



Advisory  
Services

# **CGIAR Research Program 2020 Reviews: Livestock – List of Annexes**

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The full report is available here:  
[bit.ly/LIVESTOCK-CRP2020-Report](https://bit.ly/LIVESTOCK-CRP2020-Report)

A 2-page brief is available here:  
[bit.ly/LIVESTOCK-CRP2020-Brief](https://bit.ly/LIVESTOCK-CRP2020-Brief)

# Annex 1: Terms of Reference for the CRP2020 Review, Addendum

Links to CRP 2020 Reviews [TOR](#) and [Addendum](#)<sup>1</sup>.

## Annex 1.1: Call for Expressions of Interest

CRP 2020 Independent Reviews of Quality of Science and Effectiveness

Deliverables and consultation for the CRP Review (pag.9-10 of the ToR attached)

The review team is expected to produce the following deliverables:

1. A preliminary findings matrix, for discussion midway through the review process, to check the progress of the review and to provide a basis for early course correction if required. The CAS Secretariat will provide the review team with a template for the preliminary findings matrix.
2. A brief presentation of preliminary findings, for the debrief with the CRP management and the CAS Secretariat for validation, factual corrections, and feedback.
3. A draft report of the CRP review, for review by the CRP management and the CAS Secretariat for final feedback. The CAS Secretariat will provide a template for the draft and final reports.
4. A final report of the CRP review, following the report template with a maximum of 20 pages, a 2-3-page executive summary, and a set of annexes with additional information apart from the main body of the report.
5. A PowerPoint presentation covering the main points of the review, including purpose, methods, findings, conclusions, recommendations, and additional notes relevant to the review. The CAS Secretariat will provide a template for this presentation.

Templates for the preliminary findings matrix, draft, and final report, and the presentations will be provided to the review team in the first week of the review.

The review team will engage with the CAS Secretariat and the CRP under review at the following key points:

- Initial discussion with the CAS Secretariat to start the review and clarify questions from the review team
- Briefing at the start of the review between the review team and CRP management, facilitated by the CAS Secretariat
- Interview with the CRP Leader and a focus group discussion (FGD) with other members of the CRP management during data collection
- Debrief presentation of the preliminary findings led by the review team, for validation, clarifications, and feedback by the CRP management and the CAS Secretariat
- The draft report will be shared with the CRP Leader and staff for factual correction and final feedback
- Additional discussions between the review team, the CRP management and the CAS Secretariat may be scheduled based as needed during the course of the review.

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<sup>1</sup> Accessed September 25, 2020

## **Annex 1.2: Addendum to the Terms of Reference & Call for Expressions of Interest, June 2020**

The CAS Secretariat has made the following modifications to the Terms of Reference (TOR) and Call for Expressions of Interest, for the CRP 2020 Reviews of Quality of Science (QoS) and Effectiveness.

Please note: (i) the independent reviewers for CRP reviews that will begin in August (see Annex I for the working schedule) will be selected by the first week of July, and (ii) the overall deadline is 15 July 2020 for submission of expressions of interest for the CRP 2020 Review.

**Methods.** The proposed surveys of CRP researchers, partners, and donors have been removed from the CRP 2020 Reviews. The sample frame of respondents for these surveys was considered to be smaller than anticipated, thereby limiting the value of quantitative data collected from the surveys. Given the extensive qualitative methods (primarily key informant interviews) already applied to the same pool of respondents, the value of the surveys was determined to be questionable. Further, the burden on respondents was considered excessive, and a higher value is placed on the in-depth qualitative interviews. Considering the limited value addition of the proposed surveys and the burden on respondents, CAS has removed the surveys as a method for the reviews.

**Establishing contributions to Intermediate Development Outcomes (IDOs).** Links between the outcomes (documented as milestones) from the CRPs and the CGIAR Strategic Results Framework will be examined at the sub-IDO level, not the IDOs themselves.

**Data sources.** CRP performance data will be drawn from the Plans of Work and Budget (POWBs) and Annual Reports for the period under review, with supplementary information from the CGIAR result dashboard. The CAS Secretariat supports the reviews by integrating data from the dashboard, the CRP internal monitoring, and the POWB and annual reports, to allow the review team to make quantitative assessments of performance. The dashboard data will also be used in conducting a 'deep dive' of selected CRP outcomes (OICRs).

**Knowledge management.** The review team will be responsible for uploading and storing its original data, analysis, and drafts on the secure online content site (SharePoint) provided by the CAS Secretariat, as a basic step in knowledge management for the review.

**Analytics support.** The team will also need to adhere to timelines for accessing technical consultants made available by the CAS Secretariat, e.g., for quantitative analysis of performance data.

**Distribution of effort within team.** The two members of each review team (subject matter expert and senior evaluator) are each allocated 39 days for execution of the work, over the 11-week period. An additional two days are allocated to the team member who takes on the team leadership role. The team leader will also commit to responding to any questions or need for clarifications that arise from copyediting the final report.

Further notes to interested consultants:

Consultants who have already submitted their expressions of interest have been logged in the CAS consultant database and do not need to re-submit their documents. Short-listed candidates will be contacted as preparations for the CRP reviews are made.

Consultants who wish to apply should indicate their expertise and availability in relation to the nine CRPs that are scheduled to be reviewed between August and December 2020. The reviews of three CRPs (A4NH, GLDC, and Wheat) have already started.

## Annex I: Working schedule of CRP 2020 reviews

CGIAR Research Program (CRP)	Type	Review period
Grain, Legumes and Dryland Cereals (GLDC)	Agri-Food System	Apr-Jun
Wheat	Agri-Food System	Apr-Jun
Agriculture for Nutrition and Health (A4NH)	Global Integrated Program	Apr-Jun
Forests, Trees and Agroforestry (FTA)	Agri-Food System	Aug-Oct
Livestock	Agri-Food System	Aug-Oct
Climate Change, Agriculture and Food Security	Global Integrated Program	Aug-Oct
Fish	Agri-Food System	Sep-Nov
Maize	Agri-Food System	Sep-Nov
Water, Land and Ecosystems (WLE)	Global Integrated Program	Sep-Nov
Rice	Agri-Food System	Sep-Dec
Roots, Tubers and Bananas (RTB)	Agri-Food System	Sep-Dec
Policies, Institutions and Markets (PIM)	Global Integrated Program	Sep-Dec

Note: this working schedule may be modified. When submitting an Expression of Interest, consultants are advised to indicate a range of dates for which they are available for conducting the reviews. The schedule for all 12 reviews spans April to December 2020, with an anticipated duration of 11 weeks for each review. The final three reviews will begin in late September, to conclude by mid-December.

Note: this working schedule may be modified. When submitting an Expression of Interest, consultants are advised to indicate a range of dates for which they are available for conducting the reviews. The schedule for all 12 reviews spans April to December 2020, with an anticipated duration of 11 weeks for each review. The final three reviews will begin in late September, to conclude by mid-December.

## Annex 2: List of Persons Interviewed

Person	Role	Institution/Affiliation	Gender	Date	Selection method
1. Fritz Schneider		Global Alliance for Sustainable Livestock, Switzerland	M	4/9/20	
2. Heather Burrow		University of New England, Australia	F	4/9/20	For role in Independent steering committees (ISC)
3. Muhammad Ibrahim	Director	CATIE, Costa Rica	M	4/9/20	
4. Flora Nankhuni		Ex-Michigan State University; currently in Washington DC	F	4/9/20	
5. Lorne Babiuk		Ex-University of Alberta; Canada	M	4/9/20	
6. Thomas Fitz Randolph	Director	Livestock CRP	M	7/8/20	Inception meeting
7. Helen Altshul	Performance & Partnerships Manager	ILRI	F	9/9/20	For role in CRP M&E
8. Nicoline de Haan	Gender Coordinator (has recently transitioned to chair the new CGIAR Gender Platform). Replaced by Alessandra Galiè	ILRI	F	9/8/20	For role in Gender
9. Caroline Kanyuuru	M&E Specialist	PMU	F	01/09/20	For work on M&E
10. Peter Ballantyne	Priority Country coordinator	ILRI	M	02/09/20	For Priority Country focus
11. Karen Marshall	FP 1 Leader	ILRI	F	2/9/20	For role in Flagship
12. Ulf Magnusson	FP 2 Leader	SLU	M	28/2/20	For role in Flagship
13. Michael Peters	FP 3 Leader	CIAT	M	25/8/20	For role in Flagship
14. Polly Ericksen	FP 4 Leader	ILRI	F	2/9/20	For role in Flagship
15. Isabelle Baltenweck	FP 5 Leader	ILRI	F	4/10/20	For role in Flagship

Person	Role	Institution/Affiliation	Gender	Date	Selection method
16. Jane Poole	Coordinator, Research Quality and Open Access	ILRI	F	25/8/20	For Science Quality role
17. Iddo Dror	Coordinator, Capacity Development	ILRI	M	10/9/20	For Capacity Development role
18. Nils Teufil	Coordinator, Impact Assessment	ILRI	M	8/9/20	For Impact Assessment role
19. Peter Ballantyne	Country Coordinator	ILRI	M		
20. Ben Lukuyu	Leader, Uganda Country Program	ILRI	M	9/9/20	For Country Leader and OICR roles
21. Amos Omore	Leader, Tanzania Country Program	ILRI	M	8/9/20	For Country Leader role
22. Sabine Douchamps	Leader, Vietnam Country Program	CIAT	F	16/09/20	For Country Leader role
23. Barbara Rischkowsky	PMC and Leader Country Program Ethiopia	ICARDA	F	10/09/20	Role in PMC and Country Coordination in Ethiopia
24. Aynalem Haile	Cluster Leader/Project Leader/Principal Investigator	ICARDA	M	7/9/20	For role in Flagship
25. Julie Ojango	Cluster Leader/Project Leader	ILRI	F	9/9/20	For role in Flagship
26. Olivier Hanotte	Project Leader/ Principal Investigator	ILRI	M	11/9/20	For role in Flagship
27. Okeyo Mwai	Project Leader/ Principal Investigator	ILRI	M	9/9/20	For role in Flagship
28. Barbara Wieland	Cluster Leader/Project Leader/ Principal Investigator	ILRI	F	1/9/20	For role in Flagship
29. Vish Nene	Cluster Leader/Project Leader/ Principal Investigator	ILRI	M	7/9/20	For role in Flagship
30. Henry Kiara	Cluster Leader/Project Leader	ILRI	M	8/9/20	For role in Flagship
31. Stefan Burkart	Flagship Administrator/Principal Investigator	CIAT	M	25/8/20	For role in Flagship

