

CRP Proposal Budget Narrative

The purpose of the CRP budget narrative is to summarize the information provided in the Flagship budget narratives and participating partners' excel-based budget templates by justifying how the budget cost elements are necessary to implement the CRP overall and accomplish 2022 target outcomes. It should also provide the CRP Management and Support costs, with a detailed description of what is included and how the costs are calculated.

General Information

CRP Name	CRP
CRP Lead Center	WORLDFISH

1. Summary

Please fill out the summary table and explain the major cost drivers and how costs relate to planned activities and CRP targets. Explain the rationale behind the level of funding of each flagship and any potential risks in spending as planned and any plans to mitigate those risks (other than funding risks). Also explain how the budget supports country level activities.

Total CRP budget by flagship (USD)

Flagship name	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	TOTAL
FS1	11,007,690	11,641,962	12,413,507	13,254,652	14,170,913	15,139,248	77,627,972
FS2	8,824,418	9,331,062	9,713,465	10,205,412	10,633,800	11,166,468	59,874,625
FS3	5,266,069	5,681,052	5,935,437	5,920,091	5,241,983	5,195,936	33,240,568
FS4	-	-	-	-	-	-	-
FS5	-	-	-	-	-	-	-
FS6	-	-	-	-	-	-	-
Management & Support Cost	1,100,000	1,200,000	1,200,000	1,300,000	1,400,000	1,500,000	7,700,000
Strategic Competitive Research Grant							
Total	26,198,177	27,854,076	29,262,409	30,680,155	31,446,696	33,001,652	178,443,165

Narrative:

The primary opportunity to increase fish production lies in aquaculture, the fastest-growing food sector in the world, with significant opportunities for R&D to boost productivity. Flagship 1 focuses on research to address the challenge of sustainably intensifying aquaculture production, and accounts for the largest share of planned FISH contributions to targets on productivity improvement and poverty reduction (SLO 1) and food and nutrition security (SLO 2). It therefore also has the largest budget allocation, at 43.5%. However small-scale fisheries still provide the sector's largest contribution to livelihoods and also remain the primary source of fish for food and nutritional security for poor consumers in most countries. Sustaining these fisheries requires significant improvements in ecosystem management (SLO 3) and Flagship 2 receives 33.5% of budget allocation to invest in this research. Flagship 3 is designed to complement Flagships 1 and 2 with a focus on achieving the maximum gains in nutrition outcomes. It has a smaller geographic focus in this phase, to demonstrate and test new approaches that can be scaled. Its budget allocation is 18.6%. The preponderance of the flagship budgets will be spent to directly support country level activities.

FISH will benefit from a lower management and support cost as a result of utilizing existing administrative infrastructure and financial support processes of WorldFish to support program leadership. The budget allocation for management and support is 4.4%.

We envisage that FISH will pursue research activities in Nigeria and Tanzania, locations where WorldFish does not have an existing administrative infrastructure or legal standing. While both are priority countries targeted for intensive site integration, this remains as a start-up risk that may delay program spending if not mitigated. This risk will need to be carefully managed through collaboration with partners and due diligence aimed at ensuring the most efficient and effective processes are in place to support operations. Finally, leadership is always a critical factor in a successful program launch and ensuring the program implements according to plan. Recruiting and hiring a well qualified CRP Director for the program will be the first priority to ensure that research delivery and spending remains on schedule.

2. CRP Funding Plan

Please provide insight into the CRP funding plan: how much bilateral funding is already secured? What are the requirements for fundraising to assure achievement of the proposed 2022 targets?

Total CRP budget by sources of funding (USD)

Funding Needed	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	TOTAL
W1+W2	8,661,033	9,052,023	9,410,829	9,944,295	10,470,533	11,015,425	58,554,138
W3	-	-	-	-	-	-	-
Bilateral	17,537,143	18,802,053	19,851,580	20,735,860	20,976,164	21,986,227	119,889,027
Other	-	-	-	-	-	-	-
Total	26,198,177	27,854,076	29,262,409	30,680,155	31,446,696	33,001,652	178,443,165

(Management and Support Cost distributed across funding sources – except bilateral - on a percentage basis; Strategic and Competitive Research Grant assumed to be funded out of W1+W2)

Funding Secured	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	TOTAL
W1+W2 (Assumed secured)	8,300,362	8,426,840	8,681,515	9,052,345	9,439,277	9,857,815	53,758,155
W3	-	-	-	-	-	-	-
Bilateral	9,307,871	6,076,372	3,796,983	2,254,408	1,001,797	289,933	22,727,364
Other	-	-	-	-	-	-	-
Total	17,608,233	14,503,212	12,478,498	11,306,753	10,441,074	10,147,748	76,485,518

(Management and Support Cost assumed secured from W1,2 and 3 and distributed across funding sources on a percentage basis; Strategic Competitive Research Grant assumed unsecured – the narrative can specify whether or not this assumption is true).

Funding Gap	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	TOTAL
W1+W2 (Required from SO)	-360,671	-625,183	-729,314	-891,950	-1,031,256	-1,157,610	-4,795,984
W3 (Required from FC members)							
Bilateral (Fundraising)	-8,229,272	-12,725,681	-16,054,597	-18,481,452	-19,974,367	-21,696,294	-97,161,664
Other (Fundraising)							
Total	-8,589,944	-13,350,864	-16,783,911	-19,373,402	-21,005,622	-22,853,904	-101,957,648

(This table is simply the difference between funding needed and funding secured)

Narrative:

Due to the limitations of the online submission form, the funding figures presented herein have combined all bilateral and Window 3 (W3) funds into the bilateral fields row. Despite this presentation constraint, it is our full expectation that there will be a mix of both bilateral and Window 3 funds contributing to FISH. As of March 2016, 53% of the needed bilateral/W3 funding for 2017 is already fully secured. The current pipeline of bilateral proposals that are in negotiation with identified donors provides us with high confidence that the 2017 and 2018 funding gaps will be eliminated prior to the end of 2017.

Funding risks increase beyond 2018 as the pipeline becomes more uncertain. The greatest risk mitigation strategy is to deliver strong outcomes in the first 18 months of FISH and promote that progress through a diverse array of channels to provide bilateral donors with the compelling case they need to invest. WorldFish will continue to engage in flagship and CRP level initiatives for business development, including communication and dialogue with donors from the public and private sectors, scanning of investment opportunities and development of proposals to increase the pipeline of bilateral funds available.

Annual funding certainty of W1/W2 funds will be a critical enabler to ensure the CRP achieves its objectives on time and on target. The traditional funding dynamic that does not allow for any funding certainty until after the year is over will create delays in implementation if it is not adjusted. WorldFish will dedicate additional organizational resources to securing the bilateral funding targets identified in the proposal; however W1 and W2 funds will need to be secured and received in order to leverage the bilateral opportunities and commence investment in program activities. Delays in receiving W1 and W2 funds will have a knock-on effect on implementation and execution as WorldFish will not be in a position to pre-finance Program activities that are designated to be funded from W1 and W2 sources.

3. CRP Management and Support Cost

Please provide a detailed description of what is included in Management and Support Cost and how the individual cost line items were calculated.

The critical function of establishing and managing the direction, coherence, and transparent governance of the CRP is expected to be funded from W1/2. The CRP will be charged these actual costs incurred on a direct charge basis. The budget for this has been developed on a detailed basis considering the specific dedicated capacities and level of effort that will be required to fulfill these services for the CRP. As a starting point, great care was taken to identify cost-efficiencies through leveraging of existing and planned shared processes and systems. After realizing those efficiencies while ensuring sufficient dedicated resources are in place to support the CRP, the final management and support cost budget is 4.4% of the overall CRP budget. This includes management and governance at 62% and 38% respectively. All costs are inclusive of applicable overhead costs.

