

## ISPC Commentary on the Livestock Agri-food systems – Preproposal (2017-2022)

### *Summary*

With an increasing world population, growing scarcity of natural resources, and accelerating climate change, the road towards sustainable food and agriculture is becoming increasingly complex. Analysis of these issues across their social, environmental and economic dimensions, indicate that livestock epitomize the challenges of achieving sustainability like no other sector. Clearly this adds weight to the need for additional investment in the sector, but the justification provided by the CRP for its sole focus on smallholders is not convincing. In the absence of a convincing analysis of sector dynamics linked to research opportunities and outcomes that support the attainment of the SLOs, and detailed Terms of Reference for the recruitment of a CRP leader, it is difficult to have confidence that the proposed outputs will be delivered. Translating a clear understanding of the sector's evolution into a ToC (with convincing hypotheses and assumptions), and impact pathways at the CRP and Flagship level could provide the additional clarity in focus and activities needed. This conceptual clarity is not only required in respect of the proposed research, but also in respect to the achievement of impact at scale.

The ISPC considers scores this pre-proposal as having **major concerns** and hence recommend the submission of a new pre-proposal. Progression of such a new pre-proposal to the full proposal stage will be considered if the following key issues, further clarified in the detailed comments below, have been satisfactorily addressed:

- The analysis of sector dynamics, ToC, impact pathways, targets, and budgetary allocations need revisiting. Lots of facts about livestock are given but they need to be presented in a logical manner to define where CGIAR research can add most value;
- The CRP needs to select its priority research opportunities based on the SRF, its comparative advantage, the opportunity to link with other CRPs and its global remit;
- There is little specific justification of partners and few national and regional partners from developing countries are mentioned. The CRP needs to clarify its networking and partnership arrangements, roles and responsibilities on the basis of comparative advantage and subsidiarity;
- The CRP needs to clarify how its country vs. system focus is aided by CRP and site integration, and how this will be utilized to maximise IPG benefits across other countries and regions.

**[Score: C]**

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

The scenarios, challenges, and trajectories presented in the CRP appear to be focussed on justifying an emphasis on smallholders only, rather than providing an analysis as to how the sector can best contribute to the SLOs. In addition, whilst the selection of the Flagships (FPs) is aligned with the outcomes specified in the SRF, the role that the presented (and possibly other) analyses played in the conceptualisation of the proposed research, the definition of outcomes, and the allocation of resources needs elucidation. The CRP thus needs to present a more compelling analysis of sector dynamics that links its selection of research opportunities to outcomes that support the attainment of the SLOs

Whilst the integration with other CRPs is mentioned and presented in an annex, further detail, particularly with respect to the functional integration with A4NH and PIM, is required. More information is also required on the nature of other proposed partnership arrangements, and how well the institutional priorities of these partners align with those of the CGIAR and this CRP.

The CRP strongly stresses the added value of a programmatic approach, but it is not apparent how the proposed ‘Transformation and Scaling’ FP (FP6) will deliver the CRP’s added-value. This may be more easily achieved through additional coordination and integration of the other FP activities rather than through a stand-alone FP. In its current form, FP6 appears to duplicate many of the systems analysis, testing, and gender analysis functions already present in the other FPs. Moreover, whilst there are potentially interesting aspects to the partnership arrangement proposed in this FP, it currently seems to be focussed on pushing supply-side science delivered by other FPs through one preferred ‘development’ partner, rather than about experimentation with different ways of using research and partnership for impact.

The scientific arguments and quality appear to be high in parts of the CRP, however, the focus and discussion on what actually will be done across clusters and flagships appears highly variable. In addition, whilst risks are undoubtedly changing and hence existing assessments may need updating, the currently proposed characterisation and systems analysis activities proposed in most FPs, appear to suggest a start from scratch rather than building on ILRI’s (and many others) long history of livestock sector-related research.

Moreover, whilst there are some good examples of lessons learned from the LF CRP, explanation of those lessons remains in many places restricted to general descriptions on what has been done. Limited information is presented on how the proposed research agenda builds on, and will be shaped by, earlier results.

## **2. Theory of Change and Impact pathways [Score: C]**

No ToC section is presented at the CRP level. The document does, however, include a ToC, generally without clear hypotheses, for each FP. The ‘Impact pathways and relationships of flagship’ diagram that is presented is essentially a depiction of how the component parts of the CRP are said to fit together. It is thus difficult to judge how the CRP envisages that the FPs and their clusters complement each other towards the achievement of the presented overall CRP outcomes.