## CGIAR Research Program 2020 Reviews: Livestock – List of Annexes

Person	Role	Institution/Affiliation	Gender	Date	Selection method
32. Alan Duncan	Cluster Leader/Project Leader/ Principal Investigator	ILRI	M	3/9/20	For role in Flagship
33. Valheria Castiblanco	Cluster Leader/Project Leader	CIAT	F	3/9/20	For role in Flagship
34. Jane Wamatu	Cluster Partner Focal Point, Ethiopia	ICARDA	F	3/9/20	For role in Flagship
35. Mounir Louhaichi	Project Leader/ Principal Investigator	ILRI	M	1/9/20	For role in Flagship
36. An Notenbaert	Cluster Leader/Project Leader/ Principal Investigator	CIAT	F	2/9/20	For role in Flagship
37. Lutz Merbold	Cluster Leader/Project Leader	ILRI	M	27/8/20	For role in Flagship
38. Lance Robinson	Cluster Leader/Project Leader	ILRI	M	2/9/20	For role in Flagship
39. Renee Bullock	Project Leader	ILRI	F	14/9/20	For role in Flagship
40. Fiona Flintin	Principal Investigator	ILRI	F	31/8/20	For role in Flagship
41. Karl Rich	Cluster Leader/Project Leader/ Principal Investigator	ILRI	M	3/9/20	For role in Flagship
42. Alessandra Galiè	Principal Investigator	ILRI	F	3/9/20	For role in Flagship
43. Helena Posthumous	Researcher	KIT (Royal Tropical Institute, Netherlands)	F	28/8/20	For role in Country ToC development
44. George Ochuodho	Community worker	Heifer International, Kenya	M	19/9/20	For role in OICR
45. William Odidi	Extension Leader	County Government of Migori, Kenya	M	14/9/20	
46. Tigistu Gebremeskel	Director	Rural Land Administration & Use Directorate, Ethiopia.	M	5/10/20	For role in OICR
47. Alexander Strunck	Advisor	Participatory Planning Strengthening Drought Resilience, Ethiopia	M	1/10/20	
48. Mike Taylor	Director	ILC Secretariat, IFAD, Italy	M	28/9/20	
49. Akloweg Niagatu		Oxfam, Ethiopia	M	3/10/20	
50. Donald Nkrumah	Senior Program Officer	Bill and Melinda Gates Foundation	M	21/9/20	For role as donor to FP 1-3



Person	Role	Institution/Affiliation	Gender	Date	Selection method
51. Tobias Feldt	Observer status on PMC since Dec 2019, relatively new	GiZ	M	01/09/20	For role in CRP
52. Silvia Alvarez Alonso	Chair of Ethics Committee	ILRI	F	7/9/20	For Quality of Science role
53. Tesfaye Getachew	Research Management Coordinator	ILRI	M	14/9/20	
54. Anna Lacaster	Junior Scientist	ILRI	F	14/9/20	
55. Chinyere Ekine-Dzivenu	Junior Researcher	ILRI	M	14/9/20	
56. Solomon Mwendia	Scientist	ABC	M	14/9/20	For junior researcher role
57. Juan Cardoso	Postdoc Fellow	ABC	M	14/9/20	
58. Renee Bullock	Scientist	ILRI	F	14/9/20	
59. Mary Atieno	Postdoc Fellow	ABC	F	14/9/20	
60. Immaculate Omondi	Scientist	ILRI	F	14/9/20	
61. Kanar Dizyee	Scientist	ILRI	M		

F=25/ M= 35

## Annex 3: CRP Review Specific Methodology

### Approach and methods

The review team used a mixed methods approach drawing on available quantitative and qualitative data drawn from internal (CRP) and external sources (partners, next users, etc.). In the case of the former, the various data sources listed above were consulted, whereas in the case of the latter, a list of potential interviewees was discussed and agreed with CRP management. Following discussions between the CRP management team and the CRP Independent Steering Committee (ISC) to discuss the review and expectations about the role of the ISC as part of the review process, it was decided to organize a group interview (FGD) rather than individual interviews with ISC members.

Given the extensive body of work carried out by the CRP over the three-year period, it was not feasible to do an in-depth analysis of all CRP outcome/impact areas. The review team will therefore select two Outcome and Impact Case Reports (OICRs) in consultation with CRP leadership. These OICRs are short reports describing the contribution of a given piece of CGIAR research to development outcomes and impact and are generally developed for Innovations at Level 4 and Policies and innovations at Levels 2 and 3. In-depth analysis of these OICRs allowed for an assessment of the contribution of the CRP's research to successfully address a given development objective, mapping the reported outcome or impact against the ToC at the Program and Flagship levels. The OICR "deep dive" was done through analysis of documents from the CRP and from next users of the research, such as national government policies, and interviews with key informants (both within the CRP and equally importantly the next users of the research, e.g., external stakeholders in NARS and national policy-makers). According to the 2020 CRP Review Guidelines, suggested criteria for OICR sampling included but were not limited to:

- High-impact cases to demonstrate effectiveness
- Different themes within a CRP
- If a new OICR, from 2019 to really grasp results from the three three-year period at stake in these reviews but preferably with maturity level 3
- Access to key informants in a timely manner must be foreseen
- At least one where partnerships are significantly relevant
- Not being featured in the CRP annual report
- Relationship with CGIAR cross-cutting issues can be evidenced.

With respect to **the assessment of the quality of science** the review team considered two key criteria:

- Scientific credibility: robustness of research findings, soundness of evidence, accuracy of data, appropriateness of methods and clarity of presentation, and good practice (e.g., peer review).
- Legitimacy: fairness and ethics of research process, inclusiveness towards intended users, mutuality of commitment, management of conflicts of interest, partner engagement in design, recognition of partners and responsible use of public funds.

This was done by considering research inputs (staff, teams, infrastructure, resources), processes (management, governance, design, incentivisation of quality, equity, partnership), and outputs (peer-reviewed papers, policy notes, extension materials, tools, software, physical products etc).

Bibliometric analysis was conducted by the CAS Secretariat according to parameters set for all the current Independent Reviews and was provided to the review team to enable assessment of the Quality of Science. This included, among others, citations of individual articles, impact factors of journals, h-indices of researchers, as well as Altmetric analysis of downloads etc. A sample of outputs was be selected purposively for individual assessment as per the CRP 2020 Review Guidelines i.e., from a sample of research outputs mentioned specifically in the Livestock CRP Annual Reports. We proposed a minimum of 3 research outputs per FP were assessed according to the following criteria: methodological rigor, novelty/originality, International Public Good (IPG) value, quality of publication (Impact Factor), co-authorship, and overall quality. A sample of technical publication (working papers, reports, book chapters) was assessed for quality, relevance to next stage user, and potential for capacity development. This sample was ad hoc and a minimum of 3 outputs per FP. A sample of communication products (blogs, newsletters, manuals, digital outputs) was assessed for quality, relevance to next stage user, and potential for capacity development. A sample of physical outputs (digital innovations, varieties, methods, tools, services) was identified and assessed on the basis of their potential and actual applicability and significance.

**Effectiveness** was assessed in terms of:

- The extent to which planned outputs and outcomes had been achieved by 2019 by carrying out a quantitative and qualitative assessment of the CRP (and FPs) performance against planned milestones in relation to the level of risk assigned, annually and for the three years under review.
- The extent to which achieved outcomes contributed to broader goals and cross-cutting issues (Capacity Development, Climate Change, Gender, Youth and Partnerships) by means of a 'deep dive' on a sample of OICRs, taking account of the predictability of funding and legacy time frame for the CRP
- The extent to which the program's management and governance has supported the CRP's effectiveness and
- The extent to which the CRP and its Flagship Programs have made progress along their Theories of Change, including an assessment of the quality of those ToCs.

#### Interviews

The team conducted a sample of 40+ interviews with staff, partners, governance actors, next users and other stakeholders. During the initial meeting with the CRP Programme Management Unit, requests were made for additional interviews with staff and key stakeholders including National Agricultural Research Systems (NARS), local key research collaborators (e.g., non-government originations), and researchers from a range of backgrounds and career stages. This was in addition to CRP research leaders, and individual researchers and staff as well as donors. We also sought interviews with a limited number of next stage users such as the private sector, Non-Government Organisations and other relevant nonstate actors.

