Background and Context

The CGIAR Research Program (CRP) on Livestock and Fish (L&F) is led by the International Livestock Research Institute (ILRI) with the participation of WorldFish, the International Center for Agricultural Research in the Dry Areas (ICARDA) and the International Center for Tropical Agriculture (CIAT). It aims to increase the productivity of poor livestock and fish farmers and increase the availability and affordability of meat, milk and fish for poor consumers. An important feature of the CRP is a value chain transformation and scaling approach that seeks to make research more relevant to developing countries, and to increase the potential for impact, by implementing applied research in nine target countries.

With the International Livestock Research Center (ILRI) serving as the Lead Center, the CRP has been operational since January 2012. The total of approved funding was USD 85.1 million and L&F had spent a total of around USD 73 million, of which around half was funded from Window 1 and 2 and half from Window 3 and bilateral projects.

At the end of 2014 the program was streamlined into five Research Themes called Flagship Projects (FPs): Animal Health; Animal Genetics; Feeds & Forages; Systems Analysis for Sustainable Innovation and Value Chain Transformation and Scaling (VCTS). VCTS is termed the “delivery” flagship project, while the others are “discovery” flagship projects.

Evaluation methodology

The Evaluation covered all research activities included in L&F, the processes related to implementation, and all funding sources. It included all research lines in the present CRP as well as the outputs from relevant “legacy” projects initiated prior to the CRP and carried over into L&F.

The team drew information from over 370 published documents, databases provided by L&F, and the expert knowledge of over 270 stakeholders interviewed. In addition, 95 CRP scientists responded to an electronic survey.

Evaluation team members visited three of the four Centers contributing to L&F (ILRI, WorldFish and CIAT). Visits by two team members were made to five of the nine value chain research hubs. Case studies were developed for the five value chain research hubs visited and for seven research areas within the discovery FPs.
Main findings and conclusions
Overall, the Evaluation concluded that L&F has added value to CGIAR research in livestock and aquaculture and should continue to be funded, either as a joint CRP or as separate Livestock and Aquaculture CRPs. The CRP value chain approach is innovative and is generating valuable lessons.

The main concerns of the Evaluation relate to a) lack of focus and coherence within the program portfolio as a whole and in the way the value chain approach is managed and b) inadequacy of the management system to cope with a complex, multi-site program. Both of these factors are impeding delivery of outputs and outcomes and must be addressed.

Beyond the control of L&F, the Evaluation is also concerned about the potential impact on delivery of inconsistencies at Fund Council and Consortium level, namely the instability of core funding, frequent changes in reporting requirements and uncertainty about future directions of all CRPs.

Governance and management
The governance arrangements of L&F were found to be clearly structured and well-functioning. The evaluators advised against changing this well-functioning governance system in the second phase of the CRPs. The Evaluation highlighted the need to transition the financial reporting system from one that is spreadsheet-based to a centralized and modern database. The evaluation also considers L&F’s lack of a monitoring and evaluation (M&E) system to be a serious problem.

It also noted that approximately 50 percent of the funding came from central W1/W2 sources; while the other 50 percent bilateral projects are mapped against the CRP. Overheads generated by bilateral projects are insufficient to cover all the maintenance and capital costs of a large Center rich in laboratories like ILRI, whose long-term sustainability will be threatened without a sustainable source of such funding.

The CRP portfolio
The Evaluation concluded that all of the discovery FP research activities currently conducted are relevant. However, there is a great need to focus and streamline the portfolios. Delivery of international public goods will require scalable, game-changing outputs. The program will be better able to deliver international public goods (IPGs) if it is more clearly focused around a limited number of key research areas.

Two areas would merit a higher profile in the future. One is environment and NRM research, given the global importance of this topic. The other is aquaculture genetics, which has already generated a scalable output.

The environmental and NRM activities of L&F have included some very high-quality science. The research that has been done is very important for the essential tasks of managing livestock-related environmental impacts and impacts of environmental trends on livestock value chains. It has been even more important as climate adaptation for livestock systems under the CRP on Climate Change, Agriculture and Food Security has apparently been very limited. However the position of environment/NRM research as a sub-cluster of an FP has limited its effectiveness. A higher profile would be beneficial.
Quality of science and value chain approach

On quality of science, the Evaluation found that L&F has the ability to produce outputs of high quality and indeed is doing so. There have been some excellent reports and peer-reviewed publications, mostly from legacy work. However, the Evaluation is concerned about the generally low level of publications in internationally recognized journals, and also considers that L&F should be producing more excellent rather than good or acceptable grey literature. The program could also benefit from a more strategic exploitation of international collaboration with the intention of filling skill gaps and increasing the critical mass of researchers and resources in areas where they are lacking.