A table of target beneficiaries lists expected outcomes against targets and sub-IDOs. Many of the key assumptions noted, however, are risks that should be internalized by the CRP. In addition, further clarity is required on how the postulated impact will be achieved through the currently proposed micro-level approaches of the ‘Transformation and Scaling’ FP. As presented, this FP has a fairly weak impact logic related to the systemic change that would be required to attain the proposed levels of impact.

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

The CRP is clear in its understanding of the key role that women play in smallholder livestock production and thus the need to target them specifically. How this has influenced the selection of research topics or priorities in the CRP *per se*, however, is less clear. From the text it appears that the gender implications of technological and institutional solutions are proposed to be studied through a set of integrated research activities in FP6, after they have been designed, delivered and studied.

The enabling environment is not explicitly dealt with in the CRP overview, although it does get some attention in the FPs. Given that parts of the CRP do have a significant focus on facilitating policy and institutional change, the general lack of recognition of broader issues such as subsidies, security in pastoral areas, vested interest, and policy change process, requires attention. The apparent lack of conceptualisation of these issues suggests that not all FPs might have paid due attention to the complex enabling environments in their research plans.

The CRP adopts the CGIAR CapDev framework and gives particular emphasis to the design and delivery of training materials and the training of future research leaders. More substance should be provided at this stage as to what will actually be done.

#### **4. Budget**

The current request, at a level of *c.* USD 125 million per year with an overall expectation that 50% of this will be mobilized through W1/2, represents a fourfold increase over the ongoing L&F CRP. Given the lack of a compelling analysis of sector dynamics, there are significant concerns as to whether the CRP can actually deliver on its promises.

Budget allocations do not appear to be based on a reasoned priority setting on new opportunities, expected impact, or sequencing. In addition, an indication is required as to how much the expected levels of W1/2 funding are per FP (or whether these stand at the 50% indicated for the CRP), as opposed to reflecting bilateral funding on topics where donors have specific interest. In addition, consolidation of the apparent substantial overlaps between the 'Transformation and Scaling' FP and other FPs may provide opportunities for efficiency savings and free up resources that could be allocated elsewhere in the CRP.

The funding requested for the management of the CRP is significantly higher than the management budget allocated to similar sized CRPs, and needs further clarification and/or revision.

#### **5. Governance and management [Score: C]**

This is a new CRP, and hence a new governance, leadership and management structure will need to be established. The pre-proposal indicates that this CRP will be aligned to the best practices for management and governance that emerged from on-going CRPs as well as from reviews and lessons learned from the Livestock and Fish CRP. The CRP, however, is invited to carefully check the IEA review on CRP Management and Governance, as part of the proposed arrangements appear to run contrary to its observations on independence and legitimacy.

The proposal provides very limited indication of the criteria/ToRs for selection of the new CRP leader, which makes it difficult to assess the overall leadership of the CRP. The competencies of the FP leaders and other proposed staff include scientists with strong track records, mixed with some relatively unknown quantities. The proposed joint appointments of, at least, two flagship leaders (genetics and health) is applauded, but will require significant additional attention to coordination and internal communication, and increase the leadership-related transaction costs.

The current partnership presentation, rather than a specific strategy describes the comparative advantage of its various proposed science discovery partners. Whilst these seem to have

strong international reputations and fill relevant gaps in comparative advantage, more information is required on the specific nature of the partnership arrangements, and how well institutional priorities align with those of the CGIAR and this CRP. National and regional AR4D partners get limited or no mention and should be identified.

The selection of GIZ as the CRP's bespoke 'research into use' partner provides an interesting opportunity to explore how research products and expertise can be used productively for social and economic impact. To achieve this, however, its purpose should not just be to transfer technologies, but also to couple access to technology and expertise with access to markets, credit and other inputs, as well as the facilitation of the institutional arrangements that make such links responsive to the needs of stakeholders. The wide-ranging impacts from the lessons that have emerged from similar experiences (e.g. World Bank 2006; RIU, 2012; World Bank AIS source book) do not appear to have been adequately considered by the FP, and it is not evident that the proposed FP leadership has the appropriate profiles and institutional backing to effectively deal with them. There are additional questions whether this type of work would not be better approached at the System level.

