

## ISPC Assessment of the Water, Land and Ecosystems (WLE) CRP II revised proposal (2017-2022)

### ISPC CRP RATING<sup>1</sup>: A-

#### 1. Summary

- WLE aims to provide the evidence base and solutions to help decision-makers scale up sustainable water, land and ecosystem management innovations and investment. The CRP aims to assist 21 million farm households to adopt improved water and land management practices, 5.74 million people to exit poverty, a 5% increase in water- and nutrient-use efficiency over 24 million ha across its target countries, a 0.01 Gt CO<sub>2</sub>eq reduction in agriculture-related GHG emissions, and the restoration of 7.7 million ha of degraded land<sup>2</sup>.
- The proposed staff and newly appointed leader have good leadership experience; recent reports/evaluations make reference to the CRP's effective management and governance arrangements.
- The ambition of WLE is central to the SRF. It addresses a grand challenge that underpins the entire CGIAR, and it covers areas that CGIAR has directed insufficient funds to in the past. As an iCRP, it takes seriously its intended role of providing a pathway to enhance delivery of the System as a whole into key policy areas in the WLE field.
- The partnership strategy indicates a well-developed appreciation and understanding of the many and varied partner relationships, including linkages to regional and global policy initiatives that WLE requires to achieve its objectives. Nevertheless, given the CRP's huge research agenda, its outward focused partnership strategy remains relatively vague.
- The research activities of the CRP will consist of modelling and policy analysis that seek to analyze the sustainability of different technologies, combining insights from social sciences and natural sciences. Interactions of this research and its applications across the CGIAR show considerable promise of productive collaboration. It is not always sufficiently clear, however, whether there is a close relationship between this CRP and the AFS CRPs on technology development, or if most of the interaction will be linked to policy advocacy and data provision.
- WLE appears to define its main role as identifying winning packages of technologies, policies, and institutions, and facilitating the needed changes to bring these packages into social and economic use. Whilst there is no doubt that this is an important area of work, it is not always clear what the sources of innovation and the expertise in policy process and political analysis are, that will allow WLE to occupy this rather high-level position.

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<sup>1</sup> A+: Outstanding - of the highest quality, at the forefront of research in the field (fully evolved, exceeds expectations; recommended unconditionally).

A: Excellent – high quality research and a strongly compelling proposal that is at an advanced stage of evolution as a CRP, with strong leadership which can be relied on to continue making improvements.

A-: Very good – a sound and compelling proposal displaying high quality research and drawing on established areas of strength, which could benefit from a more forward-looking vision.