## Annex 4: Livestock CRP Detailed Budget and Expenditure 2017-19 (US\$)

Item	2017					
	Planned			Actual		
	W1/W2	W3/bilateral	Total	W1/W2	W3/bilateral	Total
FP1	4,543,000	8,541,000	13,084,000	2,633,000	6,066,000	8,699,000
FP2	3,978,000	5,710,000	9,688,000	2,884,000	3,430,000	6,314,000
FP3	-	7,027,000	7,027,000	-	3,870,000	3,870,000
FP4	3,426,000	7,663,000	11,089,000	2,265,000	9,895,000	12,160,000
FP5	-	12,618,000	12,618,000	69,000	12,510,000	12,579,000
Strategic competitive grant	2,042,000	-	2,042,000	650,000	-	650,000
CRP management	2,660,000	59,000	2,719,000	3,245,000	2,000	3,247,000
CRP Total	16,649,000	41,618,000	58,267,000	11,746,000	35,773,000	47,519,000

Item	2018					
	Planned			Actual		
	W1/W2	W3/bilateral	Total	W1/W2	W3/bilateral	Total
FP1	2,670,079	7,925,915	10,595,994	3,346,000	6,516,000	9,862,000
FP2	2,679,999	3,663,067	6,343,066	3,342,000	2,880,000	6,222,000
FP3	1,844,808	4,715,820	6,560,628	1,980,000	2,921,000	4,901,000
FP4	1,375,559	6,293,350	7,668,909	1,629,000	9,423,000	11,052,000
FP5	1,506,522	11,295,691	12,802,213	1,600,000	12,785,000	14,385,000
Strategic competitive grant	1,355,000	-	1,355,000	649,000	-	649,000
CRP management	2,317,919	-	2,317,919	1,450,000	-	1,450,000
CRP Total	13,749,886	33,893,843	47,643,729	13,996,000	34,525,000	48,521,000

Item	2019					
	Planned			Actual		
	W1/W2	W3/bilateral	Total	W1/W2	W3/bilateral	Total
FP1	3,375,702	4,179,034	7,554,736	3,596,018	7,273,363	10,869,381
FP2	3,539,789	1,769,999	5,309,788	3,105,872	2,547,115	5,652,987
FP3	2,647,500	4,621,761	7,269,261	2,633,715	3,801,968	6,435,683
FP4	1,830,472	3,160,746	4,991,218	2,076,851	7,278,110	9,354,961
FP5	2,018,486	8,562,918	10,581,404	1,918,918	8,590,991	10,509,909
Strategic competitive grant	1,200,000	-	1,200,000	108,453	-	108,453
CRP management	2,588,051	-	2,588,051	2,588,051	-	2,588,051
CRP Total	17,200,000	22,294,458	39,494,458	16,027,878	29,491,547	45,519,425

Item	Total								
	Planned			Actual			Difference		
	W1/W2	W3/bilateral	Total	W1/W2	W3/bilateral	Total	W1/W2	W3/bilateral	Total
FP1	10,588,781	20,645,949	31,234,730	9,575,018	19,855,363	29,430,381	1,013,763	790,586	1,804,349
FP2	10,197,788	11,143,066	21,340,854	9,331,872	8,857,115	18,188,987	865,916	2,285,951	3,151,867
FP3	4,492,308	16,364,581	20,856,889	4,613,715	10,592,968	15,206,683	-121,407	5,771,613	5,650,206
FP4	6,632,031	17,117,096	23,749,127	5,970,851	26,596,110	32,566,961	661,180	-9,479,014	-8,817,834
FP5	3,525,008	32,476,609	36,001,617	3,587,918	33,885,991	37,473,909	-62,910	-1,409,382	-1,472,292
Strategic competitive grant	4,597,000	-	4,597,000	1,407,453	-	1,407,453	3,189,547	0	3,189,547
CRP management	7,565,970	59,000	7,624,970	7,283,051	2,000	7,285,051	282,919	57,000	339,919
CRP Total	47,598,886	97,806,301	145,405,187	41,769,878	99,789,547	141,559,425	5,829,008	-1,983,246	3,845,762

## Annex 5: Livestock CRP FTE Summary - Details

2020	FP1				FP2				FP3				FP4				FP5				CRP TOTAL
	M		F		M		F		M		F		M		F		M		F		
	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	
Staff category	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	
Scientist	4.03	7.22	1.70	1.88	4.63	2.92	2.93	1.48	6.83	6.53	2.04	0.91	2.77	0.84	2.66	0.20	2.55	17.48	2.38	5.54	77.52
Postdoc/junior scientist	3.20	11.06	1.20	4.00	5.22	5.50	1.50	5.50	10.09	11.37	3.11	2.62	4.63	2.02	3.85	0.72	1.54	13.23	2.50	1.63	94.49
Support staff	2.45	1.40	4.28	1.55	-	-	0.50	-	1.57	1.56	1.69	0.83	0.30	-	1.45	-	0.30	1.86	0.30	1.08	21.12
<b>TOTAL</b>	<b>9.68</b>	<b>19.68</b>	<b>7.18</b>	<b>7.43</b>	<b>9.85</b>	<b>8.42</b>	<b>4.93</b>	<b>6.98</b>	<b>18.49</b>	<b>19.46</b>	<b>6.84</b>	<b>4.36</b>	<b>7.70</b>	<b>2.86</b>	<b>7.96</b>	<b>0.92</b>	<b>4.39</b>	<b>32.57</b>	<b>5.18</b>	<b>8.25</b>	
<b>GRAND TOTAL</b>			<b>43.97</b>				<b>30.18</b>				<b>49.15</b>				<b>19.44</b>				<b>50.39</b>		<b>193.13</b>

2019	FP1				FP2				FP3				FP4				FP5				CRP TOTAL
	M		F		M		F		M		F		M		F		M		F		
	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	
Staff category	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	
Scientist	5.66	5.22	1.35	0.93	4.24	1.71	3.10	1.27	7.38	5.89	1.49	0.50	2.93	3.47	2.30	1.81	2.54	9.48	3.42	2.31	67.00
Postdoc/junior scientist	4.67	4.10	2.50	1.00	4.57	3.23	4.48	0.67	10.29	5.70	1.51	1.23	1.82	8.64	0.50	2.00	1.67	9.52	1.47	1.37	70.94
Support staff	3.40	0.60	4.51	1.06	-	-	0.10	-	1.82	0.34	1.20	0.55	0.15	0.44	1.22	2.06	0.20	0.25	-	0.10	18.00
<b>TOTAL</b>	<b>13.73</b>	<b>9.92</b>	<b>8.36</b>	<b>2.99</b>	<b>8.81</b>	<b>4.94</b>	<b>7.68</b>	<b>1.94</b>	<b>19.49</b>	<b>11.93</b>	<b>4.20</b>	<b>2.28</b>	<b>4.90</b>	<b>12.55</b>	<b>4.02</b>	<b>5.87</b>	<b>4.41</b>	<b>19.25</b>	<b>4.89</b>	<b>3.78</b>	
<b>GRAND TOTAL</b>			<b>35.00</b>				<b>23.37</b>				<b>37.90</b>				<b>27.34</b>				<b>32.33</b>		<b>155.94</b>

2018	FP1				FP2				FP3				FP4				FP5				CRP TOTAL
	M		F		M		F		M		F		M		F		M		F		
	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	
Staff category	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	
Scientist	4.33	4.03	1.31	1.90	2.77	1.64	3.20	2.08	2.30	4.77	-	0.15	2.08	5.55	0.81	2.96	1.18	14.71	2.57	3.89	62.23
Postdoc/junior scientist	8.11	7.63	5.73	4.38	5.47	3.43	4.09	1.23	11.20	7.73	2.74	2.81	2.24	0.94	0.78	0.44	1.90	11.38	0.34	2.40	84.97
Support staff	0.50	0.63	-	-	-	0.16	0.28	0.47	-	-	-	-	0.05	-	0.07	-	1.08	3.38	1.69	0.85	9.16
<b>TOTAL</b>	<b>12.94</b>	<b>12.29</b>	<b>7.04</b>	<b>6.28</b>	<b>8.24</b>	<b>5.23</b>	<b>7.57</b>	<b>3.78</b>	<b>13.50</b>	<b>12.50</b>	<b>2.74</b>	<b>2.96</b>	<b>4.37</b>	<b>6.49</b>	<b>1.66</b>	<b>3.40</b>	<b>4.16</b>	<b>29.47</b>	<b>4.60</b>	<b>7.14</b>	
<b>GRAND TOTAL</b>			<b>38.55</b>				<b>24.82</b>				<b>31.70</b>				<b>15.92</b>				<b>45.37</b>		<b>156.36</b>

2017	FP1				FP2				FP3				FP4				FP5				CRP TOTAL
	M		F		M		F		M		F		M		F		M		F		
	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	
Staff category	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	W1/2	W3/B	
Scientist	4.65	5.81	1.56	2.17	3.84	2.81	3.19	2.44	-	4.95	-	0.05	3.58	7.05	1.24	2.26	-	9.18	-	4.48	59.26
Postdoc/junior scientist	5.21	7.84	4.83	3.01	7.19	4.55	5.77	1.60	-	7.56	-	2.18	3.38	3.17	3.27	0.73	-	13.75	-	2.99	77.03
Support staff	0.71	0.15	1.50	2.13	-	-	0.10	-	-	-	-	0.35	-	-	1.11	-	-	-	-	1.05	7.10
<b>TOTAL</b>	<b>10.57</b>	<b>13.80</b>	<b>7.89</b>	<b>7.31</b>	<b>11.03</b>	<b>7.36</b>	<b>9.06</b>	<b>4.04</b>	<b>-</b>	<b>12.51</b>	<b>-</b>	<b>2.58</b>	<b>6.96</b>	<b>10.22</b>	<b>5.62</b>	<b>2.99</b>	<b>-</b>	<b>22.93</b>	<b>-</b>	<b>8.52</b>	
<b>GRAND TOTAL</b>			<b>39.57</b>				<b>31.49</b>				<b>15.09</b>				<b>25.79</b>				<b>31.45</b>		<b>143.39</b>

Source: Data provided by Livestock CRP

## Annex 6: CRP Junior Researchers Focus Group Report

The purpose of this focus group was to gain the perspectives of a cadre of junior researchers working for the Livestock CRP on quality of science, capacity building, and associated career development. As well as considering researchers at an early stage in their career, the focus group also considered how issues such as gender may impact on career development prospects.