## **6. Flagship**

### **6.1 Animal Genetics flagship [Score: B]**

This flagship aims to ensure that the varied stakeholders in livestock production in developing countries—including men and women livestock keepers of all ages, as well as poor consumers of livestock products—can equitably benefit from superior livestock genetics. The FP aims to achieve this through the identification and promotion of the most appropriate livestock breeds or development of new ones, accompanied by effective delivery systems, policies and institutional arrangements.

The FP has good relevance to the SLOs, but the expected outcomes appear to be vague and overly ambitious. For example, the suggested 50% increase in productivity by 2.3 million smallholders from improved breeding in a 4 to 5 year period doesn't give any indication on commodity, species, or system. This would only be within the realms of possibility for poultry. It is thus recommended that this flagship revisits its targets. Further clarification is also required on the envisaged roles and responsibilities of the suggested partners and whether, for example, the importation and introduction of exotic breeds is part of the FP. Understanding systems evolution is clearly essential, but the narrative on characterisation suggests a start from scratch, rather than an update of previous work.

The scientific quality appears to be of a high standard, making use of a comprehensive set of tools including recent advances in breeding research and strengthening comparative advantage through partnering with WUR and SLU, but it would strengthen the full proposal if the justification for the choice of these partners over other expert groups in these fields were to be included. Further clarity is required on how the current focus on breed development for specific local conditions, will deliver IPGs. The proposed reproductive technology platform appears to be an exception to that rule. In addition, consideration should be given as to whether closer cooperation with the commercial sector in the technology development phase could further improve the FP's comparative advantage. Cluster 4's focus on Policy and Institutional Support is welcomed, although it is not clear whether broader policy process issues have been adequately reflected in the research plans, including the key issue of public and private sector roles. The FP shows commitment to training and gender, but it should clarify how this has affected its selection of research topics or priorities. The proposed budgetary split among clusters appears to be appropriate.

## **6.2 Animal Health flagship.** [Score: B]

This flagship, aims to take a holistic approach to assessing biological and institutional constraints and their interrelationship to increasing livestock productivity, by engaging in state-of-the-art biosciences research on animal vaccines and diagnostics, as well as new approaches to herd health and service delivery. Its research relates to sub-IDOs on reduced livestock disease risks associated with intensification and climate change (with the CRP's FP on L&E and CCAFS) and to closing yield gaps through improved agronomic and animal husbandry practices. Through links with A4NH it also aims to address sub-IDO on reduced biological and chemical hazards in the food system. The work aims to align with national and regional priorities and initiatives, but there is no clear strategy on how this will be achieved. As such, whilst the strategic relevance of the work is clear, the ToC and impact pathways require significant additional attention.

The current narrative indicates that vaccines and diagnostic tools will be developed, but is less clear on the key diseases and specific diagnostic tools it aims to deliver, unless this is expected to wait until the outcomes of the characterisation work are available. In that respect, whilst it is appreciated that risks are changing and that these require constant updating, the proposed work on measuring disease burdens and socio-economic impacts should build on the long history of research in this area, which currently is not apparent. The full proposal should be clearer on priority diseases and why they have been selected as such.

The FP will use novel tools and techniques to accelerate vaccine discovery and product development, but whilst lessons learned from previous work are said to have shaped the proposal, there is limited actual information on the results of similar work under L&F. Most of the candidate diseases are so-called "orphan diseases" that require international public support, and to which the FP will bring its combined expertise on vaccines and diagnostics (from the discovery phase to proof-of-principle both in the laboratory and the field). Its leadership team –to be led by a non-CGIAR partner from academia- have a strong track record. Science partners have been well-chosen and bring additional skills and expertise, but national and regional science and development partners need more attention and inclusion. Based on the targeted disease, other partnerships –including with the private sector– will need to be developed and the distinct lack of development partners needs to be rectified.

The proposal is not clear on how the need for an enabling environment has been conceptualized as part of its research activities, and CapDev and gender are mentioned in passing only. The candidate list of 'selected' diseases, however, does include those considered to be of particular importance to women. The FP does not elaborate in-depth on the need for research to account for potential unintended consequences on SLOs that are not its primary focus. The proposed budgetary split among clusters appears to be appropriate

## **6.3 Feeds and Forages flagship.** [Score: C]

This flagship intends to follow a demand-driven approach, informed by value chain analysis and stakeholder consultations conducted in CRP priority locations. The FP aims to contribute to sub-IDOs on closing yield gaps and the more efficient use of inputs. In collaboration with the L&E FP it will address sub-IDOs on reduced greenhouse gas emissions and increased resilience of agro-ecosystems and communities, while its work with the Resilience, Nutrition and Livelihood Flagship aims to contribute to the sub-IDO on increased livelihood opportunities. In this respect, work on feeds and fodder should be of high strategic relevance. The ToC of the FP, however, is not convincing and is particularly vague on socio-economic

constraints. In addition, the suggested product lines and impact pathways are unlikely to add up to the highly ambitious target outcomes.