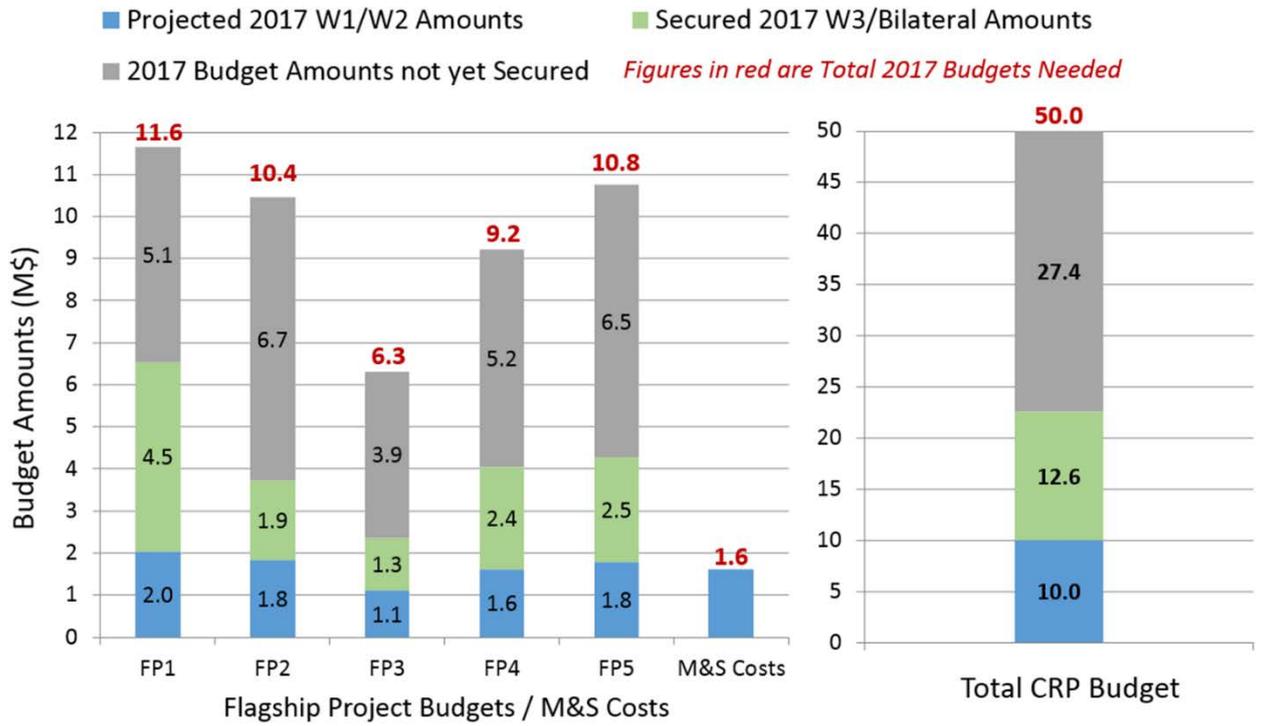
B+: Good – a sound research proposal but one which is largely framed by 'business as usual' and is deficient in some key aspects of a CRP that can contribute to System-wide SLOs.

B: Fair – Elements of a sound proposal but has one or more serious flaws rendering it uncompetitive; not recommended without significant change.

C: Unsatisfactory – Does not make an effective case for the significance or quality of the proposed research.

<sup>2</sup> The CRP targets have not been independently verified.

**WLE 2017 FP and CRP Budgets:  
W1/W2 Amounts, W3/Bilateral Amounts & Shortfalls (US\$M)**



Data Source: CGIAR System Management Office

## 2. Characterization of Flagships

FP	Main strengths	Weaknesses/Risks	Rating
<p><b><i>FP1: Restoring degraded landscapes</i></b>            The FP focusses on support to the implementation of equitable landscape and soil restoration strategies and concomitant monitoring, evaluation, and learning systems.</p>	<ul style="list-style-type: none"> <li>• Good evidence of collaboration and integration with other CRPs.</li> <li>• High priority area for the CGIAR and few alternative suppliers of research with a global mandate.</li> <li>• Good alignment of the research with global initiatives.</li> </ul>	<ul style="list-style-type: none"> <li>• No clear partnership strategy with relevant organizations, agencies and initiatives outside the CGIAR.</li> <li>• Assumption of the availability of existing, validated knowledge and technology for the restoration of degraded landscapes is questionable.</li> <li>• Limited track record of ability to influence policy in support of landscape and soil restoration.</li> </ul>	Strong
<p><b><i>FP2: Land and water solutions for sustainable intensification</i></b>            The objective of this FP is to deliver science into practice that will help unlock the potential value of more resilient farming systems.</p>	<ul style="list-style-type: none"> <li>• Few alternative suppliers of research with a global mandate.</li> <li>• Team with sound scientific expertise and track record.</li> <li>• Recognition and integration into proposal of the need for transformative change to achieve adaptation and intensification at scale.</li> </ul>	<ul style="list-style-type: none"> <li>• Limited track record and experience in influencing policy to support sustainable intensification.</li> <li>• Potential over-reliance on the availability of existing knowledge and technologies that can increase system resilience with limited trade-offs.</li> </ul>	Strong
<p><b><i>FP3: Sustaining rural – urban linkages</i></b>            The focus of this FP is to contribute to urban food security and to reduce the environmental impact of urbanization through the implementation of urban waste and water resource recovery and reuse business models.</p>	<ul style="list-style-type: none"> <li>• Strength of expertise and track record on issues of water and nutrient flows.</li> <li>• Good potential for impact in area of work of rapidly growing importance, given prior experience in this area.</li> </ul>	<ul style="list-style-type: none"> <li>• Current lack of focus enhances the risk of moving beyond areas of comparative advantage.</li> <li>• Need for more direct engagement with sustainable cities and other major initiatives on ‘tropical urban design’ to provide leverage for impact along non-traditional development trajectories.</li> </ul>	Strong