**Date of focus group:** 15<sup>th</sup> September 2020

**Respondent selection:** The CRP Leadership was asked to suggest a sample of junior researchers who work for the CRP with a range of flagships in different geographical context, and who represent different genders, and a cross-section of demographic and scientific backgrounds.

The sample selected is shown in the table below, with interviewed individuals highlighted in yellow.

	AFRICA		SOUTH EAST ASIA		LATIN AMERICA		SOUTH ASIA		OTHER	
	Life Sciences	Social Sciences	Life Sciences	Social Sciences	Life Sciences	Social Sciences	Life Sciences	Social Sciences	Life Sciences	Social Sciences
FP Genetics	Chinyere Ekine-Dzivenu (F) Christian Tiambo* (M) Tefaye Getachew Mengistu* (M)									
FP Health	Hussein Abkallo* (M) Angela Makumi* (F) Sonal Henson (F)								Hanneke Hemmink* (Netherlands/Africa) (F) Anna Lacasta (Spain/Africa) (F) Elin Gertzell (Sweden/Africa) (F) Elisabeth Genfors (Sweden/Global) (F)	
FP Feeds & Forages	Solomon Mwendia (M) Jane Wamatu Amole Tunde Mary Otieno (Kenya/SE Asia) (F)				Juan Andres Cardoso (M) Valheria Castiblanco (F)	Stefan Burkart (M)	V Padmakumar (M)		Sawsan Hassan* (North Africa/Near East) (M) Miguel Sanchez Garcia (Spain/Global) (M)	
FP Environment	Sylvia Nyawira (F) Dina Najjar (F) Aymen Frija (M) Solomon Mwendia (M)							Rupsha Banerjee (India/Africa) (F)	Sabine Douchamps (Belgium/SE Asia) (F) Sonja Leitner (Germany/Africa) (F) Jason Sircely (USA/Africa) (M)	Renee Bullock (USA/Africa) (F) Jim Hammond (UK/Global) (M)
FP LLAFS		Immaculate Omondi (F)								Kanar Dizyee (Iraq/Global) (M)

Nb: Post-docs are noted by "\*".

The CRP Leadership also offered to connect a group of PhD students with the focus group, but the Review Team decided that it would not be appropriate to mix conversations with PhD students and junior researchers.

A total of eight CRP junior staff joined the Focus Group Discussion. This is 27% of the total of Junior Researchers associated with the CRP. We believe this is a strongly representative sample. The focus group was divided 50:50 between male and female respondents. The average number of years that participants worked for the CGIAR is 2.9 and the average length of time since completing a PhD was 5.

### Summary details of respondents

Name	Gender	Normal working location/base (country)	Current substantive grade/job title	Years since joining	Years since PhD completion	Associated CG Centre(s)	Associated CRP(s)
Anna Lacaster	F	Kenya	Junior Scientist	7	7	ILRI	Livestock
Solomon Mwendia	M	Kenya	Scientist	5	5	Alliance Bioversity & CIAT	Livestock
Immaculate Omondi	F	Ethiopia	Scientist	0 (Aug 20)	7	ILRI	CGIAR Research Programme

Name	Gender	Normal working location/base (country)	Current substantive grade/job title	Years since joining	Years since PhD completion	Associated CG Centre(s)	Associated CRP(s)
Mary Atieno	F	Vietnam	Postdoc Fellow	0.6 (7 years with CIAT)	2	Alliance Bioversity & CIAT	Livestock CRP
Renee Bullock	F	Kenya	Scientist	2 (Aug 18)	5	ILRI	Livestock CRP
Juan Cardoso	M	Colombia	Postdoc Fellow	5	6	Alliance Bioversity & CIAT	Livestock CRP
Tesfaye Gatachew	M	Ethiopia	Research Management Coordinator	3	5	ICARDA	Livestock CRP
Kanar Dizyee	M	Senegal	Scientist	0.5	3.5	ILRI	Livestock CRP
8	F = 4 M = 8			Av = 2.9	5.06		

**Moderators:** Professor Ben Bennett and Karen McHugh.

**Data collection method:** Data was collected by guide questions and discussion using a Teams meeting with moderation. Respondents were sent a follow-up email to collect data advised by the CAS Team (see Table). The Focus Group was recorded with the permission of all using Teams.

**Topics:** Respondents were pre-informed of the following broad questions to be discussed:

- How was your recruitment process – did it go smoothly?
- Do you feel that you were given a proper ‘induction’ when you started and what could have been improved?
- Are you clear about your role and your relationships with other actors in the system?
- Do you have adequate scientific support from day to day to help you achieve your tasks?
- Are you receiving support to help you manage your career and fulfil your potential?
- Are the mechanisms for developing/furthering your career as a scientist/social scientist clear to you?
- Is the role of ‘junior researcher’ given sufficient recognition/voice?
- What are your views on the balance of difference within Livestock CRP, for example representation of gender and cultures?
- What does ‘high-quality research’ mean to you?

### Discussion/findings

The narrative has been divided into themes suggested by the FGD.

Defining ‘Junior Researcher’. Most agreed that the definition that is most broadly accepted is that of five years from completion of a PhD. This seems to be the norm for CG staff moving from a ‘post-doc’ position to a ‘junior researcher’ position. The group said that this rule is strictly applied at ILRI and that for promotion, it was expected that they achieve three papers a year. This initiated a debate about paper quality which is expanded below. The relative low cost of hiring post-docs compared with junior researchers was mentioned and the fact that this tends to cause over-qualified candidates to apply for these posts as an entry point to the system.

Recruitment, on-boarding and induction. All agreed that the interview process was clear but when pressed some considered the interview boards to not have been sufficiently gender balanced.

Terms of reference, duties, and line management was clear for all from the start. All (from various CGIAR Centres) spoke of the impressive range of skills courses that were available to them mentioning: negotiating skills, stats courses, performance appraisal, grant writing, writing academic papers. All said that induction was ad hoc and very much depended upon the individual supervisor as to what was given.



The importance of quality science outputs, grant writing (e.g., money winning) and communications (e.g., visibility) was made clear to all during their induction period.

Capacity development - mentorship and supervision. All agreed that the quality of support for their personal development is highly specific to the individual supervisor with some speaking of strong guidance and excellent support for career management while others considered themselves to be “left to themselves”. All agreed that a more formal career mentorship system would have merits in terms of separating line management from career guidance. When asked if the system provides specific mentorship for less represented staff (e.g., women or academics from low- and middle- income countries) one person mentioned the AWARD scheme for female staff, but none of the others were aware of this. More than one respondent complained that the supervisor feedback system is not sufficiently anonymous.

Career management. All respondents said that they had been fully engaged in project proposal preparations for bilateral funding although some talked about “always being asked to do the literature review”.

Research quality vs impact. The group spent some time discussing the balance between research quality and applied field research with impact. Most considered that the priorities of the funders came highest in the list of priorities. All understood the importance of high-quality journal papers and that weak journals should be avoided. The challenge of getting some work into good journals was considered: applied research in social science is sometimes hard to place in high impact journals but is still important. A quality assessment of junior research output that is only based on Altmetrics might under-value research outputs that are of high impact potential.

Academic misconduct. All in the group seemed to understand the concept of academic misconduct and there were no examples given of an occurrence of this. However, none could agree how they might formerly deal with misconduct should it arise other than to go to the next higher person in the line management. The Group was uncertain how a supervisor might be changed as none had this experience.

Cross-cutting issues. On the issue of difference (e.g., gender, North-South global background) some quite strong views were expressed on the challenges faced by women making progress to higher grades within the system, particularly if time out has been spent to have a family as this is “not taken into account when competing with others for promotion”.

Some talked about the experience of being local-hire vs international hired staff with some expressing the stigma that comes with this (e.g., a local-hire is considered of lower quality).

When asked about the international balance within the CRP there were several comments about the balance of European/USA/Australian educated men to women and people educated elsewhere. At the level of country teams the balance good working relationship between local and international staff and the balance (e.g., many more local and international) were highlighted as being a good feature.

### **Conclusions/Recommendations**

On the whole, this group of early career researchers seem to be well recruited and know their roles in the CRP. Where high-quality supervision has occurred, the junior researchers seem to clearly understand what is needed for successful progression.

There is a difference in the experience between early career researchers and this may lead to inequality later in the careers of individuals. The group highlighted differences between men and women, between those from the global South and the global North, and those educated at “Western” style universities.

The concept of ‘junior researcher’ is not very clear in the system since this is also the title of the permanent position one can be promoted to after 5 years of ‘post-doc’. This group could benefit from a clearer definition and concept of CGIAR early career researcher, especially if this gave them a sense of being a cadre with shared experiences that provided mutual support.

The absence of an academic misconduct policy is a potential threat to the credibility of the CRP’s research outputs and some thought should go into addressing this shortfall. While it has not been needed by this group, its absence means a) early career researchers do not know how to define misconduct and b) there is no process for addressing it if it occurs. It is better to have a policy/process and not use it than to not have a policy/process at all.