The Feeds and Forage flagship builds on decades of forage, feed and rangeland research, and whilst the comparative advantage should be high, this is not apparent from the proposal. As a result, it is difficult to assess its scientific quality. Excellent work has been carried out in the CGIAR, including the development of new tools, but it is not evident how the lessons and novel approaches have been conceptualized and integrated into a convincing research agenda. The scientific team is strong on animal nutrition, but seems to lack skills in the area of the ‘full purpose crop concept’, which is at the heart of the FP. Moreover, the rationale for the withdrawal from other CRPs is noted, but in line with the recommendations of the ISPC’s Strategic Review of Livestock in the CGIAR, some mechanism will need to be in place to ensure the integration of feed research among CRPs. There should also be additional reflection whether this work could be more effective using a systems lens, rather than the current country-related focus only. In that respect, whilst the FP lists existing and desired partners, there is no clear networking or partnership strategy on how the research outputs from the specified countries will be utilised to maximize the IPG benefits across other countries and regions, nor are details on site integration with other CRPs presented.

This FP acknowledges the importance of the enabling environment, which the proposers relate to the capacity for technology development, knowledge sharing, delivery partnerships (including public-private engagements), and infrastructure such as laboratory facilities, but there is no evidence in the narrative as to how this appreciation has impacted on the research agenda. CapDev-related training activities in the FP are said to build on approaches that are used by L&F, although there is no indication of previous results and how lessons learned have been incorporated. The FP appears to spend much time on gender analysis, but it is less clear how this influences its research questions. The proposers do not develop further the need for research to account for potential unintended consequences on SLOs that are not its primary focus. The proposed budgetary split among clusters appears to be appropriate. In light of the above comments, a major rewrite is required for this flagship, in which merging with the L&E FP should be considered.

***Summary recommendations:***

- Revisit ToC and impact pathways;
- Clarify research focus and agenda;
- Revisit country vs. system focus;
- Clarify networking and partnership strategy for delivery of IPGs
- Consider merger with FP4 – major rewrite required

**6.4 Livestock and the Environment flagship [Score: C]**

This FP aims to reduce the environmental footprint of livestock production while securing its role in nutritional security and poverty reduction, and to ensure livestock enhances ecosystem services that sustain productivity and improve resilience and equity. With its primary focus on SLO 3, and potential contributions to increasing resilience, Livestock and the Environment work is potentially of major strategic relevance and its appearance as a FP is welcomed.

This is a crowded field, however, with many other major players. The FP and its ToC, do not show an appreciation of the vast amount of work that is going on in this area. As a result the proposed activities (both on the science discovery and application side) appear to overlap significantly with work being undertaken by other organizations. The list of product lines in

Cluster 2 makes interesting reading, but it is not clear whether these should be viewed as examples of possible research topics, or whether these issues have been selected on the basis of discussion with key stakeholders and/or ongoing analysis? Such consultation and analysis with key stakeholders including the FAO, CSIRO, GRA, and the CCAC and country partners, however, is exactly what will be required to be able to propose a value-added, focussed and novel research agenda that contributes to the achievement of SLO 3.

The information provided in the narrative is not sufficient to assess the scientific quality of the FP, however, the proposed FP leadership seems appropriate and there are some strong team members with good track records in this area of research. Whilst it is appreciated that this FP intends to embrace the *One Health* approach, clarification is needed on how this has been conceptualised towards its integration in the proposed research.

This FP aims to include women and youth as agents of change in environmental management, although there is no explanation as to how this will be achieved. It acknowledges the importance of the enabling environment, particularly in getting the right mix of regulations and incentives through its links with national governments. How this is reflected in the proposed activities, however, is not evident. The FP also recognizes the need for capacity development for multiple partners to ensure its sustainability, but provides little detail on what will actually be done.

The equal division of proposed budgetary resources among outcomes appears to confirm the lack of thorough priority setting. In light of the above comments, a major rewrite is required for this flagship, in which merging with the F&F FP should be considered.