FP	Main strengths	Weaknesses/Risks	Rating
<p><b><i>FP4: Managing resource variability, risk, and competing uses for increased resilience</i></b></p> <p>The focus of this FP is on reducing risks and losses to agriculture from floods and droughts and natural resource use trade-offs.</p>	<ul style="list-style-type: none"> <li>• FP directly addresses one the world's grand challenges.</li> <li>• Good network of proposed internal and external partnerships potentially facilitating delivery.</li> <li>• Strength of scientific expertise and track record.</li> </ul>	<ul style="list-style-type: none"> <li>• Broad scope of research may affect feasibility of delivery.</li> <li>• Limited track record and experience in influencing policy on natural resource use.</li> </ul>	Strong
<p><b><i>FP5: Enhancing sustainability across agricultural systems</i></b></p> <p>This FP focusses on the identification and testing of ways to promote sustainable intensification at scale with partners, including AFS CRPs.</p>	<ul style="list-style-type: none"> <li>• Ambition of the FP to become an important interface across the CGIAR for links with global partners and initiatives, thus potentially enhancing its role as a globally integrating CRP.</li> </ul>	<ul style="list-style-type: none"> <li>• A lack of focus and specificity raises questions about the feasibility of delivering results.</li> <li>• Over-reliance on partners who have a mixed track record on implementation and delivery.</li> <li>• Limited track record and experience in influencing policy in support of the promotion of sustainable intensification at scale.</li> </ul>	Weak

### 3. Assessment of CRP response to the ISPC major comments

Initial ISPC comment (16 June 2016)	CRP response/changes proposed (31 July)	ISPC assessment (14 September)
<p>1. Further elucidation of the process of prioritization at the basis of the research agenda for the CRP, and how this affects the functional integration amongst FPs, and with the other AFS and GIP CRPs.</p>	<p>Provided more clarity on how WLE sets its research priorities within and among its Flagship Programs (FPs) and with regard to its joint work with other AFS and GIP CRPs (see Annex 3.6).</p> <p>Did not consider it feasible or cost-effective to set criteria a priori and then follow a scoring and screening process; instead used the Results Based Management (RBM) system (Annex 3.5) to distinguish among the best investments across the program.</p> <p>Functional integration via four thematic FPs, each an important issue on their own, together a coherent, integrated body of work.</p> <p>In-depth discussions with the leaders of other CRPs to identify joint priorities (reflected in Annex 3.6 on linkages and site integration).</p> <p>WLE will engage when there is evidence of strong comparative advantage, else via partners.</p> <p>WLE FPs will concentrate their work in integration sites where AFS and GIP CRPs also work, frequently through the same local and national partners.</p>	<p><b>Satisfactorily addressed.</b></p> <p>Overall, the team provided coherent and convincing arguments and examples of the type of cutting edge research they will engage in. Some specific examples are given, some more convincingly than other.</p> <p>Priority setting via triangulation of the most important issues appears appropriate, particularly for a CRP that is dealing with complex, adaptive systems with often contended values (Confusingly the RBM on page 41 of Annex 3 is incorrectly labelled as ‘3.6 Results Based Management’, rather than ‘3.5’).</p> <p>The thematic scope for priority collaboration with other CRPs will happen via alignment with FPs, while the geographic scope is determined through CG target countries, which seems appropriate.</p> <p>Strong linkages on joint priorities identified with A4HN, CCAFS and PIM as well as collaborations with the Agri-Food System CRPs are outlined in Annex 3.6.</p> <p>This makes sense as long as suitable partners are identified. Problems can arise when the capabilities simply don’t exist. It would be useful for the team to reflect on this core risk and possible mitigation options.</p> <p>While the principle is logical, the approach poses a risk to good governance. The potential</p>