## Annex 7: OICR Deep Dives

### Annex 7.1: OICR #2767 “Improved cattle feeding practices in nine Kenyan counties, resulting in increased milk productivity for close to 80,000 farmers, with likely improved income and livelihoods”

<b>OICR #2767 “Improved cattle feeding practices in nine Kenyan counties, resulting in increased milk productivity for close to 80,000 farmers, with likely improved income and livelihoods”</b>		
Phases of report (new/updated same level/updated new level of maturity):		
If for Innovations at Level 4 or Policies at Levels 2 and 3		
Year reported: 2018	Maturity level: 2	# Years of programmatic work: 6
Geographic location(s): Kenya		
Populations covered, estimated size and socio-demographic categories (e.g., subsistence farmers, women, adolescents, etc.)		
Claims “near” 80,000 beneficiaries over 18,064 hectares in 9 counties. (data from USAID project survey)		
<b>Key contributors to the outcome</b>		
CGIAR (FPs, other CRPs/Platforms, and FPs, centers)		
F3: Livestock Feeds and Forages F5: Livestock Livelihoods and Agri-Food Systems		
ILRI		
No association with other CRPs.		
External partners		
Significant bilateral funding from USAID. Support from Heifer International, Kenya Agricultural and Livestock Research Organisation (KALRO).		
<b>Links to the CGIAR Strategic Results Framework: (IDOs and sub-IDOs)</b>		
<b>[CRP] contributions to the outcome (list any of the following)</b>		
Innovations		
These are not defined in the OICR. However, they could consist of application of the Feed Assessment Tool (FEAST) to dairy fodder systems based on the production of high yielding Brachiaria grass varieties developed at ILRI.		
The associated project (P750) is much larger in scope and has other innovations associated with it including ‘a menu of organizational and business models for improved livestock value chain performance’ under activity 5.4.4 and other related technologies such as solar milk cooling, hides and skins in Somaliland etc.		
Innovations from this OICR where brought through from earlier (pre-CRP) activities such as development of FEAST and breeding of new varieties of Brachiara grasses.		
Policies		
Raising awareness of the business potential of fodder production for small dairying seems to have been the biggest policy impact. Prior to this work and its associated USAID development project the benefits and potential of fodder production were not understood or specifically promoted by the decentralized extension system in Kenya.		

<p>The Kenyan government has an associated micro-dairy equipment grant program which has promoted uptake and scaling. This activity/policy has had some success, but this is more likely to be a result of the bilateral funding and associated project than being driven by CRP funded research.</p> <p>Kenya already has a strong domestic dairy sector compared with many countries in Africa, so policy in this area is already well advanced.</p>
<p>Key CRP publications supporting the OICR</p> <p>Maina, K, W., Ritho, C, N., Lukuyu, B, A., and, Rao., E, J, O. (2020)., "Socio-economic determinants and impact of adopting climate-smart Brachiaria grass among dairy farmers in Eastern and Western regions of Kenya", Heliyon, Volume 6:6.</p> <p>Rudiger.U., (2017). Synthesis report on national forage seed workshop, <a href="https://hdl.handle.net/20.500.11766/8254">https://hdl.handle.net/20.500.11766/8254</a>, FP3, P653</p> <p>Feed the future (undated), "How to grow Brachiaria Grass".</p> <p>Food the Future (2016)., "Extension Brief: Brachiaria grass: New forage option for sub-Saharan Africa".</p> <p>Maina, K, W., Ritho, C, N., Lukuyu, B, A., and, Rao., E, J, O. (2019), "Do farmers benefit financially from adopting improved forages: Evidence from adoption of Brachiaria grass among smallholder dairy in Kenya", Invited paper presented at the 6th African Conference of Agricultural Economists, Abuja, Nigeria, 23-26 September 2019.</p> <p>Opot, C., Lukuyu, B., and Kinyua, C. (2016)., Assessment of agricultural production system need for intervention in livestock feed production in Ugunja Sub County, Siaya, Kenya. FEAST Report. (Nb: a sample from many similar reports).</p> <p>Dhraief MZ, Zlaoui M, Jebali O and Ibidhi R., (2018), "Business plan and feasibility analysis of an on-farm solar-powered milk cooling system", National Institute for Agricultural Research of Tunisia. [Nb: not an output of this OICR, but of the related project]</p> <p>FEAST website. <a href="https://www.ilri.org/feast">https://www.ilri.org/feast</a> accessed 23rd September 2019.</p>
<p><b>OICR relationship with CGIAR cross-cutting issues (YES/NO)</b></p>
<p>Capacity development YES</p> <p>Significant. Aimed to enhance farmers' capacity to managed fodder and improve dairy enterprises and this has clearly been achieved as new farmers are spontaneously adopting the approach. Evidence – interviews with extension agents and local NGOs by reviewer.</p>
<p>Climate change YES</p> <p>Significant. Replacement of existing fodder crop with a more efficient alternative also seems to have been successful, but link to supporting scientific evidence of this not available to the reviewer.</p>
<p>Gender. NO</p> <p>Gender was not targeted but interviews by reviewer show that there is significant potential for gender impacts from adoption of this technology.</p>
<p>Youth. NO</p> <p>Youth was not targeted but interviews by reviewer show that there is significant potential for gender impacts from adoption of this technology.</p>
<p><b>Organization responsible for OICR (CGIAR/not CGIAR),</b></p>
<p><b>External partners related</b> N/a</p>
<p><b>Partnerships</b></p> <p>Heifer International. Partner interviewed and effusive about the success of the project. Expectations clearly met and exceeded with evidence of self-sustaining fodder businesses in the target areas.</p> <p>Kenyan Local Government Agricultural staff. Partner interviewed and strongly approves of the support and innovations supplied.</p> <p>USAID. No contact offered for interview by the CRP</p>
<p><b>Brief reviewer's description of the outcome (based on OICR report, documents cited, original data collected/interviews and other references)</b></p> <p>This project has resulted in significant increases in milk production (&gt;50% per animal: interviews and reports) for about 80,000 small scale farmers (interviews, OICR evidence) in 8 counties in Kenya. New forage production and storage businesses have started using the Brachiaria grass approach to supply emerging small-scale dairy farmers with fodder. This outcome was achieved with support from USAID Feed the Future (interviews) but builds on longer-term CRP research including improved genetics, improved animal health practices, release of new fodder varieties, and application of the FEAST feed availability analysis tool for use by local government.</p>

**Analysis**

This OICR links to Sub-IDOs 'increased livelihood opportunities' and 'closed yield gaps through improved agronomic and animal husbandry practices. Within the FP ToC, the OICR maps to Cluster 1 (food constraint diagnosis – evidence of application of FEAST assessment tool), Cluster 2 (new feed and forage options – evidence of release of new *Brachiaria* variety in Kenya and evidence of farmer uptake and development of seed supply through interviews), Cluster 3 (using existing resources better – evidence of feed storage to extend milk production during lean months through beneficiary interviews), and Cluster 4 (delivery and uptake of feed and forage technologies – evidence of dairy business models in Tunisia and private sector engagement in seed business development in Columbia). Evidence of impact in Kenya (IDOs and SLOs) measured through USAID baseline (not available to reviewer) and presentation of economic assessment (Maina et al, 2020).

Local engagement in development of scientific outputs evidenced through local authorship of FEAST reports and extension material demonstrates legitimacy. Single academic output from this OICR of good quality with high potential for next stage use and good evidence of broad-based engagement with its production. Scientific quality and type of output appropriate and appreciated by key informants interviewed.

Interviews suggest two aspects of this OICR that should be born in mind when assessing effectiveness. Firstly, much of the investment and innovation occurred prior to the CRP period and was applied to this set of activities. Secondly, the CRP contribution to this outcome (financially and physically) was rather small, with most of the investment coming from the associated USAID Feed the Future project. Key informants revealed that the main contribution during this CRP had been a publication (Mania et al, 2020). This paper validates the likely effectiveness of the set of activities in this particular location.

All those interviewed were asked about sustainability of the method/approach and the innovations. In Kenya, with devolved agricultural research there is some possibility of sustained impact through this route, but without USAID support this is likely to wane with time. A significant factor in the success was the driving of milk demand by investments in dairy cooperatives. The sustainability of this approach is not yet known. A more private sector engaged approach might have been greater potential for sustained impacts?

**Conclusions**

This OICR is a good example of CRP research (albeit from previous CRPs) feeding into application and development outcomes at a good scale with potential for significant upscaling. The OICR really undersells some of the better aspects of the approach and the results. This project brings together a wide range of scientific outputs into a development activity that has potential for significant impact on the ground. Another counterfactual question that might be interesting could be "would Kenya have achieved this without CRP support?" or even better "what does Kenya need to make this type of impact from research itself?"

This set of activities clearly impact women and youth. The absence of this element in the OICR information implies an assumption that these cross-cutting themes are not relevant. The same applied to environmental impact. Gender impacts were highlighted by interviews as a key effect of the intervention and of issues that arise from forage production and use in future (e.g., forage chopping is commonly done by youth, watering of seed gardens is often women's work, sale of milk to cooperatives is dominated by men who receive payments). Activities to further explore these aspects, as well as potential environmental benefits of the approach, would have been welcome.

This OICR addresses a number of the fundamental questions that could be applied to the CRP and CGIAR. What is the relative importance of high-quality fundamental research vs applied research in terms of impact at scale? What role should CRPs and Centres play in larger developmental initiative such as this USAID project? How far are CRPs and the CGIAR 'crowding out' domestic research initiative? What is the right balance of state, non-state, and private sector engagement in achieving impact at scale?

*Capacity building.* This OICR also highlights some of the issues related to capacity building. Evidence of large numbers of training and capacity building events are available in Marlo related to this OICR and its allied projects. This number is effectively training x participants. Unfortunately, this does not equal evidence of impact but rather implies impact. The challenge of ascribing the CRP's role and benefits from capacity building is highlighted by this finding/evidence.

**Lessons**

This OICR illustrates well the application and potential for impact at scale of the CRPs work. One lesson might be the need to provide sufficient flexibility in the Impact Case Reports to allow for longer research gestation – for 10 years for example. They also lack a narrative voice from the beneficiary to evidence the impact. Links to credible partners or beneficiaries would help.