Personnel costs represent the single largest component of management costs and relate to the cost of a dedicated CRP Director with additional specified support from finance and human resources staff. The level of effort for shared staff was estimated on a number of day's basis. All related costs (travel, operating, workshops/meetings, ICT) of the CRP Director were included in the respective lines under management.

The most significant cost for governance relates specifically to consultancies required to carry out internal audits, internal reviews and CRP-Commissioned External Evaluations (CCEE's) as well as flagship level impact assessments, which will be conducted on a rotating annual basis. The full cost of the Independent Steering Committee (ISC), including the travel, meeting and operating costs of the ISC, has also been included.

4. CRP Financial management principles

Please describe

- 1) the allocation process of the CRP 2017-2022 budget to the flagships for W1+2
- 2) the level of budget ownership of the flagship leaders (tracking, reporting, revising, etc.)
- 3) Rules and expectations around annual variances for flagship and participating partners budgets
- 4) Expected major capital investments (>\$25,000)

Allocation process of the CRP budget to flagships for Windows 1 and 2:

The total proportion of requested Windows 1 and 2 (W1/W2) funds for the program is 32.8%. This was derived from the indicative budget amounts provided in the 2017-2022 CGIAR Research Program Portfolio (CRP2) Final Guidance for Full Proposals. After applying inflation and timing based assumptions to the base-year budget, this translates into \$58.6M of cumulative W1/W2 requested for the entirety of the program.

As stated in section 3, a keystone budget assumption used in developing the budget allocations is that management and support costs are funded by Windows 1 and 2. Adjusting for management and support costs, the remaining Windows 1 and 2 funds were distributed to the flagships at a rate approximating the proportionate amount of the total budget reserved for each flagship and outlined in section 1, above.

Budget Accountabilities

Each flagship leader will be fully authorized to manage the budgets for their respective flagship. Budgetary responsibilities of the flagship leaders include monitoring performance to budget spending, monitoring impact of foreign exchange fluctuations on availability of funding and program outputs, monitoring progress against bilateral fundraising targets and adjusting projections and budgets accordingly as circumstances change.

The financial services department of WorldFish will support the flagship leaders by providing all of the necessary financial reports (performance to budget at cluster and by donor, forward looking projections, funds availability analysis, foreign exchange impact analysis, etc.) on a monthly, quarterly and annual basis as necessary. The flagship leader will be empowered to use this information to engage directly with partners, implementing country offices, cluster leaders and activity leaders to hold them accountable for performance gaps relating to spending/implementation or funding/resource acquisition. The only exception to this accountability framework will be with respect to receiving Window 1 and 2 funds. Managing this critical funding stream is beyond the scope of accountability for the flagship leaders.

Financial Guidelines

Subject to rules that may be established in the future by the new System governance structure, the working expectation is that it will be permissible to carry forward unspent funds from one period to a future period as long as the overall program is still deemed on course and the cumulative allocated funds are spent by the end of the six years.

In cases where funds are expected to be overspent in a particular natural classification category, there will be a requirement for the budget to be revised in advance. The expectation is that the budget revision will provide narrative rationalization for the shift in spending plan and must show which expense classification category will be commensurately reduced to offset the planned increase. All budget revisions will require approval of the CRP Director. If greater than 10%, then this will also require approval of the Independent Steering Committee, and of the System Office as per the Final Guidance for Full Proposals.

Annual spending variances of up to 10% for individual activities and line items funded by W1/2 will be allowed for partner and flagship budgets. W3/bilateral expenditures are subject to their own contractual requirements which will be followed.

Spending and programmatic progress of partners will be monitored on a continual basis with advances being restricted pending thorough review and

approval of spending to date. Performance criteria will be included in the partner contracts and linked to the program's results based management system to empower the flagship leader to hold partners accountable.

Leveraging the capacity of cloud-based shared financial management and enterprise resource planning (ERP) system, financial reports to donors and the System Office will be prepared on the basis that they can be viewed in detail by 'drilling down' from the flagship level to the individual funding agreements. All financial accounting will be conducted in line with International Financial Reporting Standards (IFRS). Financial reports will need to be approved by flagship leaders and the CRP Director prior to submission.

Capital Investments

The only capital investments exceeding \$25,000 are as follows (please refer to detailed budget worksheets for more information):

Genomic data handling software (\$168,666) – consists of original outlay of \$25K for software plus annual renewal and licensing costs over the lifetime of the program.

Results Based Management system for tracking & consolidation of genetic improvement (\$25,000)

5. Other

Please feel free to use this section to provide any other commentary or information that helps to describe and justify the budget request presented.

Strategic Reliance on W1/W2 Funding

Achieving the impacts outlined in this program proposal requires mobilizing approximately \$120 million in bilateral and Window 3 over the life of the program. This calls for flexibility to address the priorities of funders in terms of country focus and thematic interest.

Window 1 and 2 funds at the CRP level are used primarily to support fundamental elements of the program, including funding of managing partners to enable their participation in coordination, planning and implementing strategic research that can yield impact at scale when combined with activities funded with bilateral investments. Given the breadth of the FISH program and the interdependent funding model, funds from different sources will be integrated in support of tasks that have been determined to fit within the scope and priorities of the Program.

As noted in section 3, it is expected that Window 1 and 2 funds will also be used to fund the annual management and support costs of the program.

Uplift Budget

Under an uplift budget scenario, should additional funding be available to invest in the program, allocations will be made according to an ex ante analysis of probability of success and scale of impact, informed by results of outcome monitoring and impact assessment. In year 1, in advance of results based management data, this would follow the proportions by flagship as outlined in section 1 above, while in subsequent years it would factor in prior performance. (See Results Based Management Annex for a description of the program's approach to outcome evaluation and impact assessment.) Particular priority under an uplift budget will be given to increasing the level of investment and pace of scaling impact in Sub-Saharan Africa.

6. Budgeted Costs for certain Key Activities

Please describe key activities and estimated costs (included in the line items above) for the applicable categories below, as described in the guidance for full proposal:

- gender
- youth (only for those who have a relevant set of activities in this area)
- capacity development
- impact assessment
- intellectual asset management
- open access and data management
- communication

The sum total of the Flagship Narrative Key Activities does not necessarily have to match with the total reported under each Key activity in this CRP Narrative. These amounts are estimated and not for audit purposes.

Gender

Investment of \$21.7M over the 6 years, representing 12.1% of the overall CRP budget, will support the integration of gender analysis into all CRP and flagship activities and the delivery of outcomes related to gender equity and inclusion. This includes global and national scientists, specialist consultancy, partners, workshops and training of research teams and development partners and operating expenses for field research in focal countries and cross-country synthesis. Research will focus on:

- Gender-integrated fish breeding programs, women-led enterprises in fish feed value chains and most viable models and entry points for women entrepreneurs in aquaculture (flagship 1).
- Gender-equitable control of assets and participation in decision making as a contribution to building more resilient fishing communities and households and on increasing the value women derive from value chains through improved governance and policy (flagship 2).
- Gender-equitable resource control of assets and participation in decision-making as a contribution to increasing the availability and consumption of nutrient-dense fish. This will be done by:
 - addressing the need for harvesting technologies that meet women's specific needs and preferences, including time and labor, including the testing of women-targeted technologies for fish harvesting in pond polyculture systems (flagship 1)
 - identifying and testing approaches that enhance women's access to and control over key assets and their ability to take advantage of opportunities in fish value chains (flagship 2)
 - researching gender issues at the household-level, in particular decision-making about intra-household distribution of food and child-feeding practices. The cluster will test scalable gender-transformative behavioral change mechanisms (flagship 3)

Early program investments during 2017-18 will focus on participatory assessments and formative research, and from 2018-2022 increasingly towards action research and implementation of best bets arising from the assessments. WorldFish and IWMI will continue to recruit and train people in our own organizations so we are fit-for-purpose in engaging with the ambitious FISH gender research agenda. Funds are also invested in contributions of key international partners and national partners for research and scaling activities.

