

## ISPC commentary on the CRP on Water, Land and Ecosystems, Phase II – Pre-proposal (2017-2022)

### Summary

The pre-proposal for a Phase II for the CRP on Water, Land and Ecosystems (WLE) describes a very ambitious program of work at the nexus of water, ecosystem services and agriculture. Much of the substance of the CRP pre-proposal represents topics that are of central importance to the CGIAR and achieving progress on the System-Level Outcomes, and there are clearly aspects of the CRP that are strong. There is undoubtedly a lot of strong research in this area being carried out in the various CGIAR Centers, under the auspices of WLE, much of which is world-class. However, as currently written and conceptualised, the CRP does not present a coherent program and there is a profound lack of clarity about researchable areas throughout the pre-proposal. The work in Flagship 5 on Sustainability, Ecosystems and Resilience, and the Gender and Inclusive Growth Core Theme in particular seem to be out of step with the rest of the CRP with their perspectives being poorly integrated. More importantly, there is little evidence yet that WLE is playing the role of an integrating CRP across the rest of the CGIAR portfolio. The research and development agenda within WLE is currently insufficiently aligned with the priorities of the agri-food systems CRPs. Some points of interaction are emerging but the process of negotiating priorities with AFS CRPs should be a focus during the process of revising the pre-proposal.

**Recommendation:** The ISPC scores this pre-proposal as having **major concerns** and recommends inviting the proponents to submit a significantly revised pre-proposal, taking into account the detailed comments in the following sections, summarised more generically in the following bullet points:

- Phase 2 of WLE should be more closely integrated in sites where the agri-food CRPs are working.
- Greater clarity is required with respect to the key leverage points for research to make a contribution in the impact pathways – both in aggregate and at flagship level. Clearer, simpler and more logical Theories of Change are required at both aggregate and flagship level in order for the CRP to effectively convey how its activities will bring about impact, and what the major assumptions are that underlie these theories.
- The Core Theme on Gender and Inclusive Growth should be seriously reconsidered
- The Flagship 5 on Sustainability, Ecosystems and Resilience has a particularly unconvincing Theory of Change, though there are some strong features that could be incorporated elsewhere in the CRP
- Flagship project 6 on Integrated Solutions into Policy and Practice should be re-conceptualised and activities redefined

**Overall Score: C**

## 1. Overall analysis as an integral part of the CRP portfolio      Score: B

The research issues outlined in the pre-proposal Water, Land and Ecosystems clearly meet the criteria for a “grand challenge” and represent a high priority of the CGIAR SRF. As an integrative CRP, the potential links to the eight agri-food systems CRPs are clear on a conceptual level – that WLE will provide the expertise required to manage trade-offs between agricultural production and provision of ecosystem services across the CRP portfolio. WLE has a lot of potential as a CRP and there is a clear need for a strong program of research on these topics within the CGIAR. However, the final proposal will have to be more pragmatic and focussed where it is currently rather over-ambitious and theoretical. There is little explanation about what the priorities are, and more importantly, how priorities have been identified.

The issues identified as flagships are unquestionably important to the global development agenda. What is less clear is the potential for *research* to contribute significantly to progress on tackling them. Generalised research questions have been formulated, but there is little focus on the specific questions that are paramount for the Flagship Projects and the impact pathways to the IDOs and SLOs. Many research questions are not new, but have been the subject of research for many decades, with a thin record of impact having been documented (Merrey, 2015).

There are numerous links out from WLE to other integrating and agri-food system CRPs, however the extent to which WLE is able to partner with these CRPs effectively remains unclear. Certainly there is sufficient evidence to suggest that the Sustainability, Ecosystems and Resilience framework has so far not been successful in influencing the scientific direction of other CRPs. This is surely a critical pathway for impact from WLE and yet there are no references to the influence of this framework in any of the other 12 CRP pre-proposals.

Regarding the rigour and credibility of the scientific arguments, the ISPC has concerns about the quality of analysis motivating the Gender and Inclusive Growth Core Theme, and the Sustainability, Ecosystems and Resilience framework (see comments on these flagships in section 6 of this commentary). These are two foundational areas of work for the CRP so weaknesses in these areas could potentially undermine the CRP as a whole.

The ISPC welcomes some evidence that the research in the second phase will build on achievements in the first phase. However examples of relevant past projects, and what has been learned from them, have been mentioned only briefly in the pre-proposal. A lesson learned in WLE Phase 1 was the need to reflect gender and youth issues in the problem statement, and now there is a Gender and Inclusive Growth Core Theme. Beyond that, there is little to glean from the findings from Phase 1, except in the most general of terms.