## Annex 7.2: OICR #3164 “Adoption of Woreda Participatory Land Use Planning (WPLUP) in pastoral areas by the government of Ethiopia”

<b>OICR 3164 “Adoption of Woreda Participatory Land Use Planning (WPLUP) in pastoral areas by the government of Ethiopia”</b>		
Phase of report (new/updated same level/updated new level of maturity): NEW		
Innovation Level 3		
Policies at Level 1 (though should be 2)		
Year reported: 2019	Maturity level: New	# Years of programmatic work: 7
Geographic location(s): Ethiopia (Chifra Woreda in Afar district)		
Populations covered, estimated size and socio-demographic categories (e.g., subsistence farmers, women, adolescents, etc.) N/A		
<b>Key contributors to the outcome</b>		
CGIAR: PIM - Policies, Institutions, and Markets and FP4		
<b>External partners:</b> Swiss Development Cooperation (SDC); The International Land Coalition (ILC); Oxfam; Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the Ethiopian Ministry of Agriculture and Natural Resources (MoANR)		
<b>Links to the CGIAR Strategic Results Framework: (IDOs and sub-IDOs):</b>		
Linked to one of the SRF targets for SLO3: 55 million hectares degraded land area restored		
Linked to 3 sub IDOs: (i). Increased resilience of agro-ecosystems and communities, especially those including smallholders (ii). Increased access to productive assets, including natural resources and (iii) More productive and equitable management of natural resources		
However, <b>not linked to other sub IDOs that seem relevant</b> e.g. land, water and forest degradation minimized and reversed (especially given the link established with SLO3) or enhanced adaptive capacity to climate change.		
<b>[CRP] contributions to the outcome (list any of the following)</b>		
<b>Innovations:</b> 279 - Woreda Participatory Land Use Planning for Pastoral Areas in Ethiopia (Level 3).		
<b>Policies:</b> 352 - Adoption by Government of Ethiopia of Woreda Participatory Land Use Planning methodology for pastoral areas developed by ILRI and partners (level 1). It is unclear why this is graded as 1 (research taken up by next user) in the OICR, given that the policy has been <b>enacted</b> by the next user (level 2) as the government included WPLUP in the Ministry of Agriculture's work plan and budget for implementing its Growth and Transformation Plan and it has been included in the government's land use planning project.		
<b>Key CRP publications supporting the OICR:</b>		
Woreda Participatory Land Use Planning (WPLUP) for Pastoral and Agropastoral Areas. Volumes 1 and 2. <a href="https://cgspace.cgiar.org/handle/10568/99262">https://cgspace.cgiar.org/handle/10568/99262</a>		
Toolkit Worksheets. Government of Ethiopia. <a href="https://cgspace.cgiar.org/handle/10568/99457">https://cgspace.cgiar.org/handle/10568/99457</a>		
Flintan (2019) Woreda participatory land use planning, Ethiopia. Presented at the launch of the Government of Ethiopia's Manual on WPLUP in Bishoftu, Ethiopia, 17 September 2019. ILRI. <a href="https://cgspace.cgiar.org/handle/10568/105545">https://cgspace.cgiar.org/handle/10568/105545</a>		
EPLUAA (2016) Chifra Woreda Participatory Land Use Plan. <b>Unpublished report.</b> <a href="https://cgspace.cgiar.org/handle/10568/100548">https://cgspace.cgiar.org/handle/10568/100548</a>		
Gebremeskel, T., F. Flintan, U. Bormann and A. Nigatu (2016) Participatory land use planning in pastoral areas of Ethiopia. Paper and presentation presented at the WB Conference on Land and Poverty, March 2016, Washington. <a href="https://cgspace.cgiar.org/handle/10568/107387">https://cgspace.cgiar.org/handle/10568/107387</a>		
7. Tefera, S., Enawgaw, C., Tekle, D., Eid, A., Olibui, O., LaTosky, S., Detona, M., Nigatu, A. and Flintan, F. (2016). Pastoralists do plan! Community-led land use planning in the pastoral areas of Ethiopia. Rome, Italy: International Land Coalition. <a href="https://cgspace.cgiar.org/handle/10568/78115">https://cgspace.cgiar.org/handle/10568/78115</a>		
<b>OICR relationship with CGIAR cross-cutting issues</b> (YES/NO)		
Capacity development YES		
Climate change NO		
Gender NO		
Youth NO		
<b>Organization responsible for OICR:</b> ILRI		



**External partners related:** The process was developed and piloted with technical assistance from ILRI, GIZ and Oxfam and with financial assistance from the Swiss Development Cooperation (SDC) and the International Land Coalition (ILC).

#### Partnerships

The important role of partnerships on different levels is highlighted by this very collaborative work. The WPLUP was originally inspired by similar experiences in Tanzania such as the Joint Village Land Use Planning (JVLUP) exercise and the Participatory Rangeland Management (PRM) initiative in Kenya (and Tanzania). During the development of the manual on local level land use planning for pastoral areas in Ethiopia, government staff were exposed to these experiences and others e.g. Niger and Mali, through “learning journeys” to see these experiences firsthand. **These initiatives provided opportunities for cross country learning which were exploited by the Livestock CRP.** Other partnerships also played a key role in the achievement of this output/outcome e.g. it was thanks to a series of government experience-sharing meetings on land issues in Ethiopia organized by the NGO OXFAM, where Fiona Flintan gave a presentation on Securing Communal Land Rights. This intervention led in turn to the request for support from the Ethiopian government for the development of the manual which took place over the next five years including its piloting in two woredas - one in Afar region (Chifra woreda) in collaboration with GIZ, and one in Somali region (Shinile woreda) where Oxfam worked. **Both of these organizations provided important entry points for the piloting exercise.** Also of note is the close collaboration between FP5 of the PIM CRP and FP4 of the Livestock CRP with the same researcher (Fiona Flintan) supporting both these FPs. And finally, it worth highlighting the strong partnership and high level of trust developed between CRP staff and key Ethiopian government staff. What is now missing are key strategic partnerships to move forward with the scaling of WPLUP to the remaining highland woredas of the country.

#### Brief reviewer’s description of the outcome (based on OICR report, documents cited, original data collected/interviews, and other references)

The basic premise underpinning the need for participatory land use planning is that the optimal use of natural resources requires the systematic identification and inventorying of those resources and proper planning and management of their uses with the genuine participation of concerned land users. In the absence of land use planning, the development of land becomes arbitrary, focusing on short-term exploitation of the land, detrimental to long term conservation and sustainable use of the resource. Good land use planning gives time and resources to decision-making processes in order to reach conclusions on the most suitable or best possible uses of land (and restrictions on inappropriate use), based on long-term objectives and more equitable benefits. Participatory land use planning can ensure more transparent and accountable allocation and distribution of land, that provides opportunities for poor and vulnerable land users, in order to make effective use of land and resources. Convinced of the need for this participatory approach and following on from the successful pilot in Chifra woreda which resulted in a woreda-level land use plan for the district, the key output/outcome i.e. the Integrated Local Level Participatory Land Use Planning Manual- was completed through consultations with technical experts organized by the Ministry of Agriculture with support from ILRI. It was finalized in 2018 and launched in 2019 at a government-led meeting followed by the **training of land experts from federal and regional government.** The government has shared this participatory land use planning process nationally and globally e.g. at a World Bank Conference on Land and Poverty and **it was included in the MoA’s workplan and budget for implementing the Growth and Transformation Plan** which is now being replaced by the government’s 10-year economic development plan under the theme ‘Ethiopia: An African Beacon of Prosperity’ (the so-called Prosperity Plan). According to those interviewed, the government remains fully committed to the PLUP approach and is keen to roll it out across the country. It also plans to include the training of more regional and woreda experts in pastoral areas at some point in the future. In 2019 ILRI and the government along with other partners, developed a proposal for this scaling-up which has not yet proved successful.

#### Analysis

The manual can be clearly tracked to the series of outputs captured by “Tools for land and resource governance frameworks for livestock systems”, which in turn has led to the development outcome of “National government agencies design (*and implement*) key policies to improve the management of the environment and livestock systems” in FP4’s Theory of Change (ToC). As regards its contribution to the 3 sub IDOs identified above: (i). Increased resilience of agro-ecosystems and communities, especially those including smallholders (ii). Increased access to productive assets, including natural resources and (iii) More productive and equitable management of natural resources, there are a series of assumptions that need to hold true for these change processes to take place, and to date this has not been the case. In the first place, the planning process has not been extended to other woredas given the lack of available resources; the regional level has not allocated any funding to woredas to

carry out this work and no external funding sources have yet been identified. Secondly, though there is overall consensus that the manual is of very high quality, there are also concerns related to the capacities of woreda level staff to effectively implement it e.g. GiZ is currently in the process of elaborating a simplified version of the manual and is also shifting the focus to kebele rather than woreda level. A related problem is the high level of staff turnover on regional and local levels as a result of the elections last year, which means that many of those trained in the use of the manual are no longer in their posts. And finally, even if the PLUPs were to be carried out in all concerned woredas, and even if all respective regional and woreda staff were adequately trained to develop those plans, at the end of the day, they are still only plans; in order to bring about the higher-level changes cited above, these plans must be of high quality and be supported by sufficient human and financial resources, and be effectively implemented, something that is not a given at this point in time. There are also a number of limitations or 'dangers' of land use planning identified by the government, such as the 'locking-in' of land uses within restrictive boundaries spatially and temporally, which reduce or prevent the flexibility of use including physical movement of people and livestock. Community planning processes can be on a different time and spatial scale than government ones – combining these in an effective way can be challenging. Local land users may find long-term planning time-consuming and perhaps feel it is unnecessary. PLUP is an intensive process and can take several weeks, if not months, to complete requiring significant and consistent financial and technical resources. The WPLUP Process in Chifra woreda took nearly a year (from April 2015 through to March 2016) and despite trying to keep the costs of the process as low as possible, the completed pilot cost between US\$50-60,000. The process needs to be made more efficient if the government is going to be able to afford to replicate it in all woredas in pastoral areas, estimated at about 100. Complications and delays can result from there being multiple groups of stakeholders who need to be included, conflicts of interest over land use or lack of readily available data required for informed decision-making. In the case of the Chifra pilot, there were challenges in the data collection including a lack of awareness creation and discussions at village level and road inaccessibility to reach some of the sites. In the case of the second pilot in Somali region (Shinile woreda), work had to be stopped midway due to severe drought. As regards the quality of science<sup>2</sup>, the assessment of the main report related to this OICR (which was not published<sup>3</sup>) is that it is a well-presented report on field practice and application in context; lessons are clearly stated and the primary issue with participatory approaches highlighted (ie., that they raise expectations). This approach is highly relevant to land use planning practitioners, however, the challenges faced to make the approach normative and useful are not really addressed. Furthermore, how this approach marries with existing capacity (and therefore uptake) is alluded to, but not explained.