Youth

Investment of \$5.2M over the 6 years representing 2.9% of the overall CRP budget which will support the integration of youth into all CRP and flagship activities.

Early program investments during 2017-18 are oriented towards assessments of youth and addressing the dearth of knowledge about the roles of youth in pond polyculture systems, rice field fisheries and fish value chains. As the CRP progresses the investments will increasingly go towards developing and testing youth-responsive technologies for all parts of the value chain and from 2018-2022 increasingly towards engaging youth in action research and catalytic support to scaling of promising youth interventions in aquaculture production, fisheries governance and value chains in focal countries.

Global and national scientists are funded, including a part-time young scientist as coordinator of flagship 1 youth research, together with a specialist consultancy for national studies, partnerships, workshops and training of research teams and development partners and operating expenses for field research in focal countries and cross-country synthesis. Funds are also allocated for youth internships and mentoring across the flagship, enabling us to capitalize on activities for engaging youth in program activities and supporting youth-oriented capacity building.

Capacity development

Investment of \$17.8M over the 6 years representing 10% of the overall CRP budget which will support the integration of capacity development into flagship research activities and support achievement of outcomes in line with the program theory of change. Early program investments will include needs assessments, multi-stakeholder approaches, development of new learning materials where required, the development of capacity for the testing of gender-inclusive technologies and market and institutional approaches to reducing fish waste and economic and nutrient losses, and enhancing the quality of fish.

This will be followed by targeted capacity building investments including specialist training consultancy, internships for young scientists within the program research activities, implementation of regular Africa regional aquaculture training courses in the Abbassa research and training center in Egypt, investment in national partners through collaboration in research activities, and student fellowships.

Funds are also allocated to global and national scientists to conduct training activities for researchers and development partners. A dedicated coordinator for aquaculture capacity building in Africa is proposed to be based at the Abbassa center, to facilitate transfer of our core aquaculture research learning in Egypt more widely in support of scaling across the region. Investments are also made in staff to support capacity building across our Asian focal and scaling countries.

Impact assessment

Investment of US\$7.0M over the 6 years represents 3.9% of the overall CRP budget. This investment will support staff time and tools for data collection, consolidation and analysis related to indicators of relevance across the CRP including changes in fish consumption, reduced waste and loss, nutrient analysis of fish content of different species and across the value chain, estimating and validating dissemination of improved fish strains, on-farm assessments of productivity, income, fish disease control/feed technology adoption, and fish price monitoring.

Additional investment in annual after-action assessments and learning events with partners to capture lessons learned, document outcomes and evaluate uptake of research technologies by partners and policy-related outcomes.

Intellectual asset management

Investment of US\$511K over the 6 years represents 0.3% of the overall CRP budget. This investment is allocated for assessment, protection and ensuring suitable arrangements with partners in ownership of intellectual property, lawyer's fees and meeting the requirements of the Nagoya protocol.

Open access and data management

Investment of US\$510K over the 6 years represents 0.3% of the overall CRP budget and supports publication of research data and papers (including OA publication costs), ensuring materials are available for dissemination through the CRP website, investments in data management and appropriate documentation to make datasets publicly available through open access depositories, and purchasing of open access privileges for publication in non-open access journals where needed.

Communications

Investment of US\$8.2M over the 6 years represents 4.6% of the overall CRP budget. This investment supports publication of research papers, and communication activities (policy briefs, manuals, technical reports, outcome stories) that will support the communication of research to end users with and through partners, including farming communities in focal countries (costs of pamphlets, manuals), policy makers (policy briefs) and NGO or government partners (extension manuals). Investment in mobile technology approaches to communication to end-users will be assessed through a study planned for 2017. Communications will also be resourced through partners and their institutional investments in communications, particularly, for example, JCU which has developed a highly effective communications and media program. Similarly, we will seek synergies with collaborating CRPs.

Flagship Proposal Budget Narrative

The purpose of the flagship budget narrative is to supplement the information provided in the excel-based budget template by justifying how the flagship budget cost elements are necessary to implement project activities and accomplish 2022 target outcomes. The flagship budget narrative is a tool to help Reviewers fully understand the budgetary needs of the project and is an opportunity to provide descriptive information about the costs, drivers, and risks that can't be easily communicated in the flagship participating partners budget templates. Together, the flagship budget narrative and participating partners budget templates should provide a complete quantitative and qualitative description that supports the proposed flagship budget. Please use this flagship budget narrative to provide a thorough description of your flagship budget and only complete questions that are relevant to your proposal.

This flagship budget narrative will also serve as the basis for the CRP budget narrative which is composed of the flagship budgets plus the CRP Management and Support Cost.

General Information

CRP Name	FISH
CRP Lead Center	WORLDFISH
Flagship Name	FLAGSHIP 1 – SUSTAINABLE AQUACULTURE
Center location of Flagship Leader	MALAYSIA

1. Summary

Please fill out the summary table and explain the major cost drivers and how costs relate to planned activities and target outcomes. Also explain any potential risks in spending as planned and any plans to mitigate those risks.

Total Flagship budget summary by sources of funding (USD)

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
W1+W2	3,343,862	3,471,252	3,643,642	3,831,351	4,039,804	4,245,203
W3						
Bilateral	7,663,828	8,170,710	8,769,865	9,423,301	10,131,109	10,894,045
Other						
Total	11,007,690	11,641,962	12,413,507	13,254,652	14,170,913	15,139,248

Total Flagship budget by Natrual Classifications (USD)

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
Personnel	4,293,517	4,659,241	5,087,719	5,558,206	6,077,228	6,649,100
Travel	618,980	630,367	661,928	691,515	719,552	748,246
Capital Equipment	78,200	67,600	70,980	74,529	78,255	82,168
Other Supplies and Services	3,842,632	4,004,781	4,188,372	4,393,394	4,611,768	4,825,104
Non CGIAR collaboration	1,013,060	1,048,260	1,089,840	1,131,882	1,180,426	1,226,777
Indirect Cost	1,161,301	1,231,713	1,314,667	1,405,125	1,503,684	1,607,854
Total	11,007,690	11,641,962	12,413,507	13,254,652	14,170,913	15,139,248

Total Flagship budget by participating partners (signed PPAs) (USD)

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
WorldFish	10,758,833	11,411,158	12,179,683	13,017,732	13,930,820	14,895,903
UoW - Wageningen University	248,857	230,804	233,824	236,920	240,093	243,345
Total	11,007,690	11,641,962	12,413,507	13,254,652	14,170,913	15,139,248

Explanations of these costs in relation to the planned 2022 outcomes:

Major cost drivers and how these relate to planned activities and target outcomes

Major cost drivers are scientific personnel, travel, consumables and capital equipment. Scientific personnel costs include those of flagship and cluster leaders, principal investigators and cluster research teams, including those at WorldFish HQ (Malaysia) and our key research hubs in the focal countries Bangladesh and Egypt. During the implementation of the flagship we plan to increase allocation of funds to focal country programs in Africa (Nigeria, Tanzania, Zambia) and Asia (Cambodia, Myanmar), while maintaining the core cluster investments in scientific personnel. Investments are also made in personnel for leading/coordinating key cross-cutting dimensions of flagship activities, including gender, youth and capacity development. We anticipate funding a coordinator for flagship 1 activities in each focal country where we operate. Scaling to countries beyond the core program countries will be through bilateral funding. Travel includes investments in field visits and assessments, planning and review meetings/workshops, partner consultations and scientific supervision. Capital equipment includes items for the tilapia breeding program necessary to upgrade their efficiency and to support experiments in Egypt (Abbassa), automated fish measuring systems for genetics research, genomics analysis software and associated large data hardware (with M&E component of the CRP), and fish health and feeds equipment for cluster 2 research in the Abbassa aquaculture research and training center in Egypt. Consumables include the costs for molecular characterization of fish stocks and diseases, which are a fundamental part of the research.

