

A910097



**AMENDMENT AGREEMENT  
ADDENDUM NO.4 DATED August 7, 2015**

**To the  
PROGRAM PARTICIPANT AGREEMENT (PPA) DATED 12<sup>th</sup> JULY 2013  
FOR THE CRP "More meat, milk and fish by and for the poor -CRP 3.7".**

**Between** International Livestock Research Institute P.O. Box 30709 - 00100, Nairobi, Kenya (LEAD CENTER)

**And** WorldFish Jalan Batu Maung, Batu Maung, 11960 Banyan Lepas, Penang, Malaysia (PROGRAM PARTICIPANT)

**Previous Amendments**

**Amendment 1:** Dated 11<sup>th</sup> November, 2013 - Amended the PPA to make budgetary provisions for the 2013 Annual Work Plan and revised **Annex 4a**

**Amendment 2:** Dated 9<sup>th</sup> June, 2014 - Amended the PPA to make budgetary provisions for the 2014 Annual Work Plan and revised **Annex 4a (Annual Activity Plan)** and **Annex 4c (Theme Leader Indicative Budget 2012-2014 and Theme Leader Annual Budget [to be developed as needed])** and included an additional financial reporting requirement for the Program Participant to list details of its bilateral projects.

**Amendment 3:** Dated 22<sup>nd</sup> June, 2015 - Amended and extended the PPA to make budgetary provisions for the amended 2014 Annual Work Plan and revised **Annex 4a (Annual Work Plan 2014 for WorldFish - Additional Activities)** and included an additional **Annex 4d (Annual Work Plan 2014 for Multi -Year for WorldFish 2014-2016)**. In addition, the amendment included revision to the Management of Intellectual Assets and Donor Acknowledgment.

**4<sup>TH</sup> AMENDMENT**

**Amendment 4:** **Purpose of the amendment:** Following Amendment No. 2 dated 14<sup>th</sup> April 2015 of the PIA (Program Implementation Agreement) between the International Plant Genetic Resources Institute (IPGRI) and ILRI, ILRI has received funding allocation for 2015 to be disbursed to the Program Participant; therefore, the Parties have agreed to **FURTHER AMEND** the PPA as follows:

**A. Clause 2.3 (Grant) NOW includes the following additional clause**

**2.3 (f)** The Lead Center obligates USD1, 255,771 (US Dollars One Million, two hundred and fifty-five, seven hundred and seventy-one). This sum includes:

<b>CRP Budget</b>	<i>(Figures in USD)</i>
Window 1 /Window 2 funds for base 2015 allocation	1,205,000
Window 1/ Window 2 funds for Animal Genetics and Breeding Flagship Leadership	50,771
<b>Total Budget</b>	<b>1,255,771</b>

The budget will be used to undertake the work detailed in the revised **Annex 4a: Annual Work Plan 2015 - WorldFish** showing outputs for WorldFish based on the revised **Annex 4b: Program Participant Indicative Budget 2015 and 2016 for WorldFish**. The services of a WorldFish staff member to serve as Flagship Leader for Flagship 2 – Animal Genetics and Breeding shall be funded as detailed in the revised **Annex 4c: Flagship Leader Annual Budget 2015 - WorldFish**. The Grant may be modified upon a written notification from the Lead Centre to the Program Participant, after discussion with the Program Participant.

**B Clause 2.4 (Disbursements) NOW includes the following additional clause)**

**2.4 (e)** Upon signature of this Amendment No. 4, funds shall be disbursed to the Program Participant on a pro-rata basis upon receipt from the Consortium.

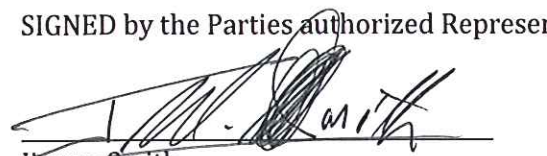
**List of Annexes:**

- Revised Annex 4a: Annual Work Plan 2015 - WorldFish and attached hereto.
- Revised Annex 4b: Program Participant Indicative Budget 2015 and 2016 - WorldFish attached hereto
- Revised Annex 4c: Flagship Leader Annual Budget 2015 - WorldFish attached hereto.