Site Integration Plans will be developed during the full proposal stage, in close consultation with national partners, led by a specified Center or CRP in each country or site. The Site Integration Plans are expected to demonstrate that the CRPs will jointly contribute to improved community livelihoods and resilience through locally appropriate farming and food systems. The value of Site Integration Plans is well understood, but to be able to develop these plans in the full proposal stage, coordination with the relevant partners should already be structured in the pre-proposal phase. The

way coordination with partners will be structured has received little attention so far in the WLE CRP Pre-proposal.

## **2. Theory of Change and Impact Pathway**

**Score: C**

There is a succinct and laudably clear description of the categories of expected outputs from the CRP, namely: “(i) diagnostic and monitoring tools... (ii) data generation and analysis for informed decision-making... (iii) business and investment support... and (iv) capacity development of partners” (p.2). However, it is frustrating that the reader cannot get a better sense of how these outputs – all of which are the immediate results of very different kinds of strategies for trying to achieve impact – match up to the research questions in the pre-proposal.

The Theory of Change is linear and generic, with assumptions listed that are far from comprehensive. Lists of outcomes have been prepared, together with targets and contributions. The targets are quite clear but concerning the expected contributions from WLE – as in the overall value proposition – it is not well defined how the targets (e.g. numbers of hectares of restored land; percentages of reduction of greenhouse gas emissions) have been generated.

It is not evident how the CRP will go about attempting to measure contributions to development outcomes. The outcomes are difficult to measure, and the question of how such outcomes are to be generated is insufficiently clear from the Theory of Change at CRP level. The impact pathway from research clusters to research outcomes and development outcomes to the contribution to system-wide sub-IDs, and system level outcomes, has many unstated uncertainties, assumptions, and leaps of logic that are very significant. The Theory of Change and impact pathway sections at Flagship Project level are generally more plausible. The topics covered by the CRP are clearly of vital global significance but in aggregate, the pre-proposal is very ambitious, and the expectations of impacts would seem to be somewhat unrealistic.

## **3. Cross-cutting themes**

A change from the extension proposal for WLE is the greater emphasis in this pre-proposal on gender and youth issues. The rationale for the gender and youth components in the Flagship Projects of WLE has been explained. However, the quality of the analysis underlying the choice of activities in this field (for example, in attempting to change attitudes) is somewhat questionable on the basis of what is written in the pre-proposal, and the strategies for bringing about such significant shifts are undefined. In terms of visibility of gender issues, WLE scores very highly. However, gender will be manifest in widely divergent ways in the different geographic regions and a diversity of approaches will be needed. The impression from the pre-proposal is that women are treated as totally disconnected from men the value and roles of family cohesion is not visible in the proposal. Many societies have different models for dealing with gender issues and therefore one cannot assume that the ultimate objective can always be for women and men to have identical roles in society.

With regards to youth issues, some of the same positive and negative comments apply as for gender. Youth issues have been placed at the center of the CRP given the emphasis in the cross-cutting flagship on “inclusive growth”. However, the underlying pre-analytical vision of the CRP has to be questioned with regards to its role in supporting rural young people. Central to the GIG (Gender and Inclusive Growth) flagship is the desire for young people to stay behind and continue to farm. The first overall research question listed is: “How best to motivate rural youth at the brink of out-

migration to invest in sustainable intensification?” This is surely putting agriculture front and center of the picture rather than the goals and aspirations of young people. There is good evidence from around the world that young people do not want to work in agriculture if they have a better option, and we should assume that this is a rational decision on their part.

Capacity development is an important strategy in the WLE CRP. At Flagship Project level the types of training have been indicated. While it is not clear which partner organisations should be trained and which training institutes should be involved, these are topics that can be addressed in the full proposal. Also needing more detail are the questions of how training and other modes of capacity-building will, or will not, be a sufficient contribution to bring about changes that can result in development outcomes in the context of the wider enabling environment. Consequently, also at CRP level there are some significant uncertainties.