Risks and plans to mitigate risks

Major risks are associated with funding uncertainties across each cluster. Cluster 3 is sufficiently well funded by current/pipeline bilaterals to proceed as planned until 2018, but cluster 1 and 2 need further investments to implement the research agenda and achieve the development outcomes indicated. Funding risks increase beyond 2018 when the funding pipeline becomes more uncertain. Risk mitigation measures will include implementation of systems of financial planning in accordance with WorldFish procedures and more flagship-level initiatives for business development, including communication/dialogue with donors from public and private sectors, scanning of investment opportunities and development of proposals to increase the pipeline of bilateral funds available.

2. Additional explanations for certain accounting categories

Benefits: Describe the components of the benefits (column R of the “Budget Details” sheet) included with the salary costs. For example: pension, health insurance, expatriate costs, housing/education/vehicle allowances etc.

Personnel costs are based upon best estimates of the level of effort required by specific staff positions to deliver upon the objectives of the Flagship. This level of effort has been expressed as a number of days per period. The personnel costs have been determined via the application of daily standard rates per position/staff member. In addition to the daily standard rates, the cost of benefits have been calculated on an individual basis and expressed as a function of salary. The benefits included are those that are applicable per the employing Center's established policies and procedures.

The estimated cost of the allowances and benefits vary depending on the classification of the individual staff member as well as the location in which they are working. WorldFish has three staff designations: Global (GRS), Home Country International (HCI), and National (NRS). The following benefits are have been included in the budgeted salary costs:

Retirement contributions: WorldFish contributes the equivalent of 15% of base salary to a retirement fund for staff. This is applicable to all designations of staff (GRS, HCI, NRS).

Insurance premiums: this includes medical (GRS, HCI & NRS), accidental death and dismemberment (AD&D) (GRS & HCI), long-term disability (LTD) (GRS & HCI), and life insurance (GRS, HCI, & NRS).

Annual medical examination costs: applicable to all staff designations (GRS, HCI, NRS), WorldFish encourages annual medical examination for all staff and agrees to subsidize the costs thereof for all staff over the age of 40, up to \$250USD per annum.

Housing allowance: generally applicable for GRS staff only, WorldFish provides an allowance of up to 75% of the cost of housing, subject to monthly maximums established by location.

Dependant Education Allowance: applicable for GRS staff only, WorldFish provides the cost of education (up to end of secondary education) for dependant co-located children.

Home Leave: applicable for GRS staff only, WorldFish funds the cost of an annual trip to the staff members' home country for the staff member and dependants.

Relocation and Repatriation costs: applicable for GRS staff only, WorldFish covers the cost of relocating GRS staff from their home location to their duty post. Once the staff member has completed at least 3 years of continuous service, WorldFish will also cover the cost of repatriating the staff member to their home location upon termination of employment.

Location specific benefits (i.e. hardship allowances), where applicable, have also been included in the cost as have the cost of statutory employment related taxes applicable in certain operating locations.

As there is great range in the cost of benefits by location and by staff designation, we assigned a specific percentage (of salaries) to each location/staff designation combination. The following provides the range of percentages that were used by staff designation:

Range of Benefit %		
	High	Low
HCI	Zambia (63.56%)	Philippines (21.6%)
GRS	Zambia (129.03%)	Egypt (36.59%)
NRS	Solomon (62.15%)	Zambia (21.64%)

Other Supplies and Services: Provide a brief description and rationale for other Supplies and Services required, including cost assumptions used to develop the budget for these costs.

Other supplies and services include: (i) specialist consulting services for support to integrated farm assessments, country scaling plans, capacity assessments, data collection and other field studies; (ii) support to operations and genetics, feed and health experiments at the three fish genetic improvement programs in Bangladesh, Egypt (Abbassa) and Malaysia (WorldFish HQ), including aquarium equipment, fish-tagging, molecular characterization, feeding, casual help, and facility maintenance; (iii) non-CGIAR partner costs, including contracts for supporting national fish breeding programs, field assessments of improved strains, epidemiological studies, and feed ingredient/value chain studies, as well as costs associated with participation in planning and design meetings at global/national levels; and (iv) workshops for annual flagship and cluster planning, stakeholder consultations and training, scaling activities and national research platforms.

3. Other Sources of Funding for this Project

Please describe your contingency plans if full project funding does not become available. Any significant expected in-kind contributions should be included in the space below.

Should full funding not become available, we will reduce the scope of the activities across the flagship, which will have knock on effects on the research and development outcomes that can be achieved. Research focus under a restricted funding environment will be directed more towards tilapia, and potential investments in carp genomics and genetic improvement will be postponed until later in the program or as funds become available. Hiring of key new appointments, including bioinformatics, geneticists, fish disease and feeds will also be postponed until sufficient funds are available. We will continue to seek bilateral donor funds to implement the research priorities identified in the proposal, and have several bilateral projects in the pipeline or under development. Longer-term fish genomics and genetic improvement programs, which require continued attention to the maintenance and management of live animals, will be placed at risk through decline or uncertainty in W1/W2 funds, and will shift towards potentially uncertain and/or shorter-term bilateral funding windows

4. Budgeted Costs for certain Key Activities

Please describe key activities and estimated costs (included in the line items above) for the applicable categories below, as described in the guidance for full proposal:

- gender
- youth (only for those who have a relevant set of activities in this area)
- capacity development
- impact assessment
- intellectual asset management
- open access and data management
- communication

Gender investment of US\$9.3M over the 6 years represents 11.9% of the budget allocated to the flagship and supports integration of gender into all flagship activities, as well as gender-focused research to increase the impact of the research on development outcomes for women. These include global and national scientists, specialist consultancy, partners, workshops and training of research teams and development partners and operating

expenses for field research in focal countries and cross-country synthesis. Investments are made across all research clusters, including research on gender-integrated fish breeding programs (cluster 1), women-led enterprises in fish feed value chains (cluster 2) and most viable models and entry points for women entrepreneurs in aquaculture (cluster 3). Early program investments during 2017-18 are oriented towards participatory assessments, and from 2018-2022 increasingly towards action research and implementation of best bets arising from the assessments, followed by scaling of research with national and international development partners. Funds are also invested in contributions of key international partners and national partners for research and scaling activities.

Youth investment of US\$2.3M over the 6 years represents 2.9% of the budget allocated to flagship 1 and supports integration of youth into all flagship activities. Global and national scientists are funded, including a part-time young scientist as coordinator of flagship 1 youth research, together with a specialist consultancy for national studies, partnerships, workshops and training of research teams and development partners and operating expenses for field research in focal countries and cross-country synthesis. Funds are also allocated for youth internships and mentoring across the flagship, enabling us to capitalize on activities for engaging youth in program activities and supporting youth-oriented capacity building. All research clusters receive investments, though youth employment receives particular attention in cluster 3. Early program investments during 2017-18 are oriented towards assessments of youth, and from 2018-2022 increasingly towards engaging youth in action research and catalytic support to scaling of promising youth interventions in aquaculture production and value chains in focal countries.