2. All other terms of the PPA and its amendments shall remain unchanged.

3. This Amendment No.4 to the PPA is retrospective from 1<sup>st</sup> January 2015 and shall become effective on the date of the last signature.

SIGNED by the Parties authorized Representatives:

  
 Jimmy Smith  
 Director General,  
 International Livestock Research Institute

  
 Stephen Hall  
 Director General  
 WorldFish

Date: 7/8/15

Date: 10 SEPTEMBER 2015

**Revised Annex 4a – Annual Work Plan 2015 for WORLD FISH**

Description	Deliverables
<b>Flagship 1: Animal Health</b>	Budget (\$000's) CG Fund: \$120k W3/Bilateral: \$318k Others: N/A Total: \$438
<b>Objective:</b>	
<i>Cluster of Activities 1.1: Animal Health Assessment and Prioritisation</i>	Budget (\$000's) CG Fund: \$59k W3/Bilateral: \$71k Others: N/A Total: \$130k
1.1.1.1: Secure funding for mapping of fish diseases (Egypt, Bangladesh)	<ul style="list-style-type: none"> <li>• (Egypt) Full project proposal on economic modeling on impacts of aquatic animal health and food safety in target value chains and cost-effective interventions submitted</li> <li>• (Bangladesh) Full project proposal on economic modeling on impacts of aquatic animal health and food safety in target value chains and cost-effective interventions submitted</li> <li>• (AIN Bangladesh): Technical report/publication on economic impact of key diseases in target fish value chains</li> </ul>
<i>Cluster of Activities 1.2: Animal population health and food safety</i>	Budget (\$000's) CG Fund: \$0 W3/Bilateral: \$109k Others: N/A Total: \$109k
1.2.1.1: (AIN Bangladesh) Developing and validating attributes for healthy and improved quality seed (fish, shrimp and prawn) using population	<ul style="list-style-type: none"> <li>• (AIN Bangladesh): Technical report/publication on seed quality and health assessments for fish value chains in Bangladesh</li> </ul>

Description	Deliverables
based and production outcome linked participatory research approaches in project supported farms.	
<i>Cluster of Activities 1.3: Vaccine and Diagnostic Assay Development</i>	Budget (\$000's) CG Fund: \$28k W3/Bilateral: 0 Others: N/A Total: \$28k
1.3.1.1: Economic and biological characterization of the most important fish pathogens as candidates for future work on diagnostics and vaccines (Egypt; Bangladesh)	<ul style="list-style-type: none"> <li>• One technical report on identified pathogens (Egypt; Bangladesh)</li> <li>• One research proposal for work on rapid diagnostics and vaccine development (Egypt; Bangladesh) in collaboration with ILRI</li> </ul>
<i>Cluster of Activities 1.4: Equitable animal health services delivery</i>	Budget (\$000's) CG Fund: \$33k W3/Bilateral: \$138k Others: N/A Total: \$171k
1.4.1.1: Assess the sustained access to and delivery of aquatic animal health products (e.g. pond side diagnostics, approved treatment products) and services (PCR tested seed, SPF seed, farm level biosecurity protocols, BMPs) to poor fish farmers, including women and other value chain actors (Bangladesh)	<ul style="list-style-type: none"> <li>• Report on the status of access to and delivery of aquatic animal health products and services to farmers and value chain actors including women farmers</li> <li>• Transition strategy for supply of PCR tested seed</li> <li>• Scientific report/publication on adoption, compliance and benefits of Best Management Practices to project farmers compared with non-project farmers</li> </ul>
<b>Flagship 2: Genetics and Breeding</b>	Budget (\$000's) CG Fund: \$428k W3/Bilateral: \$733k Others: N/A Total: \$1,161k
<b>Objective</b>	

