongong	Australia	-	-	141	-	141
80	USF	The University of Osnabrück's Institute of Environmental Systems Research (USF)		-	-	63	-	63
81	VSG	Village Support Group (VSG)	Battambang, Cambodia	5	-	30	-	35
82	VISCA FOUNDATION FOR AGRICULTURAL AND DEVELOPMENT	VISCA FOUNDATION FOR AGRICULTURAL AND DEVELOPMENT	Philippines	7	-	-	-	7
83		Others < $1,000		22	14	24	-	61
Total for CRP				884	784	1,266	75	3,008

TOTAL FOR CRP "X.X"			Actual Expenses - This Year				
			Windows 1&2	**Window 3**	**Bilateral**	**Center Funds**	**TOTAL**
1. AFRICA RICE							-
2. BIOVERSITY			17	-	5	-	22
3. CIAT							-
4. CIFOR							-
5. CIMMYT							-
6. CIP							-
7. ICARDA							-
8. ICRAF							-
9. ICRISAT							-
10. IFPRI							-
11. IITA							-
12. ILRI							-
13. IRRI							-
14. IWMI			3	-	84	-	87
15. WORLDFISH			884	784	1,266	75	3,008
Total for CRP			**903**	**784**	**1,355**	**75**	**3,117**

NOTE

[1] Ref Feldafing principles http://www.icipe.org/itaacc/index.php/2013-12-03-07-06-24/2013-12-03-07-07-26

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About the CGIAR Research Program on Aquatic Agricultural Systems
Nearly 500 million people in the developing world depend on aquatic agricultural systems for their livelihoods, with 140 million living in poverty. Occurring along freshwater floodplains and coastal deltas, aquatic agricultural systems are highly productive farming and fishing systems that provide multiple opportunities for growing or harvesting food and generating income.

The CGIAR Research Program on Aquatic Agricultural Systems (AAS) seeks to better harness the agricultural potential of these systems, while helping to build adaptive capacity and resilience in the face of social, economic and environmental change.

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