Capacity development investment of US\$8.9M over the 6 years represents 11.4% of the budget allocated to flagship 1 and supports integration of capacity development into all flagship activities, including assessments during early stages of the program, followed by targeted capacity building investments. Funds are allocated to global and national scientists for conduct of training activities for researchers and development partners, specialist training consultancy, internships for young scientists within the program research activities, and implementation of regular Africa regional aquaculture training courses in the Abbassa research and training center in Egypt. A dedicated coordinator for aquaculture capacity building in Africa is proposed for funding, also to be based at the Abbassa center, to facilitate transfer of our core aquaculture research learning in Egypt more widely in support of scaling across the region. Investments are also made in staff to support capacity building across our Asian focal and scaling countries.

Impact assessment investment of US\$3.1M over the 6 years represents 4% of Flagship 1 budget and supports staff time and tools for data collection associated with documentation of research and development outcomes including estimating and validating dissemination of improved fish strains, on-farm assessments of productivity, income, fish disease control/feed technology adoption, fish price monitoring, and annual review/learning events with partners to capture lessons learned and document research and development outcomes.

Intellectual asset management investment of US\$230K over the 6 years is allocated for assessment, protection and suitable arrangements with partners in ownership of intellectual property, lawyers fees, meeting requirements of the Nagoya protocol and appropriate access to data.

Open access and data management investment of US\$230K over the 6 years is allocated for maintenance of databases, mainly for genetic data collected through the cluster 1 research and supports publication of research data and papers (including OA publication costs) and management of OA databases, including collection and management of the large amount of genomics and associated data being collected through cluster 1.

Communication investment of US\$2.7M over the 6 years supports publication of research papers, and communication activities (policy briefs, manuals, technical reports, outcome stories) that will support the communication of research to end users with and through partners, including farming communities in focal countries (costs of pamphlets, manuals), policy makers (policy briefs) and NGO or government partners (extension manuals). Investment in mobile technology approaches to communication to end-users will be assessed through a study planned for 2017.

5. Other

Please feel free to use this section to provide any other commentary or information that helps to describe and justify the budget request presented. This may include assumptions and rationale behind indirect costs, risks, anomalies or other assumptions Reviewers should be aware of when reviewing the budget.

The level of ambition of the Sustainable Aquaculture flagship requires mobilization of approximately \$55 million in bilateral and Window 3 funds over the life of the program. This calls for flexibility to address the priorities of funders in terms of country focus and thematic interest. **Window 1 and 2 funds are used primarily to support core elements of the program** that can be widely applied when matched with bilateral funds. Given the breadth of the flagship and the funding model, with dependence on all sources of funding, funds from different sources are often integrated in support of tasks that have been determined to fit within the scope and priorities of the Program.

Annual funding certainty of W1 and W2 funds will be critical to ensure the flagship achieves its objectives on time and on target. As a means of risk mitigation, WorldFish will dedicate organizational resources to securing the bilateral funding targets identified in the proposal, however W1 and W2 funds will need to be secured and received in order to leverage the bilateral opportunities. Delays in receiving W1 and W2 funds will have a knock-on effect on implementation and execution of the flagship as WorldFish will not be in a position to pre-finance Program activities that are designated to be funded from W1 and W2 sources.

Due to the limitations of the online submission form, the funding figures presented herein have combined all bilateral and Window 3 funds into the bilateral fields. It is our full expectation that there will be a mix of both bilateral and Window 3 funds contributing to the flagship.

Indirect costs included in the budget have been set at 12%, which is consistent with existing audited indirect costs for WorldFish, adjusting for information technology and facility costs which have been specifically included as direct costs in the flagship budget .

Flagship Proposal Budget Narrative

The purpose of the flagship budget narrative is to supplement the information provided in the excel-based budget template by justifying how the flagship budget cost elements are necessary to implement project activities and accomplish 2022 target outcomes. The flagship budget narrative is a tool to help Reviewers fully understand the budgetary needs of the project and is an opportunity to provide descriptive information about the costs, drivers, and risks that can't be easily communicated in the flagship participating partners budget templates. Together, the flagship budget narrative and participating partners budget templates should provide a complete quantitative and qualitative description that supports the proposed flagship budget. Please use this flagship budget narrative to provide a thorough description of your flagship budget and only complete questions that are relevant to your proposal.

This flagship budget narrative will also serve as the basis for the CRP budget narrative which is composed of the flagship budgets plus the CRP Management and Support Cost.

General Information

CRP Name	FISH
CRP Lead Center	WORLDFISH
Flagship Name	FLAGSHIP 2 – SUSTAINING SMALL-SCALE FISHERIES
Center location of Flagship Leader	MALAYSIA

1. Summary

Please fill out the summary table and explain the major cost drivers and how costs relate to planned activities and target outcomes. Also explain any potential risks in spending as planned and any plans to mitigate those risks.

Total Flagship budget summary by sources of funding (USD)

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
W1+W2	2,624,418	2,759,061	2,878,586	3,028,789	3,170,111	3,329,595
W3	-	-	-	-	-	-
Bilateral	6,200,000	6,572,001	6,834,879	7,176,623	7,463,689	7,836,873
Other						
Total	8,824,418	9,331,062	9,713,465	10,205,412	10,633,800	1,166,468

Total Flagship budget by Natrual Classifications (USD)

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
Personnel	2,680,396	2,864,604	2,986,473	3,174,510	3,542,742	3,881,074
Travel	485,055	611,589	705,362	874,203	988,217	1,010,738
Capital Equipment	10,500	-	-	-	-	-
Other Supplies and Services	3,273,746	3,371,865	3,531,350	3,829,039	3,449,227	3,567,318
Non CGIAR collaboration	1,403,624	1,456,105	1,421,315	1,204,571	1,473,424	1,478,533
Indirect Cost	971,097	1,026,899	1,068,964	1,123,089	1,170,190	1,228,805
Total	8,824,418	9,331,062	9,713,465	10,205,412	10,633,800	11,166,468

Total Flagship budget by participating partners (signed PPAs) (USD)

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
WorldFish	7,884,418	8,334,663	8,677,209	9,117,343	9,502,208	9,978,297
IWMI	620,000	657,200	683,488	717,663	746,369	783,688
James Cook University	320,000	339,200	352,768	370,407	385,223	404,483
Total	8,824,418	9,331,062	9,713,465	10,205,412	10,633,800	11,166,468

Explanations of these costs in relation to the planned 2022 outcomes:

Major cost drivers and how these relate to planned activities and target outcomes

Major cost drivers are scientific personnel, travel and operating expenses. Scientific personnel costs include those of principal investigators and cluster research teams, the vast majority of whom are located in the countries in which fieldwork will be implemented. Many of these countries are high-inflation economies and this is expected to be a major driver over the life of the CRP. Investments are also made in personnel for leading/coordinating key crosscutting dimensions of flagship activities, including gender, youth and capacity development. Travel includes investments in field visits and assessments, planning and review meetings/workshops, partner consultations and scientific supervision. Given the nature of the research, no capital equipment (>USD\$25,000 per item) is expected to be purchased.

Risks and plans to mitigate risks

FP2 is heavily dependant on bilateral funding – the continuity of that funding is the major risk to achieving our ambitious targets. Bilateral funding is secured for the majority of 2017 and there is a significant pipeline of projects already in the pipeline to be confident for the first 18 months of the CRP. Funding risks increase beyond 2018 when the funding pipeline becomes more uncertain. The greatest risk mitigation strategy is to deliver strong outcomes in the first 18 months of the CRP and promote that progress through a diverse array of channels to provide bilateral donors with the compelling case they need to invest. On an operational level, implementation and fiduciary risks will be managed through CGIAR partner policies and processes.

2. Additional explanations for certain accounting categories

Benefits: Describe the components of the benefits (column R of the “Budget Details” sheet) included with the salary costs. For example: pension, health insurance, expatriate costs, housing/education/vehicle allowances etc.