Description	Deliverables
<b>Cluster of Activities 2.1: System, strategy and genome assessment</b>	<i>CG Fund: \$49k</i> <i>W3/Bilateral: \$0</i> <i>Others: N/A</i> <i>Total: \$49k</i>
2.1.1.1: Assess potential target fish species and traits for genetic improvement in Egypt, Bangladesh.	<ul style="list-style-type: none"> <li>• Working paper on assessment of catfish in Egypt (country-wide)</li> <li>• Internal report on assessment of SIS species completed in Bangladesh (country-wide)</li> <li>• Internal report on the assessment of carp in Bangladesh (country-wide)</li> <li>• Preliminary research report on Mola genetic characterization in Bangladesh. (country-wide)</li> <li>• One scientific paper on the genetic assessments of wild versus farmed tilapia in West Africa</li> </ul>
<b>Cluster of Activities 2.2: Improved breeds and strains.</b>	<i>CG Fund: \$236k</i> <i>W3/Bilateral: \$387k</i> <i>Others: N/A</i> <i>Total: \$623k</i>
2.2.1.1: Genetically improved strains of aquaculture target species developed in Africa and Asia.	<ul style="list-style-type: none"> <li>• (Asia excluding Bangladesh) One donor report on generation 4 of GIFT (RGCA) in India (Orissa, Vijayawada, Andra Pradesh)</li> <li>• At least two publications on the above.</li> <li>• At least one PhD thesis on Malaysia GIFT.</li> <li>• Donor report on the genetics improvement program for Rohu, Labeo rohita in Jessore District, Bangladesh)</li> </ul>
<b>Cluster of Activities 2.3: Delivery and use systems</b>	<i>CG Fund: \$108k</i> <i>W3/Bilateral: \$346k</i> <i>Others: N/A</i> <i>Total: \$454k</i>
2.3.1.1: Assess dissemination systems prior to release of new strains and the amount and extent (geographical and social group) of dissemination in target Value Chains	<ul style="list-style-type: none"> <li>• Scientific paper on utility of GIS approaches for determining patterns of tilapia dissemination in the Philippines (Central and Northern Luzon, Regions 2 and 3 in the Philippines)</li> <li>• Two internal reports on dissemination systems of tilapia, small fish and carp in Bangladesh and tilapia in Ghana (country-wide)</li> <li>• Internal report on the amount and extent of dissemination of improved tilapia in Kafr El-Sheikh and Sharkiya, Egypt</li> <li>• Donor reports and an internal report on breeding and dissemination activities related to two nucleus hatcheries with 8 cohorts operational and 5 satellite hatcheries producing quality seed. 77 hatcheries will be supported and results will be reported to</li> </ul>

Description	Deliverables
	donor
2.3.1.2: Investigate on-farm performance, production efficiency and yield gap in improved tilapia in different farming systems.	<ul style="list-style-type: none"> <li>• Scientific publication reviewing on-farm performance for improved tilapia (Global: Genetics Team in Malaysia together with Wageningen)</li> <li>• Submission of a proposal to investigate production efficiency and yield gap in improved tilapia (Global: Genetics Team in Malaysia together with Wageningen)</li> </ul>
<i>Cluster of Activities 2.4: Breakthrough technologies and information systems</i>	CG Fund: \$35k W3/Bilateral: \$0 Others: N/A Total: \$35k
2.4.1.2: Development of genomic tools to assist genetics improvement in aquaculture species.	<ul style="list-style-type: none"> <li>• Collection of samples for molecular tools development (Global: Genetics Team in Bangladesh and Malaysia together with ILRI Nairobi)</li> </ul>
<b>Flagship 3: Feeds and Forages</b>	Budget (\$000's) CG Fund: \$120k W3/Bilateral: \$371k Others: N/A Total: \$491k
<b>Objective</b>	
<i>Cluster of Activities 3.1: Feed technology platform, networking and analysis</i>	CG Fund: \$42k W3/Bilateral: \$92k Others: N/A Total: \$134k
3.1.1.1: Feed technology modeling and tools	<ul style="list-style-type: none"> <li>• Workshop report on review with livestock colleagues on feed/forage models, and preparation of work plan for incorporation of fish into L&amp;F models derived from joint meetings/dialogue</li> <li>• (Bangladesh): NIRS equations for fish feed ingredients completed and used for screening of ingredients (donor reports)</li> <li>• (Bangladesh): On-line repository of feed ingredients in Bangladesh</li> <li>• (Bangladesh, Egypt): Report on workshop outputs documenting research and development agendas emerging from strengthened collaboration in Bangladesh and Egypt.</li> <li>• Global research and development agendas for aquaculture feeds emerging from improved</li> </ul>