#### **4. Budget**

The six-year (2017 – 2022) budget for WLE is USD 507.7 million with a spread across flagship projects that appears reasonable even if the prioritization process that led to the relative allocations is not explained. WLE is a very ambitious programme which could easily use at least the funds requested, so relative to the outcomes they hope to achieve, the budget would seem to be appropriate in aggregate. Among Flagship Projects, about 50% is allocated to the Flagships more oriented towards biophysical science (FP1, 2 and 5), and 50% towards the socio-economic and process-focused flagships (FP3, 4 , 6 and GIG). Considering that WLE aims to receive products from the agri-food systems CRPs, this balance is probably appropriate.

#### **5. Governance and management**

**Score: C**

Among the proposed leadership team there is comprehensive expertise and good publications records, including staff from IWMI, WorldFish, CIAT, ICRISAT, ICARDA, IFPRI, ICRAF, CIFOR and Bioversity. There is also membership from universities and advanced research institutes e.g. Stanford, CIRAD and WUR, and international organizations UNESCO and IUCN. This plurality of partners with a leadership stake in WLE places a significant responsibility on the CRP Director to ensure that there is strong coordination and communication. It is something of a concern that the Director’s position is currently under recruitment at such a crucial point, but a job description and person specification are included.

It is hard to judge the quality of partnerships, but it should be noted that for this CRP particularly, successful working relationships with partner organisations are essential. If the partnerships don’t work out as was planned, it will be very difficult to make progress towards development outcomes. Evidence of a clear strategy guiding choice of partners needs to be provided in the full proposal. The lack of detail on the researchable areas within WLE makes it difficult to make an informed judgement on whether the best institutions for making research breakthroughs have been included. But, there are certainly institutions, and individual researchers within them, with great track records in water management (e.g. CSIRO; the Israel Institute for Technology) that hold the comparative advantage for specific topics.

For development partners, WLE has tried to get the balance right between, on the one hand, a micro-based strategy for specific watersheds with few prospects for generating international public goods, and on the other hand, a global strategy targeting imperfect, slow-moving multilateral

processes that have enormous potential impacts but low probability of success. This has been the focus of two prior ISPC commentaries on previous iterations of WLE. There is some evidence from this pre-proposal that WLE are finding their way in the middle ground, though more could be done to assuage doubts about the prospects for generating international public goods. For a number of Flagship Projects (but particularly 2 and 4) to achieve large-scale impacts, much will depend on the relationships with the multilateral banks. If WLE researchers can show evidence that they are listened to by senior managers at the African Development Bank, then the prospects for the research to influence major investments are greatly enhanced.

## **6. Flagship projects**

### **Core Theme on Gender and Inclusive Growth (GIG)**

Gender and youth issues in agricultural development are clearly of global significance. While the GIG core theme is relatively modest in budget it is hugely ambitious: impacts from this kind of approach can surely only be long-term and incremental in nature. Perhaps the intent is for these issues to be mainstreamed through the rest of the CRP and for GIG to play an advocacy role? The technical and conceptual framework underpinning the youth work and “inclusive growth” is not clear.

YPARD (Young Professionals for Agricultural Research for Development), part of the Global Forum on Agricultural Research (GFAR), is the key partner for the GIG core theme. As far as the ISPC understands it, YPARD is not an organisation with a mandate to represent the interests of young people in developing countries. It is a forum focused on agricultural research that brings in the perspectives of young professionals, not disadvantaged youth living in the focal regions. **The ISPC is concerned that there is currently not a sufficient level of analysis of the critical issues required to deliver strong support to the WLE research in this area across the CRP.**

### **FP1: Restoring Dryland Landscapes (RDL)**

**B**

The grand challenge of regenerating degraded agricultural landscapes and the enhancement of their ecosystem services is one that the CGIAR is well-positioned to contribute towards. This flagship project is extremely ambitious. All three activity clusters have no specific geographic focus – all are global in scope across Sub-Saharan Africa, Asia and Latin America. The plausibility of what is proposed will hinge on whether the leadership have a pragmatic view of how local scientific research will bring about positive change. More evidence of this will be needed in the full proposal. However, the collection of topics described does represent a coherent agenda for research with a good mix of some important innovative new work alongside a continuation of some areas of significant investment by the CGIAR from the past 10 years.

The Flagship Theory of Change would benefit from further reflection, particularly as this is an area of research with a long history and a relatively poor record of impact. If the kinds of restorations envisaged could be achieved there would indeed be profound global impacts, but currently the FP description is short on rigorous analysis or pragmatism about what can realistically be achieved. Many academics in environmental economics estimate the economic value of ecosystem services and biodiversity, often in contexts where these attributes have little direct instrumental value for poor people. The establishment of institutions to compensate these “landscape managers” for the ecosystem services they provide to humanity is a task that has been tackled from many different angles and with limited success – it is very difficult to do properly. Given these concerns, the full

proposal will need to more carefully acknowledge the socio-political difficulties associated with the various strategies for ecosystem restoration.