The value chain transformation and scaling approach has been a keystone of L&F and one of its most appreciated features. The Evaluation was impressed by the investment in institutional relationships and development partnerships, providing a solid foundation for applied research. The CGIAR Centers have reached far beyond their traditional national agricultural research system partners to work with government extension agencies, producer co-operatives and NGOs.

However, L&F has only very partially delivered on the potential of the value chain approach. The core teams are too small to carry out all of their necessary work and the funding deficit has resulted in a generally low level of published outputs as well as incomplete research portfolios. The abrupt funding cut in 2015 has seriously hampered research in some value chains.

The Evaluation found the VCTS FP is not being managed in a coherent fashion to create economies of scope and scale. The research hubs largely operate as separate entities. The Evaluation believes that this should be managed more effectively. L&F will need to pay attention to synthesis and coherence across the VCTS FP, and indeed across the whole CRP, if it is to deliver IPGs.

Summary of Recommendations

1. **Capitalize on the benefits of being a CRP.** The following are recommended to CRP management:
   - stronger emphasis on CRP-wide research initiatives that will produce game-changing outputs;
   - stronger engagement as a CRP in global public debates on livestock, poverty and development;
   - whole-CRP approaches to major donors

2. **Increase synergies between livestock and aquaculture.** Regardless of whether livestock and aquaculture remain together in one program, stronger attempts should be made to capitalize on potential synergies between them, including the development of a larger portfolio of substantial projects that brings them together

3. **Streamline the portfolio.** The portfolio will need to be streamlined into areas of greatest potential impact on IDOs taking into account scientific capacity. The streamlining should take place in the context of the TOC and should ensure a balance between short, medium and long term outputs, based on very clear decision criteria

4. **A higher profile for environment/NRM:** A higher profile for work on environment and natural resource management is recommended. In Phase 2 this could take the form of a flagship program on the topic

5. **Establish a M&E system based on the TOC:** L&F should complete the development of the TOC (including impact pathways) and ensure that a M&E system is established in line with the TOC.

6. **Build private sector partnerships for technology delivery:** Build carefully-chosen partnerships
with commercial companies, including partners in developing countries and multinationals with expertise in developing country markets, in order to deliver the pipeline from technology research to application

7 **Maintain the governance arrangements but with some adjustments:**
   a) associate the Director General of ILRI more with SPAC deliberations in order to align ILRI and CRP programs
   b) establish a periodic interaction between the SPAC chair and ILRI Board program committee chair
   c) provide the SPAC regularly with summarized (gross) financial and administrative information

8 **Modernize the financial management system**: as a matter of urgency, the systems of financial management are modernized to fit the requirements of a complex, multi-site program

9 **Maintain the value chain approach but manage it much more effectively**: The value chain approach or its functional equivalent should be continued but considerable changes are needed to increase the value added by the approach:
   a) every value chain hub should be properly resourced
   b) roles of the VCTS flagship, the country research hubs and SASI should be clarified;
   c) role of the leader of the VCTS should be reformulated with a strong emphasis on communication and learning across value chains
   d) there should be much stronger emphasis on synthesis of results in published papers

10 **Generate more high-quality published outputs.** While the Evaluation has no serious concerns about quality of science, the following recommendations are made. L&F should:
   a) clear the backlog and increase effort on producing high-quality peer-reviewed publications aiming for internationally recognized journals
   b) continue to produce non externally peer reviewed high-quality outputs
   c) increase the number of publications that are interdisciplinary
   d) increase and systematize mentoring for young scientists

**Management Response**

CRP L&F management provided a response to the Evaluation, congratulating the Evaluation Team on a constructive, insightful and forward-looking analysis. CRP management was pleased with the main findings recognizing the added value to CGAR research on livestock and aquaculture and the need to continue support of its activities.

In their response, CRP management fully accepted all ten recommendations. It stated that most concerns highlighted in the Evaluation were shared by CRP management, and appreciated references made by Evaluation Team in acknowledging challenges and efforts made to address them. It further stated that the Evaluation findings and recommendations have helped sharpen the focus and prioritize efforts. A plan of action was provided to respond to the individual recommendations in detail.

**Further Information**