Description	Deliverables
	<p>dialogue among industry stakeholders</p> <ul style="list-style-type: none"> <li>• (Bangladesh): Study report on future fish-supply demand scenarios in Bangladesh and implications for future fish feed supplies and ingredients</li> <li>• (Egypt): Donor reports on NIRS equations for fish feed ingredients completed and used for screening of ingredients</li> <li>• (Egypt): Survey report and development of an on-line repository of feed ingredients in Egypt</li> </ul>
<b>Cluster of Activities 3.2: Better use of available feed resources</b>	<p><i>CG Fund: \$52k</i>  <i>W3/Bilateral: \$207k</i>  <i>Others: N/A</i>  <i>Total: \$259k</i></p>
3.2.1.1 Improving the processing and formulation of aquaculture diets	<ul style="list-style-type: none"> <li>• Technical report on use of portable low cost semi-auto feed machines to facilitate access to quality feed for small-scale aquaculture farmers, Bangladesh</li> <li>• One journal article on types of low cost and higher quality fish feed contribute to increase fish production, Bangladesh</li> <li>• Training materials for commercial feed companies on formulation of nutritional optimal fish diets, Bangladesh</li> <li>• Training materials on licensing requirements for fish feed companies, Bangladesh</li> <li>• Donor report on study of business models and services from commercial feed companies, Bangladesh</li> </ul>
3.2.1.2 Improving feed value chains and access of small-scale farmers to better quality off-farm feed	<ul style="list-style-type: none"> <li>• Report on a gendered analysis of feed value chains and interventions identified, Bangladesh</li> </ul>
3.2.1.3 Improving efficiency of on-farm use of feeds and fertilizers	<ul style="list-style-type: none"> <li>• Popular article on feed and fertilization efficiencies in poly-culture and monoculture aquaculture systems, Bangladesh</li> <li>• Training and promotional materials for small farmers on knowledge of fish nutrition and better feeding practices, Bangladesh</li> <li>• Draft Guideline on small scale semi-auto feed mill operation in coordination with commercial raw material suppliers, Bangladesh</li> <li>• Evaluation report/policy brief analyzing the impact of the implementation of the Bangladesh Feed Act</li> </ul>
<b>Cluster of Activities 3.3: More and</b>	<i>CG Fund: \$26k</i>