## **FP2: Land and Water Solutions for Sustainable Intensification**

**B**

The work under this Flagship is organized in two clusters. Activity cluster 1 focused on smallholders, in irrigated and rainfed systems to help identify “mechanisms of change for uptake of smallholder agricultural water and land management”. Activity cluster 2 focuses on large-scale, typically publically-funded, irrigated systems with the goal of increasing the “agroecosystem service values obtained from water management services”. In both cases, the major strategy seems to fundamentally be about conducting *ex-ante* environmental impact assessment for large programs.

Activity cluster 1 commits to work with the agri-food system CRPs to assess the impacts of their innovations in terms of “people, poverty and ecosystems”, and yet the comparative advantage of lead centers IWMI and ICRISAT for doing this, for any area other than the ecosystem services assessment part of this puzzle, is far from clear. The description of the Flagship Project uses phrases like “business models”, “investment options” and “solutions” throughout, while at the same time acknowledging elsewhere in the CRP (flagship 4 in particular) that win-win scenarios between competing uses are the exception rather than the rule. Managing trade-offs between economic and ecological values of alternative options would seem to be a more realistic assessment of the problems. This Flagship is very ambitious and is attempting things that have consumed a lot of effort for many years in many locations by many donors. The full proposal should aim to provide a more convincing demonstration of how the outputs from Activity Cluster 1 such as indicator systems, and multi-scale modelling / systems analysis are expected to either influence policy / institutional arrangements in the focal regions, or will translate into changes in the behaviour of smallholders.

## **FP3: Sustaining Rural-Urban Linkages**

**B**

This Flagship Project is both more practical and more innovative than the other Flagships. Activity cluster 1 starts from an urban consumption entry point to investigate rural-urban food linkages in particular value chains. The rationale is that starting projects from urban areas and working outwards is a good complement to the more rural-focused perspectives of the agri-food systems CRPs. CIAT are the lead Center and have reasonable claim to have comparative advantage on these issues within the CGIAR. Activity cluster 2 looks at the growth of urban water demand and how it interacts with agricultural production and consumption in larger urban watersheds, as well as how peri-urban agriculture and aquaculture can impact on water quality in urban areas. IWMI are leading and have clear comparative advantage to do so. Activity cluster 3 evaluates options for resource recovery and re-use, broadening previous conceptions of “resource” to also include energy in the form of dumped waste, through a collaboration with ICRAF. The impact pathways and Theory of Change for this Flagship are more plausible and rooted in reality than the other flagships. In Phase 1 of the CRP (2014 extension proposal), the Flagship was called Recovering and Re-using resources in urbanizing environments. This suggests that there has been a broadening out to include the topics now under activity clusters 1 and 2. The full proposal will have to demonstrate that these additional new topics do not represent a dilution from a core area of tight focus and comparative advantage.

#### **FP4: Managing Resource Variability, Risks and Competing Uses for Increased Resilience (VCR) B**

This Flagship Project is about finding solutions to water management problems – either through technical management options for specific contexts, or working to find resolutions for cross-border water management issues. Activity Cluster 1 develops management innovations to mitigate droughts and floods, whereas Activity Cluster 2 develops “policies, institutions and tools to address bilateral and multilateral resources trade-offs” in specific geopolitical contexts. The links to the agri-food systems CRPs are more evident in FP 4 than in much of the rest of the CRP, though they are not well-developed to date. Linkages to CCAFS and PIM are clear and of potential value to the System.

The researchable areas are somewhat unclear, and with outputs that are “advice...”, “monitoring systems...”, “guidance...”, “analyses...” the pathway to impact seems to hinge on individual country governments seeking out WLE’s contributions to large-scale national programmes. The question is whether this needs to be part of the CGIAR CRP portfolio, or whether this would be better pursued as a series of bilateral projects directly commissioned by countries? The full proposal should aim to build the case for how this FP strengthens the rest of the CRP, and other CRPs in the CGIAR portfolio.