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		<p>for moral hazard to occur is large ('double dipping'). This requires close attention to monitoring and evaluation of resources used in the delivery of agreed outcomes. The concept of 'additionality' as an essential and documented requirement before WLE funds can be accessed might mitigate against this risk.</p>
<p>2. Clarification of the focus of the CRP on facilitation versus science, accompanied by a description and clarification of the science, technology, and innovation agenda (particularly for FP1, FP2 and FP4).</p>	<p>The WLE team believes that their unique, comparative advantage lies in the integration of both science and facilitation, with research applied along the entire impact pathway. They hypothesise that the ISPC's perception might be the result of the team's response to earlier comments. This might have overshadowed the explanation of the science that WLE will deliver. The team acknowledges that WLE must conduct cutting edge disciplinary biophysical and socioeconomic research plus translational research.</p> <p>The team then proceeds to give concrete examples for:  FP1: a) modelling benefits &amp; costs of interventions at landscape/catchment level &amp; quantification of on- and off-site ecosystems services.  b) building soil carbon reserves and  c) UAV-based land and crop monitoring (soil mapping, chlorophyll fluorescence, near-infrared spectroscopy in the soil-plant continuum.</p>	<p><b>Partially addressed.</b></p> <p>It seems plausible that WLE might have underplayed the research agenda. The addendum provides a compelling example of WLE's contribution to the development of NRM-focused water policies by providing science-based policy support for the water-energy-food production nexus (e.g. rather than simply replacing old water pumps with new, solar powered pumps to extract scarce groundwater, the technology can be used to sell power into the grid).</p> <p>a) modelling seems to be the only way this issue can be addressed; this deserves support.  b) less convincing, given the global resources that have already gone into this issue that seems to defy resolution.  c) appropriate given the potential of this technology at a time of rapidly declining costs for UAV.</p>

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	<p>FP2: In collaboration with AFS CRPs, LWS will co-develop research on agricultural land and water management (ALWM) technologies for small scale irrigation and poverty alleviation (e.g. ICT for smallholder farmers to help manage water and soil capital) and improving performance of medium- and large-scale publicly managed irrigation systems.</p> <p>FP4: (a) Designing approaches that simultaneously reduce flood damage and recharge the aquifer (managed recharge);  (b) remote sensing of water resources for early warning; and  (c) co-design of flood/drought weather index insurance for smallholders.</p>	<p>Advice for smallholders via mobile apps for example, has potential and is being tried elsewhere. This is an area that comes up in several iCRPs and requires careful coordination.</p> <p>Transforming the NRM performance of large farms and commercial farms by ‘... applying business-like approaches to transform delivery of irrigation services’ is ambitious and desirable, but will require a sustained effort in influencing perceptions and ambitions while developing skills of the operators. Projects teams are likely to encounter aspirational, educational and institutional barriers.</p> <p>a) innovative and disruptive but not without risks; the type of research CGIAR should be involved in.  b) early warning rarely leads to early action; this needs to be embedded in a clear signal – action framework.  c) again, some concern about possible, excessive overlap with CCAFS.</p>
<p>(WLE has addressed both issues together)</p> <p>3. The ISPC requests WLE to provide details on the scientific expertise within the CRP on the issues of process and intermediation, as well as its comparative advantage in dealing with these issues.</p>	<p>WLE argued strongly that they have considerable core expertise in sociology, political economics of agro-ecosystems and NRM; they also acknowledge that that this pool of expertise could be strengthened via collaboration and partnerships with other CRPs. They outlined these strengthened partnerships in a revised Annex 3.6 that now demonstrates additional links particularly via FP 1 and FP5.</p>	<p><b>Partially addressed.</b></p> <p>Added links to e.g. UNESCO-IHE and Wageningen University are welcome, but it could be questioned whether these changes go far enough in order to really draw in the wealth of global knowledge that resides outside the CGIAR. This is a perpetual question not just for WLE but also for the CGIAR as a whole. It</p>