Description	Deliverables
<i>higher quality feed and fodder</i>	<i>W3/Bilateral: \$72k Others: N/A Total: \$98k</i>
3.3.1.1 Improved fish feed ingredient traits	<ul style="list-style-type: none"> <li>• (Global): Working paper and/or journal article on the relationships between fish feeds and human nutrition and health</li> <li>• (Bangladesh): Technical report on potential locally available new ingredients for fish feeds in Bangladesh</li> <li>• (Bangladesh) Popular article report on rice husks and bran processing technology</li> <li>• (Bangladesh and Vietnam): Internal report with results from fish and shrimp pond trials that show increased efficiency and improved nutritional qualities in feed and fertilized pond systems (incl. WOTRO project with Wageningen)</li> </ul>
3.3.1.2 Identify new fish ingredients from agro-businesses/biofuel value chains and novel sources	<ul style="list-style-type: none"> <li>• (Egypt, Global): One global concept note developed and proposal submitted to secure funding for research on new feed ingredients</li> <li>• Project proposal for collaboration with ILRI on cassava wastes for livestock and fish feeds (Global)</li> </ul>
<b>Flagship 4: Systems Analysis for Sustainability (SASI)</b>	<i>Budget (\$000's) CG Fund: \$434k W3/Bilateral: \$692k Others: N/A Total: \$1,126k</i>
<b>Objective</b>	
<b>Cluster of Activities 4.1: Conduct system component research and identify promising innovations</b>	<i>CG Fund: \$352k W3/Bilateral: \$449k Others: N/A Total: \$801k</i>
4.1.1.1: Value chain analysis (Gender integrated) *including Flagship 5 M&E.	<ul style="list-style-type: none"> <li>• Working paper and journal article from 2014 Community Social and Gender Analysis (with AAS, Bangladesh)</li> <li>• Working paper and journal article from feed value chain gender analysis, including identification of interventions, Bangladesh</li> <li>• Manual with refined gender-integrated VCA tools, Bangladesh</li> <li>• Funding proposal on gender perceptions of ownership of homestead ponds (Bangladesh)</li> </ul>
4.1.1.3 Expert group meeting on GTA tools and approaches to VCA (ILRI leading) (Global gender work)	<ul style="list-style-type: none"> <li>• Work plan to produce joint IPGs on GTAs in Value Chain Analysis and in value chain development (WF/ILRI)</li> </ul>
4.1.2.1: Develop nutrition strategy	<ul style="list-style-type: none"> <li>• Nutrition strategy document (Egypt &amp; Bangladesh)</li> </ul>



Description	Deliverables
(Egypt & Bangladesh)	<ul style="list-style-type: none"> <li>• Funding proposal submitted (Egypt &amp; Bangladesh)</li> <li>• Article from consumer study (Egypt)</li> </ul>
<b>Cluster of Activities 4.2:</b> Conduct systems analysis guiding the design and development of integrated intervention packages for the VCs	CG Fund: \$31k W3/Bilateral: \$143k Others: N/A Total: \$174k
4.2.1.1: Diagnose technical, economic, social, ecological constraints and define opportunities for value chain transformation through analysis of the changing local, regional and global context within which the L&F VCs operate and investigation of feedbacks of VC transformation on its operating space	(Global) (PIM): <ul style="list-style-type: none"> <li>• One joint working paper: Fish to 2050 (regional)</li> <li>• Policy brief for Bangladesh and Indonesia on scenarios and future investment options</li> <li>• L&amp;F gender capacity development strategy</li> <li>• Egypt - Aswan Donor report for SDC</li> <li>• Egypt - Aswan VCA gender integrated; report assesses opportunities for women</li> <li>• Bangladesh Report &amp; journal article from 2014 SGA; report from 2014 VCA/GTA tool test and a set of refined GTA tools</li> <li>• Working paper on future fish supply demand scenarios and technology investment options and strategies for Bangladesh</li> </ul>
<b>Cluster of Activities 4.3:</b> Learn lessons and adapt VC and CRP operations and activities	CG Fund: \$51k W3/Bilateral: \$100k Others: N/A Total: \$151k
4.3.1.1: Cross cutting learning on pilots, to feed into best bet refinement and scaling and on gender transformative change and its link to value chain transformation	<ul style="list-style-type: none"> <li>• Gender-integrated ME&amp;L framework for Value Chains (Egypt and Bangladesh)</li> </ul>
4.3.1.2: Conduct Impact Assessments	<ul style="list-style-type: none"> <li>• Donor Report for SDC, Egypt</li> <li>• Gender-integrated report assessing Egypt value chain (impact assessment from IEIDEAS)</li> <li>• Research proposal on gender issues in value chains, with L&amp;F-wide gender colleagues, as interested</li> <li>• Report on design of R4D intervention for implementation (some GTA integrated)</li> </ul>
<b>Flagship 5: Enabling Innovations for Value Chain Transformation and Scaling (VCT)</b>	CG Fund: \$101k W3/Bilateral: \$620k Others: N/A Total: \$721k
<b>Objective</b>	
<b>Cluster of Activities 5.1:</b> Piloting best-bet interventions	CG Fund: \$76k W3/Bilateral: \$447k Others: N/A