Personnel costs are based upon best estimates of the level of effort required by specific staff positions to deliver upon the objectives of the Flagship. This level of effort has been expressed as a number of days per period. The personnel costs have been determined via the application of daily standard rates per position/staff member. In addition to the daily standard rates, the cost of benefits have been calculated on an individual basis and expressed as a function of salary. The benefits included are those that are applicable per the employing Center’s established policies and procedures.

The estimated cost of the allowances and benefits vary depending on the classification of the individual staff member as well as the location in which they are working. WorldFish has three staff designations: Global (GRS), Home Country International (HCI), and National (NRS). The following benefits are have been included in the budgeted salary costs:

Retirement contributions: WorldFish contributes the equivalent of 15% of base salary to a retirement fund for staff. This is applicable to all designations of staff (GRS, HCI, NRS).

Insurance premiums: this includes medical (GRS, HCI & NRS), accidental death and dismemberment (AD&D) (GRS & HCI), long-term disability (LTD) (GRS & HCI), and life insurance (GRS, HCI, & NRS).

Annual medical examination costs: applicable to all staff designations (GRS, HCI, NRS), WorldFish encourages annual medical examination for all staff and agrees to subsidize the costs thereof for all staff over the age of 40, up to \$250USD per annum.

Housing allowance: generally applicable for GRS staff only, WorldFish provides an allowance of up to 75% of the cost of housing, subject to monthly maximums established by location.

Dependant Education Allowance: applicable for GRS staff only, WorldFish provides the cost of education (up to end of secondary education) for dependant co-located children.

Home Leave: applicable for GRS staff only, WorldFish funds the cost of an annual trip to the staff members’ home country for the staff member and dependants.

Relocation and Repatriation costs: applicable for GRS staff only, WorldFish covers the cost of relocating GRS staff from their home location to their duty post. Once the staff member has completed at least 3 years of continuous service, WorldFish will also cover the cost of repatriating the staff member to their home location upon termination of employment.

Location specific benefits (i.e. hardship allowances), where applicable, have also been included in the cost as have the cost of statutory employment related taxes applicable in certain operating locations.

As there is great range in the cost of benefits by location and by staff designation, we assigned a specific percentage (of salaries) to each location/staff designation combination. The following provides the range of percentages that were used by staff designation:

Range of Benefit %		
	High	Low
HCI	Zambia (63.56%)	Philippines (21.6%)
GRS	Zambia (129.03%)	Egypt (36.59%)
NRS	Solomon (62.15%)	Zambia (21.64%)

Other Supplies and Services: Provide a brief description and rationale for other Supplies and Services required, including cost assumptions used to develop the budget for these costs.

Other supplies and services include (i) specialist contracts for international development partners (e.g. Promundo), national and regional NGOs and network (e.g. LMMA) and field enumerators, and other field costs, (ii) costs associated with participation in planning and design meetings, at global/national levels; and (iii) workshops for annual flagship and cluster planning, stakeholder consultations and training, scaling activities and national research platforms, (iv) National workshops/multistakeholder platforms: costs associated with the organization of national / local level workshops and multi-stakeholder platforms; (v) Training events/student fellowships: this includes costs for capacity development of local stakeholders, own staff, and fellowships for PhD and MSc students integrated into the FP2 program. Given the participatory nature of FP2 and the need to engage with governance networks and national processes as a central element of the impact pathway, this budget is estimated to be a significant proportion of the flagship budget.

3. Other Sources of Funding for this Project

Please describe your contingency plans if full project funding does not become available. Any significant expected in-kind contributions should be included in the space below.

Should full funding not materialize FP2 will reduce its ambitions and implement this cut by reducing the number of geographies we engage with in 2017 and the scope of the activities within those remaining. The outcomes we seek in 2017 through to 2022 will consequently be reduced. Hiring of key new appointments, including economists and fisheries scientists will also be postponed until sufficient funds are available. We will continue to seek bilateral donor funds to implement the research priorities identified in the proposal.

4. Budgeted Costs for certain Key Activities

Please describe key activities and estimated costs (included in the line items above) for the applicable categories below, as described in the guidance for full proposal:

- gender
- youth (only for those who have a relevant set of activities in this area)
- capacity development
- impact assessment
- intellectual asset management
- open access and data management
- communication

Gender: investment of US\$8.1M over the six years or 13.5% of the budget will support integration of gender into all flagship activities as well as focused research on gender to increase the impact of the research on development outcomes for women. This includes global and national scientists, specialist consultancy, partners, workshops and training of research teams and development partners and operating expenses for field research in focal countries and cross-country synthesis. Research will focus on gender-equitable control of assets and participation in decision making as a contribution to building more resilient fishing communities and households (clusters 1 and 2) and on increasing the value women derive from value chains through improved governance and policy. WorldFish and IWMI will continue to recruit and train people in our own organizations so we are fit-for-purpose in engaging with the ambitious FISH gender research agenda.

Youth: investment of \$1.9M over the six years or 3.1% of the budget will lay the foundation for a growing research agenda to increase participation and benefit sharing among young people. Existing tools and approaches to better engage young people will be further developed. Cluster 3 research on alternative future for fish in food systems and on trade will ensure young people have a 'voice' in imagining that future and policy concerning young people as labour in value chains will be better informed. In the latter years of the CRP, and as the evidence base grows, the research agenda will increasingly shift to more direct engagement in youth as agents of change in fisheries governance.

Capacity development: investment of US\$5.5M over the 6 years represents 9.2% of the budget allocated to FP2 and supports integration of gender into all activities as well as focused research on gender to increase the impact of the research on development outcomes for women. Investment in national partners through collaboration in research activities, training (spanning short courses to post-graduate scholarships) is a significant enabling activity in the ToC. Thematically our investments in building capacity range from community leadership to national policy. We will continue to invest in our own staff to build the capacity needed to remain at the leading edge of fisheries R4D.

Impact assessment investment of US\$2.5M over the 6 years represents 4.1% of the flagship budget and supports household surveys, consolidation and analysis of data, annual after-action meetings to consolidate outcomes, GIS mapping of land use, and development of tablet-based systems for data collection and consolidation and development and updates of an outcome tracking database.

Intellectual asset management: investment of US\$176K over the 6 years is focused on maintenance of OA databases, including hosting infrastructure costs and staff time.

Communication: Investment of US\$3.2M over the 6 years supports publication of research papers, and communication activities (policy briefs, manuals, technical reports, outcome stories) that will support the communication of research to end users with and through partners, including fishing communities in focal countries (costs of pamphlets, manuals), policy makers (policy briefs) and NGO or government partners (extension manuals). We will build on existing investments in innovative channels to better engage youth through theatre, social media and cartoons. Communications will also be resourced through our partners and their institutional investments in communications, particularly, for example, JCU which has developed a highly effective communications and media program. Similarly, we will seek synergies with collaborating CRPs.

5. Other

Please feel free to use this section to provide any other commentary or information that helps to describe and justify the budget request presented. This may include assumptions and rationale behind indirect costs, risks, anomalies or other assumptions Reviewers should be aware of when reviewing the budget.

The level of ambition of Flagship 2 - Sustaining Small-Scale Fisheries requires mobilization of approximately \$42 million in bilateral and Window 3 funds over the life of the program. This calls for flexibility to address the priorities of funders in terms of country focus and thematic interest. **Window 1 and 2 funds are used primarily to support core elements of the program** that can be widely applied when matched with bilateral funds. Given the breadth of the flagship and the funding model, with dependence on all sources of funding, funds from different sources are often integrated in support of tasks that have been determined to fit within the scope and priorities of the Program.