#### **FP5: Sustainability, Ecosystems and Resilience (SER)**

**D**

While the text on FP5 is undoubtedly interesting, **FP5 is insufficiently integrated with the needs of the other FPs and the other CRPs.** The SER framework was published very recently, in December 2014, but it is nonetheless surprising that none of the other CRP pre-proposals have cited it. This is particularly unfortunate given the numerous mentions of “resilience” throughout the portfolio. The critique is that the content of FP5, and in particular Activity cluster 1 on biodiversity and ecosystem services research and human well-being benefits, is fundamental research and is not clearly linked to generating development outcomes. This is reflected in the poor Theory of Change provided for FP5 which is unconvincing. While links with WLE are certainly mentioned in the pre-proposals of many other CRPs, the evidence suggests that the SER framework authors have thus far not succeeded in persuading their internal CGIAR audience of the need to adopt the framework as a central part of their work, despite the table of “interaction points” outlined in table 2.6.2.

Activity cluster 2 proposes using the SER framework as a foundation for a series of impact evaluations on behalf of the agri-food systems CRPs that aim to “quantify the economic and human well-being values of services provided by AFS interventions as well as the environmental impacts of these interventions at scale”. The task of teasing out causal connections on these topics is very challenging and the studies would need to be explicitly designed within a careful counterfactual framework. While WLE researchers have the relevant expertise for examining a range of biophysical measures, it is not clear that FP5 can effectively integrate these with the economic and social issues, or can examine the negotiation between alternative values attached to ecosystem services. There would also seem to be a degree of overlap here with Activity Cluster 1 of FP 2 which the WLE proponents should reflect on. **Will the SER framework, now that it has been written and disseminated, have a greater influence if the content of proposed FP 5 were integrated within the other FPs?**

FP6 is essential to the functioning of the CRP as a whole. It is, however, hugely ambitious, planning to work with all other WLE Flagships and with all AFS CRPs plus multiple other partners. What is not clear is how the potentially huge workplan will be turned into something manageable. The Flagship is organised under three activity clusters. Activity cluster 1 is on integrated research and impact support, carried out by Coordination and Change teams established in phase 1, and includes an innovation fund that allows for demand-driven research in partnerships in the focal regions. The concept of a competitive fund is welcomed, but on what criteria will the competition be based? Details are not required so much as giving some idea of how the feasibility of turning some research outputs into impact will be aligned with demand? Does the leadership team have experience in running competitive grant schemes? In component 2 the same question can be asked in the other direction how are 'promising solutions' going to be matched with demand? It is not possible to get a sense from the narrative as to how these multiple partners – WLE FPs, AFS CRPs and their individual FPs, regional and national organizations, private sector companies - will be co-ordinated. Some indication of the stepwise progression towards the end-goal is essential. I doubt if many would disagree that research in the regions needs to be: '(i) integrative, scalable, equitable, innovative and demand driven; (ii) co-designed and practical, and work with a range of national and regional partners, the AFS CRPs and the ICRPs; and (iii) incorporate institutional analysis and political economic considerations' but that is the ideal not the reality of what can be achieved. What is written in this one cluster could be the program of a donor agency. This needs to be rewritten in a way which gives confidence that what is promised can be delivered. Activity cluster 2 is led by the Gender and Inclusive Growth team (GIG), and represents a body of place-based research on gender and youth. Comments on the activities are described under the GIG Core theme. Activity cluster 3 is on decision support and analytics, led by ICRAF and IWMI and makes more sense. This is a key area for the CRP. It obviously needs to work very closely with development of the proposed platform on Big Data and hence more detail on that linkage would be required at the full proposal stage.

With regards to science quality and comparative advantage, the lack of detailed information makes it hard for the ISPC to make a judgment, but certainly IWMI and IFPRI have the track record needed to manage this FP. The budget allocation to this flagship is the highest of all the flagships in the CRP. Yet even with that budget the degree of ambition is excessive. The vision for "what" innovations are required is largely sound: the problem is that insufficient information is provided for the reader to understand "*how*" the research will be conducted with the resources requested.

### **Recommendations**

- Activity cluster 1 needs to be rewritten in a way which illustrates how priorities will be set, how decisions will be taken, how lessons will be learnt at each stage and which gives more confidence that tangible impacts will be delivered. Trying to do too much simultaneously runs a high risk of any impact not being realized.
- More detail on how WLE will work with AFS CRPs (and who within those large numbers of scientists will be engaged) and how selection of 'solutions' or 'demand' to take forward will be arrived at collectively is essential.