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<p>Further information on the types of scientific knowledge and impact pathways that will inform the “influence agenda” and shape institutions, including an increased awareness of trade-offs and uncertainty across scales and priorities as part of the recognition of the complexity of systemic change should also be provided.</p> <p>4. Provision of further information on the scientific expertise within the CRP on the issues of process and intermediation, as well as its comparative advantage in dealing with these issues.</p>	<p>Across CRPS, WLE gives an example where they are jointly promoting change. This is a collaborative effort by PIM, A4NH, CCAFS and WLE that defines a shared policy agenda and coordinate policy-oriented research during Phase 2 starting with Bangladesh and Ethiopia.</p> <p>In terms of impact pathways and ToC concerns, WLE points to their long tradition and experience in this field going back to the Challenge Program on Water and Food where some of these concepts were pioneered.</p>	<p>is understandable that in an environment with shrinking resources organisations need to protect their internal expertise. This needs to be balanced against the long-term benefits of true collaboration in order to tap into expertise and knowledge that sit outside. We need to question whether it is sufficient to identify individuals for a range of outside institutions or if there might be more robust models of engagement that would overcome single person dependencies.</p> <p>The example given for cross CRP collaboration seems appropriate.</p> <p>This is correct and it needs to be recognised that they have come a very long way from the early days of the Challenge Programme. WLE is probably better placed than most CRPs due to that experience, but this is not an argument for keeping most of the work in house.</p> <p>So, whilst the ISPC has no doubt about the usefulness and necessity of the proposed activities, what is not always clear from the proposal, is what the sources of innovation and the expertise in policy process and political analysis are, that will allow WLE to occupy its proposed ‘high-level’ position.</p>
<p>5. Elaborate upon the justification for prioritizing RUL (FP3) in the CRP as well as a discussion of the comparative advantage of CGIAR in this area.</p>	<p>WLE argues that the inclusion of a flagship on Rural-Urban Linkages is a result of the growing importance of urban and peri-urban areas for the overall sustainability of agriculture and food systems, which has been stressed by a number of partners and by the</p>	<p><b>Satisfactorily addressed.</b></p> <p>ISPC agrees with the urgent need to consider and develop linkages to urban and peri-urban regions. For a food systems perspective, this is where the action is. The ISPC asked some</p>

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	<p>ISPC itself. Rural and urban landscapes can no longer be treated separately; they are increasingly intertwined, and their effective sustainable management requires an integrated systems approach.</p> <p>WLE accept the recommendation to consider livestock waste and as discussed in Annex 3.6, this is already contemplated in East Africa with the Livestock, and Agriculture for Health and Nutrition (A4HN) CRPs.</p>	<p>pertinent questions about the science agenda and the involvement of NGOs and community initiatives that have not been answered. This is not completely surprising, given that this is an emerging field for science investigation and policy interventions. Addressing these concerns scientifically and conceptually could form the basis for a new and contemporary science agenda.</p> <p>The authors have made a compelling argument why this work is essential for the CGIAR, given the natural resources needed to feed growing urban (and often poor) populations. WLE proposes investigations of nutrient, N, C and water cycles with an emphasis on recycling wastes. The arguments are compelling and the need for this type of research is real. Leadership from the CGIAR could go a long way to establish some real capability in this area.</p>