Annual funding certainty of W1 and W2 funds will be critical to ensure the flagship achieves its objectives on time and on target. As a means of risk mitigation, WorldFish will dedicate organizational resources to securing the bilateral funding targets identified in the proposal, however W1 and W2 funds will need to be secured and received in order to leverage the bilateral opportunities. Delays in receiving W1 and W2 funds will have a follow-on effect on implementation and execution of the flagship as WorldFish will not be in a position to pre-finance Program activities that are designated to be funded from W1 and W2 sources.

Due to the limitations of the online submission form, the funding figures presented herein have combined all bilateral and Window 3 funds into the bilateral fields. It is our full expectation that there will be a mix of both bilateral and Window 3 funds contributing to the flagship.

Indirect costs included in the budget have been set at 12%, which is consistent with existing audited indirect costs for WorldFish, adjusting for information technology and facility costs which have been specifically included as direct costs in the flagship budget .

Flagship Proposal Budget Narrative

The purpose of the flagship budget narrative is to supplement the information provided in the excel-based budget template by justifying how the flagship budget cost elements are necessary to implement project activities and accomplish 2022 target outcomes. The flagship budget narrative is a tool to help Reviewers fully understand the budgetary needs of the project and is an opportunity to provide descriptive information about the costs, drivers, and risks that can't be easily communicated in the flagship participating partners budget templates. Together, the flagship budget narrative and participating partners budget templates should provide a complete quantitative and qualitative description that supports the proposed flagship budget. Please use this flagship budget narrative to provide a thorough description of your flagship budget and only complete questions that are relevant to your proposal.

This flagship budget narrative will also serve as the basis for the CRP budget narrative which is composed of the flagship budgets plus the CRP Management and Support Cost.

General Information

CRP Name	FISH
CRP Lead Center	WORLDFISH
Flagship Name	FLAGSHIP 3 - ENHANCING THE IMPACT OF FISH FOR NUTRITION AND HEALTH OF THE POOR
Center location of Flagship Leader	MALAYSIA

1. Summary

Please fill out the summary table and explain the major cost drivers and how costs relate to planned activities and target outcomes. Also explain any potential risks in spending as planned and any plans to mitigate those risks.

Total Flagship budget summary by sources of funding (USD)

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
W1+W2	1,592,753	1,621,710	1,688,601	1,784,155	1,860,617	1,940,626
W3						
Bilateral	3,673,315	4,059,342	4,246,836	4,135,936	3,381,366	3,255,309
Other						
Total	5,266,069	5,681,052	5,935,437	5,920,091	5,241,983	5,195,936

Total Flagship budget by Natrual Classifications (USD)

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
Personnel	2,271,410	2,461,843	2,563,284	2,698,084	2,468,804	2,660,064
Travel	372,745	405,841	426,106	448,755	373,119	384,578
Capital Equipment	91,300	81,000	42,050	43,153	40,311	37,527
Other Supplies and Services	1,127,873	1,251,685	1,247,619	1,265,361	1,236,750	1,121,001
Non CGIAR collaboration	864,415	905,515	1,045,950	850,080	578,831	453,555
Indirect Cost	538,325	575,168	610,429	614,658	544,169	539,212
Total	5,266,069	5,681,052	5,935,437	5,920,091	5,241,983	5,195,936

Total Flagship budget by participating partners (signed PPAs) (USD)

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
WorldFish	4,987,294	5,328,626	5,655,294	5,694,478	5,041,429	4,995,505
NRI	278,775	352,426	280,143	225,614	200,554	200,430
Total	5,266,069	5,681,052	5,935,437	5,920,091	5,241,983	5,195,936

Explanations of these costs in relation to the planned 2022 outcomes:

Major cost drivers and how these relate to planned activities and target outcomes

Major cost drivers include scientific personnel and travel. Scientific personnel costs include the flagship and cluster leaders, principal investigators and research teams in headquarters of WorldFish, NRI, and each of the focal countries as well as partners. We will initially dedicate our efforts in focus countries (Bangladesh and Cambodia in particular), as well as an initial assessment in Tanzania, and will then expand into other scaling countries over time primarily through bilateral funding. We will have a core scientific researcher serve as focal point in each of these countries to coordinate our work on the ground and with partners. Travel costs will include field visits by researchers, planning and review meetings and workshops including annual meetings to document outcomes. We have also allocated funding towards analysis of fish samples for nutrient content and contamination and towards pond-based experiments.

Risks and plans to mitigate risks

Funding uncertainty is a major risk for all three clusters over the duration of the CRP as all three are highly dependent on our ability to secure bilateral funding. Clusters 1 and 3 are strongly linked to current/bilateral pipelines in Bangladesh and Cambodia, which will help to mitigate this risk. Greater funding uncertainty exists for Tanzania, where WorldFish and partners have not worked extensively. We will mitigate this risk through building on existing partnerships with local research institutions and staggering our activities to phase in gradually over the course of the CRP. We anticipate that activities conducted during the first two years of the project will provide an important foundation for developing funding proposals. The establishment within WorldFish of structures to scan for investment opportunities will help mitigate this risk as will continuing to utilize our strong networks in countries of interest. In some countries political instability is a risk to research activities.

2. Additional explanations for certain accounting categories

Benefits: Describe the components of the benefits (column R of the “Budget Details” sheet) included with the salary costs. For example: pension, health insurance, expatriate costs, housing/education/vehicle allowances etc.

Personnel costs are based upon best estimates of the level of effort required by specific staff positions to deliver upon the objectives of the Flagship. This level of effort has been expressed as a number of days per period. The personnel costs have been determined via the application of daily standard rates per position/staff member. In addition to the daily standard rates, the cost of benefits have been calculated on an individual basis and expressed as a function of salary. The benefits included are those that are applicable per the employing Center’s established policies and procedures.

The estimated cost of the allowances and benefits vary depending on the classification of the individual staff member as well as the location in which they are working. WorldFish has three staff designations: Global (GRS), Home Country International (HCI), and National (NRS). The following benefits are have been included in the budgeted salary costs:

Retirement contributions: WorldFish contributes the equivalent of 15% of base salary to a retirement fund for staff. This is applicable to all designations of staff (GRS, HCI, NRS).

Insurance premiums: this includes medical (GRS, HCI & NRS), accidental death and dismemberment (AD&D) (GRS & HCI), long-term disability (LTD) (GRS & HCI), and life insurance (GRS, HCI, & NRS).

Annual medical examination costs: applicable to all staff designations (GRS, HCI, NRS), WorldFish encourages annual medical examination for all staff and agrees to subsidize the costs thereof for all staff over the age of 40, up to \$250USD per annum.

Housing allowance: generally applicable for GRS staff only, WorldFish provides an allowance of up to 75% of the cost of housing, subject to monthly maximums established by location.

Dependant Education Allowance: applicable for GRS staff only, WorldFish provides the cost of education (up to end of secondary education) for dependant co-located children.

Home Leave: applicable for GRS staff only, WorldFish funds the cost of an annual trip to the staff members’ home country for the staff member and dependants.

Relocation and Repatriation costs: applicable for GRS staff only, WorldFish covers the cost of relocating GRS staff from their home location to their duty post. Once the staff member has completed at least 3 years of continuous service, WorldFish will also cover the cost of repatriating the staff member to their home location upon termination of employment.

Location specific benefits (i.e. hardship allowances), where applicable, have also been included in the cost as have the cost of statutory employment related taxes applicable in certain operating locations.