***Summary recommendations:***

- Revisit ToC and impact pathways;
- Clarify research focus and agenda in consultation with partners;
- Revisit budgetary allocations;
- Consider merger with FP3 – major rewrite required

**6.5 Livestock, Resilience and Nutrition flagship.** [Score: C]

The FP aims to enhance the contribution of animal-source foods to the food and nutritional security of the poor, while also improving the livelihoods of smallholder livestock keepers. It aims to contribute directly to sub-IDs on increased availability of diverse nutrient-rich foods, reduced market barriers, increased livelihood opportunities, and increased household capacity to cope with shocks. In collaboration with A4NH it also aims to contribute to sub-IDs on the appropriate regulatory environment for food safety, and reduced livestock and fish disease risks associated with intensification and climate change.

The issues touched upon by the FP are clearly of strategic relevance, but the three clusters don't seem to deliver a coherent whole. As a result, the TOC and activities are relatively vague and unfocussed, with limited clarity on how the main product lines will add up to the target outcomes. The focus of the work seems to be on pushing potential solutions rather than on trying to identify a range of appropriate solutions for a specific context, or to develop appropriate tools for such purposes. The use of a value chain approach with a possible focus on systems in marginal areas with few alternatives to livestock might have provided a sharper set of research questions and enhanced the relevance of the work towards the achievement of the sub-IDs.

Whilst the FP's comparative advantage should be high, this is not apparent from the proposal. In addition, there seems to be potential for significant overlap with the FP on Transformation and Scaling in general, and with the other FPs on gender-related activities. In addition, work on the contribution of animal source foods to nutrition should be implemented jointly with the FISH and A4NH CRPs. The FP includes some strong team members with good track records in component parts of the proposed research, but there are questions as to whether the quality of the proposed FP leadership would be best used for the currently proposed activities.

The FP contains some good discussion of the role of women in livestock systems and the relevant enabling environment. There is less discussion, however, on the implications this has for the research agenda. The FP's partnership strategy and choice of partners does not seem to have received the appropriate attention thus far. In addition, the potential unintended consequences of the planned research have not been considered in any detail. The challenge is thus not only to better define this FP's research in a way that fits the CGIAR agenda, but also to include a strategy to link local level partnership to groupings that have legitimacy and carriage for policy and institutional change at higher scales.

The budget seems high for what is likely to be delivered. The proposed allocation for the delivery of outcomes seems arbitrary and not based on any reasoned analysis or allocation of priority.

***Summary recommendations:***

- Revisit ToC and impact pathways;
- Clarify research focus and consider alternative approaches;
- Develop a clear partnership strategy in light of policy and institutional change at higher scales
- Revise budget;
- Consider merger of indicated component parts with other FPs – major rewrite required

**6.6 Transformation and scaling flagship [Score: D]**

This flagship aims to enable the other flagships in the CRP to contribute successfully to their specifically targeted sub-IDOs and SLOs by enhancing their ability to achieve impact at scale. The flagship proposes to do this by addressing the cross-cutting sub-IDOs critical to the delivery of appropriate research results, especially those for equity and inclusion, better enabling environment and capacity development.

Impact at scale is obviously essential for delivery of the SLOs, but it is not apparent how the proposed FP would deliver the CRP's added-value. In its current form, it appears to duplicate many of the systems analysis, testing, and gender analysis functions already present in the other FPs. Like the previous FP a focus on value chains might have been more appropriate. As such, due consideration should be given to the integration of the appropriate component parts into other FPs.

The partnership arrangements proposed in this FP are potentially interesting, but they seem to be skewed towards disseminating supply-side science delivered by the other FPs, rather than about experimenting with different ways of using research and partnership for impact. In their currently proposed form, impacts are likely to remain local and restricted to project cycle funding only. In the absence of attention to link these activities to higher-level initiatives or groups, the scope of addressing overarching policy and institutional constraints, or of alignment with longer term (and wider-scale) development goals and plans, remains limited.

The current narrative does not indicate that such issues have been adequately considered. It is also not clear whether the proposed FP leadership has the appropriate profiles and the necessary institutional backing, and whether this type of work would not be better approached at the System level.

As indicated, one of the FP's clusters deals with gender analysis and enhancing the role of youth. The FP acknowledges the enabling environment and commits to capacity development by enhancing the institutional capacity of partner research organizations, and will increase innovation capacity for partner development organizations and in poor and vulnerable communities, although no indications on how this will be achieved are presented. The budget is high but this is assumed to relate to the bi-lateral funding expected through the GIZ partnership.