Description	Deliverables
	<i>Total: \$523k</i>
5.1.1.1: Pilot and test new interventions in Egypt.	<ul style="list-style-type: none"> <li>• Best Management Practices Manual on new BMPs and new nodes (Egypt)</li> <li>• Training Report on new BMPs in new nodes and including environmental practices (Egypt)</li> <li>• Journal /Article submitted on BMPs (Egypt) (Q4)</li> <li>• Functional producers association (as reported in donor report) (Egypt)</li> <li>• Report documenting different retailer support models (Egypt)</li> <li>• Report and recommendations on scaling the retailer model (Egypt)</li> <li>• Journal article on retailers submitted (Egypt)</li> <li>• Report on identified best bet system (Egypt)</li> <li>• Funding proposal submitted for second phase of IEIIDEAS project (Egypt)</li> <li>• Training report on delivery of BMP training to aquaculture producers in Aswan (Egypt)</li> </ul>
5.1.1.2: Pilot test gender integrated best bets.	<ul style="list-style-type: none"> <li>• Portfolio of 1-2 gender integrated best bets through technical entry points and designs documented, Bangladesh</li> <li>• Benchmark evidence of initial conditions from pre-pilots (feeding into assessment of pilots and of overall change processes)</li> <li>• Report of results from 1-2 gender integrated technology flagship research (with KIT)</li> <li>• Funding proposals as needed for best-bet pilots</li> <li>• Funding proposal for empowerment pathway GTAs (Bangladesh, with KIT)</li> <li>• Partner landscaping report identifying In-country partners to work with on empowerment pathway/GTAs for Bangladesh</li> <li>• 1-2 strategic gender best bets designed (related to empowerment pathway, group mobilization, social media) through stakeholder consultation process, Bangladesh</li> <li>• Database with service center location map and MoU</li> <li>• Strategy document on best-bet interventions on access to services, inputs and information, through public sector extension services and local service providers (AIN Project)</li> <li>• Database of Local Service Providers (LSPs) as well as VC actors, progress report and strategy papers</li> </ul>
5.1.1.3: Identify and improve added value fish products in Aswan	<ul style="list-style-type: none"> <li>• Project Reports - Added value fish products</li> </ul>
<b>Cluster of Activities 5.2:</b> <i>Implementation of innovations at scale</i>	<i>CG Fund: \$25k</i> <i>W3/Bilateral: \$173k</i>

Description	Deliverables
	<i>Others: N/A</i> <i>Total: \$198k</i>
5.2.1.1: Support policy reform process	<ul style="list-style-type: none"> <li>• Working paper on aquaculture sector policy recommendations for Aswan (Egypt)</li> <li>• Working paper on rules and regulation recommendations for hatchery regulation (Bangladesh)</li> <li>• Quarterly &amp; annual progress to donor (USAID)</li> <li>• Report to donor on future fish-supply demand scenarios in Bangladesh and implications for future fish feed supplies and ingredients</li> </ul>

**Annex 4B: Program Participant Indicative Budget 2015 and 2016**

Year	ILRI	CIAT	WorldFish	ICARDA	Mgmt. and Strategic Investment Fund	TOTAL
<b>2015</b>	9,283,584	1,647,313	<b>1,584,491</b>	628,212	3,406,400	16,550,000
<b>2016</b>	10,211,942	1,812,044	<b>1,742,940</b>	691,003	3,747,040	18,204,969
<b>TOTAL</b>	19,495,526	3,459,357	<b>3,327,431</b>	1,319,215	7,153,440	34,754,969

**Annex 4c: Flagship Leader Annual Budget 2015 - WorldFish**

<b>Flagship Leader</b>	<b>No. Days</b>	<b>USD Amount</b>
John Benzie - Salary	44	\$39,766
John Benzie - Service Charges	44	4,181.76
Sub-Total		
Overhead	15.5%	\$6,813,45
Total		\$50,771.21