As there is great range in the cost of benefits by location and by staff designation, we assigned a specific percentage (of salaries) to each location/staff designation combination. The following provides the range of percentages that were used by staff designation:

Range of Benefit %		
	High	Low
HCI	Zambia (63.56%)	Philippines (21.6%)
GRS	Zambia (129.03%)	Egypt (36.59%)
NRS	Solomon (62.15%)	Zambia (21.64%)

Other Supplies and Services: Provide a brief description and rationale for other Supplies and Services required, including cost assumptions used to develop the budget for these costs.

The supplies and services required are:

- Fieldwork and sample collection: this includes the polyculture and rice-field fishery research, the collection of data through surveys, interviews and focus groups, and the collection of fish samples for nutrient content and contaminant analysis. This may include costs of equipment and field costs.
- Lab analysis: the costs associated with the analysis of fish samples both at the local level (food safety aspects) and at the NRI laboratory (for nutrient content).
- Behavioral change communication (BCC) materials: this is for the work under cluster 3 related to behavioral change around the feeding of fish to young children. Materials may include videos, brochures and signboards, targeting poor households in the focal countries.
- Publications editing and printing: costs associated with the editing of reports, policy briefs, open access journal publications, press releases and support for larger media events.
- National workshops/multistakeholder platforms: costs associated with the organization of national/local-level workshops and multi-stakeholder platforms. These are essential for the development of the fish value chain, engagement of the private sector, co-development of approaches, and for capacity development.
- Training events/student fellowships: this includes costs for capacity development of local stakeholders, own staff, and fellowships for PhD and MSc students integrated into the flagship's work.
- Global workshops: the costs associated with flagship planning and science workshops.
- Consultancy: the hiring of consultants for pieces of species work that cannot be done by scientists directly associated with the program. This may include small pieces of targeted research; the facilitation of workshops, as well specific capacity development actions that arise from needs assessments.

3. Other Sources of Funding for this Project

Please describe your contingency plans if full project funding does not become available. Any significant expected in-kind contributions should be included in the space below.

Efforts are already underway to raise bilateral funds for new areas of FP3 research and these will continue. The budget for the flagship has been developed on the basis of a 24% W1/2 funding share. If sufficient bilateral or W1/2 funding cannot be secured, we will reduce the number of countries where FP3 undertakes its research. Reducing the number of countries and value chains the flagship works in significantly reduces the budget required, but also reduces the number of people that can be reached with the intended impacts.

4. Budgeted Costs for certain Key Activities

Please describe key activities and estimated costs (included in the line items above) for the applicable categories below, as described in the guidance for full proposal:

- gender
- youth (only for those who have a relevant set of activities in this area)
- capacity development
- impact assessment
- intellectual asset management
- open access and data management

• communication

Gender investment of US\$4.3M over the 6 years represents 12.1% of the budget allocated to the flagship and supports integration of gender into all flagship activities, as well as gender-focused research to increase the impact of the research on development outcomes for women. These include global and national scientists, specialist consultancy, partners, workshops and training of research teams and development partners and operating expenses for field research in focal countries and cross-country synthesis. Investments are made across all research clusters, focusing on research on gender-equitable resource control of assets and participation in decision-making as a contribution to increasing the availability and consumption of nutrient-dense fish. In cluster 1 this is done by addressing the need for harvesting technologies that meet women's specific needs and preferences, including time and labor, including the testing of women-targeted technologies for fish harvesting in pond polyculture systems. Cluster 2 focuses on identifying and testing approaches that enhance women's access to and control over key assets and their ability to take advantage of opportunities in fish value chains. Finally, cluster 3 will work on gender issues at the household-level, in particular decision-making about intra-household distribution of food and child-feeding practices. The cluster will test scalable gender-transformative behavioral change mechanisms. Initially the investments made will focus on assessment and formative research, while in later years the investments will focus on developing approaches to overcome particular gendered barriers, as well as gender capacity development. Funds are also invested in contributions of key international partners and national partners for research and scaling activities.

Youth investment of US\$1.1M over the 6 years represents 3.2% of the budget allocated to the flagship and supports integration of youth into all flagship activities. Initially investments will focus on addressing the dearth of knowledge about the roles of youth in pond polyculture systems and rice field fisheries (cluster 1), as well as in fish value chains (cluster 2). This means integrating youth aspirations and opportunities into research methodologies and the collection of age (and gender) disaggregated data. As the CRP progresses the investments will increasingly go towards developing and testing youth-responsive technologies for all parts of the value chain. The cluster 3 investments for youth relate to influencing behavior change in fish consumption, including through school curricula and other channels to raise community awareness around the importance of fish to improve nutrition for pregnant and lactating women and for infants and young children. This implies the development of specific behavioral change communication materials for school children.

Capacity development investment of US\$3.5M over the 6 years representing 10.4% of the budget allocated to the flagship and supports needs assessments, multi-stakeholder approaches, development of new learning materials where required, the development of capacity for the testing of gender-inclusive technologies and market and institutional approaches to reducing fish waste and economic and nutrient losses, and enhancing the quality of fish. It further includes capacity development of policymakers to use our research outputs. Finally, a key component of the investments are student fellowships, for the development of future research leaders.

Impact assessment investment of US\$1.5M over the 6 years representing 4.4% of the flagship budget and supports conducting data collection related to indicators of relevance to all three flagship clusters including on changes in fish consumption, reduced waste and loss, nutrient analysis of fish content of different species and across the value chain, and related to documenting outcomes related to the impact of technologies on productivity of nutrient-rich fish. Investment will also cover annual after-action assessments and reviews to document uptake of research technologies by partners and policy-related outcomes.

Intellectual asset management investment of US\$104K over the 6 years and is used for maintenance of databases.

Open access and data management investment of US\$104K over the 6 years supports publication of research data and papers (including OA publication costs) and management. This includes investments in ensuring materials are disseminated through the CRP website, investments in data management and appropriate documentation to make datasets publicly available through open access depositories, and purchasing of open access privileges for publication in non-open access journals where needed.

Communication investment of US\$2.3M over the 6 years supports publication of research papers, and communication activities (policy briefs, manuals, technical reports, outcome stories) that will support the communication of research to end users with and through partners. A large component of this budget is also invested in specific behavioral change communication materials for cluster 3, aimed at increasing the fish fed to infants.

5. Other

Please feel free to use this section to provide any other commentary or information that helps to describe and justify the budget request presented. This may include assumptions and rationale behind indirect costs, risks, anomalies or other assumptions Reviewers should be aware of when reviewing the budget.

The level of ambition of the *Enhancing the impact of fish for nutrition and health of the poor* flagship requires mobilization of approximately \$23 million in bilateral and Window 3 funds over the life of the program. This calls for flexibility to address the priorities of funders in terms of country focus and thematic interest. **Window 1 and 2 funds are used primarily to support core elements of the program** that can be widely applied when matched with bilateral funds. Given the breadth of the flagship and the funding model, with dependence on all sources of funding, funds from different sources are often integrated in support of tasks that have been determined to fit within the scope and priorities of the Program.

Annual funding certainty of W1 and W2 funds will be critical to ensuring the flagship achieves its objectives on time and on target. As a means of risk mitigation, WorldFish will dedicate organizational resources to securing the bilateral funding targets identified in the proposal, however W1 and W2 funds will need to be secured and received in order to leverage the bilateral opportunities. Delays in receiving W1 and W2 funds will have a follow-on effect on implementation and execution of the flagship as WorldFish will not be in a position to pre-finance Program activities that are designated to be funded from W1 and W2 sources.

Due to the limitations of the online submission form, the funding figures presented herein have combined all bilateral and Window 3 funds into the bilateral fields. It is our full expectation that there will be a mix of both bilateral and Window 3 funds contributing to the flagship.

Indirect costs included in the budget have been set at 12%, which is consistent with existing audited indirect costs for WorldFish, adjusting for information technology and facility costs which have been specifically included as direct costs in the flagship budget .