### **Conclusions**

The Integrated Local Level Participatory Land Use Planning manual is of good quality and is highly appreciated by all partners interviewed for this review. There is clear commitment to rolling out this process within the Government, though whether this commitment is fully embedded within the ministry is not certain given the lack of funding allocated to woredas for its rollout. The key lesson learned from this exercise that it is not sufficient to just deliver the science; it is essential to ensure sufficient resources, both financial and human (including capacities) to allow that science to deliver on its final objective, in this case, more productive and equitable management of natural resources and reduced land degradation. Without the funding secured for the rollout of PLUP to other woreda, there is a strong risk that this manual will simply end up on the shelf. The high level and quality of partnerships established for the elaboration of the manual should have extended to partners willing and able to take it to the next stage.

<sup>2</sup> Assessment made by the subject matter expert.

<sup>3</sup> Gebremeskel, T, Flintan, F, Bormann, U and Nigatu, A., (2016), "Woreda (District) Participatory Land Use Planning in Pastoral Areas of Ethiopia: Development, Piloting and Opportunities for Scaling-up", Paper prepared for the 2016 World Bank Conference of Land and Poverty, The World Bank, Washington DC, March 14-18, 2016.

## Annex 8: Detailed Assessment of Scientific Outputs

**Table 1: In-depth assessment of a sample of Livestock CRP journal outputs**

Journal article: title, journal, year, authorship	Related FP(s)	Rigor	Originality	IPGs	Journal Impact Factor	Citations to date (Web of Sc.)	Altmetric	Access	Co-authorship	Overall quality summary
Genomic footprints of dryland stress adaptation in Egyptian fat-tail sheep and their divergence from East African and western Asia cohorts  Scientific Reports, Volume 7, 2017  Mwacharo, J.M., Kim, E., Elbeltagy, A.R. Aboul-Naga, A.M., Rischkowsky, B.A., Rothschild, M.R.	1	4	4	4	4.12 0	11		Open	Appropriate - Lead and one other author from ICARDA. Two authors from Iowa State University in USA. Two authors from NARS, Min of Ag, Egypt.  Authorships broad and appropriate. Evidence of significant contribution by all.	An important and original academic contribution which generates new and novel knowledge and opens new avenues for research into the use of indigenous sheep against existential threats like climate change. Hard to argue with the rigor required to publication in this journal. High potential for publication to lead to significant future impacts.



Journal article: title, journal, year, authorship	Related FP(s)	Rigor	Originality	IPGs	Journal Impact Factor	Citations to date (Web of Sc.)	Altmetric	Access	Co-authorship	Overall quality summary
The Women's Empowerment in Livestock Index Social Indicators Research, Volume 142, 2018 Galie, A., Teurel, N., Korir, L., Webb Girard, A., Dominquez-Salas, P., Yount, K.M.	All	4	3	4	1.45 2	7	2 3	Open	Authors from ILRI, Emory University in USA and LSHTM UK. Disappointing that collaborators in Tanzania not involved in authorship	Introduces a novel tool to assess the empowerment of women in the livestock sector. This is tested in Tanzania. An index is proposed, and comparisons drawn based on earlier women empowerment indices. The approach and its analysis is well presented and conclusions realistic – highlighting that this is part of a set of steps needed to generalize the indices. The work is challenging, important and innovative with the potential for important future impacts in-terms of guiding interventions and research agendas.
Assessment of lifetime performance of small ruminants under different feeding systems Animal Volume 15:4, 2016 (reported 2017) Amole, T.A., Zijlstra, M., Descheemaeker, K., Ayantunde, A.A.,	2 & 3	3	3	3	2.04 3	1		Only through institutional login	Appropriate. Lead author from a Nigerian University. Two each from WAN and ILRI.	Looks a lifetime performance of West African Dwarf goats through dynamic modeling with interesting results supporting future research into supplementation with farm-generated feed.  Appears to have both novelty and rigor with a relatively high international applicability.  Only partial access limits the utility of this research to other researchers.  A disappointing number of citations since publication.

Journal article: title, journal, year, authorship	Related FP(s)	Rigor	Originality	IPGs	Journal Impact Factor	Citations to date (Web of Sc.)	Altmetric	Access	Co-authorship	Overall quality summary
Duncan, A.J.										
Micro-economic analysis of the potential impact of contagious bovine pleuropneumonia and its control by vaccination in Narok district of Kenya  Livestock Science Volume 197, 2017  Kairu-Wanyoike, S.W., Taylor, N.M., Herrernan, C.	2	3	3	4	1.44 0	1		Limited – only able to review abstract	Appropriate. Lead author from NARS. Others from ILRI, University of Reading, UK, and University of Limerick, Ireland. Good international spread.	Considers impact of CBPP on communities using a large household survey and follow-up surveys post outbreak. Area of disease loss measurement under-researched – so potentially internationally impactful. Title and abstract rather under-sell the potential value of the research which might explain its low citation rate. Method used self-assessment and would have benefitted from some critique of this approach which sometimes over-estimates losses.  Limited access reduces impact and uptake of research.  A disappointing number of citations since publication.
The genome landscape of indigenous African cattle Genome Biology  Volume 18:34, 2017  Kim, J., Hanotte, O., Mwai, O.A., Dessie, T., Bashir, S., Diallo, B.,	1	4	4	4		64		Open	Appropriate. As is common in this field there is a long list of authors, many from globally leading institutions in UK, USA, S Korea. Also several African Universities	An important and ground-breaking output characterizing the distribution of five indigenous African Cattle breeds. The importance and founding nature of this is shown by a high citation rate. Journal among the top in the field. Founds future research utilizing African cattle diversity for sustainable livestock improvement.

Journal article: title, journal, year, authorship	Related FP(s)	Rigor	Originality	IPGs	Journal Impact Factor	Citations to date (Web of Sc.)	Altmetric	Access	Co-authorship	Overall quality summary
Agaba, M., Kim, K., Kwak, W., Sung, S., Seo, M., Jeong, H., Kwon, T., Taye, M., Song, K-D., Lim, D., Cho, S., Lee, H-J., Yoon, D., Oh, S.J., Kemp, S., Lee, H-K., Kim, H.									involved including in Guinea, Sudan, and Ethiopia.	
Whole-Genome Resequencing of Red Junglefowl and Indigenous Village Chicken Reveal New Insights on the Genome Dynamics of the Species Frontiers in Genetics 2018 Lawal, R.,Al-Atiyat, R.M., Aljumaah, R.S., Silva, P., Mwacharo, J.M., Hanotte, O.	1	4	4	4	3.36	10		Open	Appropriate. Broad range of co-authors including in the countries of origin.	Looks at genetic potential of indigenous chickens in Sri Lanka, Ethiopia and Saudi Arabia and shows the speed that domestication occurs under pressure. A rigorous and important piece of research. Problems with sample size are highlighted but accepted. There is a high degree of novelty with this approach which could make an important contribution to future poultry research. In a strong journal (Q2) but not the strongest in this field. Citations fair/good given the short period since publication.

Journal article: title, journal, year, authorship	Related FP(s)	Rigor	Originality	IPGs	Journal Impact Factor	Citations to date (Web of Sc.)	Altmetric	Access	Co-authorship	Overall quality summary
Using high-resolution data to assess land use impact on nitrate dynamics in East African Tropical Montane Catchments Water Resource Research Volume 54:3 Jacobs, S.R., Weeser, B., Guzha, A.C., Rufino, M.C., Windhorst, D., Breuer, L.	4	4	4	4	4.14 2	10		Open	Appropriate. Authors from various prestigious institutions: ILRI, CIFOR, US Forestry Service. Given that the work was done in Kenya is seems a shame there was no Kenyan co-author.	Test using nitrate dynamics as a measure of impacts of different land use patterns for monitoring N export in tropical landscapes.  Uses a novel data set in an important catchment area in multiple years. Data well presented. Data set and approach novel to the geography.  Published in one of the top journals in this field.
Global assessment of agricultural system redesign for sustainable intensification Nature Sustainability Volume 1:8, 2018 Pretty, J., Benton, T.G., Bhauracha, Z.P., Dicks, L.V., Flora, C.B., Godfray, H.C., Goulson, D.,	4	3	4	4	0 (new journal)	79	3 6 7	Only through institutional login	Appropriate. Impressive array of leading thinkers and institutions in this area. Including at least one author or institution from the Global South might have given more credence	An analysis at scale of sustainable intensification efforts globally which purport to show that the approach is now at a scale where it could be transformative. An important collection of thought leaders in the field. Highly cited, very visible and thought leading. The Journal is new but predicted to be globally leading.

Journal article: title, journal, year, authorship	Related FP(s)	Rigor	Originality	IPGs	Journal Impact Factor	Citations to date (Web of Sc.)	Altmetric	Access	Co-authorship	Overall quality summary
Hartely, S., Lampkin, N., Morris, C., Pierzynski, G., Prasad, P.W., Reganold, J., Rockstron, J., Smith, P., Thorne, P., Wratten, S.									to the document.	
Temporal and spatial variability in the nutritive value of pasture vegetation and supplement feedstuffs for domestic ruminants in Western Kenya  Asian-Australasian Journal of Animal Sciences  Volume 32:5, 2018  Onyango, A.A., Dickhoefer, U., Rufino, M.C., Butterback-Bahl, K., Goopy, J.P.	4	3	3	3	1.22 7	1		Open	Appropriate. Lead author associated with a Kenyan University. All other authors from recognized research institutes in Europe or ILRI.	Original research using samples and testing in 3 areas of Kenya to assess seasonal and spatial variation in feed value of herbaceous vegetation for domestic ruminants. A little surprising the journal did not ask for more than one year of data. Research somewhat novel, but important to support research on alternative feeds. Highlights the dangers of making universal supplemental feeding recommendations across different regions and therefore an important contribution.

Journal article: title, journal, year, authorship	Related FP(s)	Rigor	Originality	IPGs	Journal Impact Factor	Citations to date (Web of Sc.)	Altmetric	Access	Co-authorship	Overall quality summary
Power through: A new concept in the empowerment discourse  Global Food Security  Volume 21, 2019  Galie, A., Farnworth, C.R.	5	4	4	4	5.56	1		Open	Appropriate. Limited authorship. Journal does not include acknowledgmen ts or contribution section so hard to say whether others might have been included as authors.	Looks at aspects of women and youth empowerment using longitudinal qualitative data. Reveals aspects of associative power e.g., through relationships with others that have power or assets such as livestock. Research highly integrative within the CRP and other CRPs (e.g., A4NH). Introduces a new concept of 'power through' to explain the mediation of power. Disappointing citation record (to date) for a high-value journal and interesting paper.
The Rural Household Multiple Indicator Survey, data from 13,310 farm households in 21 countries.  Nature - Scientific Data  Volume 7, 2020  Van Wijk, M., Hammond, J., Yameogo, V + 46	4	4	4	4	5.54 1	2	1 1 4	Open	Appropriate. 16 authors from ILRI. Numerous other contributions and involvement from NGOs, NARS, Universities, research institutes and other CGIAR Centres.	Food security, dietary diversity, welfare, and poverty household survey in 21 countries over three years. A globally important dataset that has been shared in a top journal. A very high value output appropriately shared with the global research community.

Journal article: title, journal, year, authorship	Related FP(s)	Rigor	Originality	IPGs	Journal Impact Factor	Citations to date (Web of Sc.)	Altmetric	Access	Co-authorship	Overall quality summary
Using “theory of change” to improve agricultural research: recent experience from Tanzania  Development in Practice  Volume 29:7, 2019  Omore, A., Kidoido, M., Twine, E., Kurwijila, L., O’Flynn, M., and Githinji, J.		2	3	3	0.84	0	18	Open	Appropriate. All but two authors from the CGIAR (ILRI and ICARDA). One from Sokoine University and one consultant.	The paper considers the application of Theory of Change techniques to dairy value chains in Tanzania. A report on practice based on a case study. The paper has research questions but seems to lack a central hypothesis. It might also have been stronger if more than one case had been compared. Journal choice is appropriate – this journal is more applied in scope. Notwithstanding minor reservations, this is really important to report on practice of this kind and as such this is an important contribution.
Women’s empowerment, food security and nutrition of pastoral communities in Tanzania  Global Food Security  Volume 23, 2019  Galiè, A., Teufel, N., Webb Girard, A., Beltenwick, I., Dominquez-Salas, P., Price, M.,	3 & 5	4	4	4	6.034	9		Open	Appropriate. Good range of authors from institutions with global credibility (LSHTM, UK, Emory, UC Berkley, USA). In country contributions recognized in the acknowledgments but not in authorship.	Looks at domains of women’s empowerment captured from the ‘Women’s empowerment in livestock index’ (WELI) applying both quantitative and qualitative mixed methods in an innovative way. Links between all three aspects of empowerment of women nutrition security of children at a qualitative level. The application of this research to forage/livestock systems is novel and the assessment/comparison of qualitative and quantitative methods important for future research design.  Journal choice good - A solid Q1 journal with global reach and impact

Journal article: title, journal, year, authorship	Related FP(s)	Rigor	Originality	IPGs	Journal Impact Factor	Citations to date (Web of Sc.)	Altmetric	Access	Co-authorship	Overall quality summary
Jones, R., Lukuyu, B., Korir, L., Raskind, I., Smith, K and Yount K.										potential. The journal has a high impact factor for the development studies field.
Socio-economic determinants and impact of adopting climate-smart Brachiaria grass among dairy farmers in Eastern and Western regions of Kenya  Heliyon  Volume 6:6, 2020	1, 3 and 5	3	4	3	1.65	0		Open	Appropriate. This work was led by two University of Nairobi scholars and supported by ILRI staff. Nice to see this work led by national partners.	Uses a with and without treatment survey to assess the impacts on labor and productivity of feed improved Brachiaria grass varieties to dairy cattle. Empirically sound with a reasonable method and sample size. Useful and important results. Very recent, so no citations.  An interesting journal choice: both empirical and applied research published with a fast-growing impact and in the first quartile for this field.

Source: Selection from Livestock CRP Annual Reports



**Table 2: Assessment criteria and approach for Livestock CRP research publications**

Criterion	Assessment approach
Methodological rigor and coherence of data analysis	Rating scale 1 = poor 2 = weak 3 = good 4 = excellent
Originality, innovativeness and novelty	Rating scale 1 = low – not original, innovative, or novel 2 = weak – standards methods and established knowledge 3 = good – original methods and new approaches 4 = excellent – highly original, new knowledge, analytics or theoretical concepts
International Public Good relevant to CRP objectives	Rating scale 0 = results not relevant to CRP objectives 1 = low - no broad applicability (local relevance only) 2 = weak – potentially broader applicability but not explicit 3 = good – broader applicability presented and explicit 4 = excellent – significant international applicability
Impact Factor	
Quality and appropriateness of publication venue	Observation of quality or appropriateness of venue relative to subject and paper quality
Co-authorship	Observation of extent of co-authorship, with whom and is it appropriate?
Overall publication quality	Evaluator assessment including citations and altmetrics

**Table 3: Top 10 choice of journal for CRP research publications**

Sources	Articles	Impact Factor 2019	Rank	JCR Category	Quartile in Category
TROPICAL ANIMAL HEALTH AND PRODUCTION	15	1.333	32 of 63; 56 of 142	Agriculture, dairy & animal science; veterinary sciences	3; 2
FRONTIERS IN GENETICS	12	3.258	73 of 177	Genetics & heredity	2
AGRICULTURAL SYSTEMS	10	4.212	3 of 58	Agriculture, Multidisciplinary	1

Sources	Articles	Impact Factor 2019	Rank	JCR Category	Quartile in Category
FIELD CROPS RESEARCH	10	3.868	7 of 89	Agronomy	1
SMALL RUMINANT RESEARCH	10	1.273	34 of 63	Agriculture, dairy & animal science	3
ANIMAL	7	2.4	9 of 63; 11 of 142	Agriculture, dairy & animal science; veterinary sciences	1; 1
GLOBAL FOOD SECURITY- AGRICULTURE POLICY ECONOMICS AND ENVIRONMENT	7	6.034	7 of 139	Food science & technology	1
PLOS ONE	7	2.74	27 of 71	Multidisciplinary Sciences	2
BMC VETERINARY RESEARCH	6	1.835	32 of 142	Veterinary sciences	1
FRONTIERS IN SUSTAINABLE FOOD SYSTEMS	6	na in WoS			
TRANSBOUNDARY AND EMERGING DISEASES	6	4.188	22 of 93; 4 of 142	Infectuous diseases; veterinary sciences	1; 1
JOURNAL OF ANIMAL SCIENCE	5	2.092	12 of 63	Agriculture, dairy & animal science	1
AGRICULTURE ECOSYSTEMS \& ENVIRONMENT	4	4.241	2 of 58; 29 of 168; 60 of 265	Agriculture, Multidisciplinary; Ecology; Environmental sciences	1; 1; 1
ANIMAL GENETICS	4	2.841	6 of 63; 86 of 177	Agriculture, dairy & animal science; Genetics & heredity	1; 2
FRONTIERS IN VETERINARY SCIENCE	4	2.245	19 of 142	Veterinary sciences	1

Source: Dashboard data pre-analyzed by CAS

**Table 4: Assessment of selected technical publications from Flagships and OICRs**

Technical publications	Quality	Relevance to next stage user	Potential for capacity development	Assessment
Udo Rudiger. (13/7/2017). Synthesis report on national forage seed workshop <a href="https://hdl.handle.net/20.500.11766/8254">https://hdl.handle.net/20.500.11766/8254</a> FP3, P653	A clear summary of what seems to have been an important meeting with stakeholders including the Ministry of Agriculture in Tunisia. The purpose and context of the workshop is missing. There is no list of participants, which makes follow-up or assessment of engagement challenging – there may be GCPR issues with this. Unclear if the workshop/activity was assessed. It might be useful to have a standard/consistent workshop report checklist.	Highly relevant to those involved in this activity. Information provided not so relevant to those not involved.	Hard to assess capacity development. Workshop methods (break-out groups) were used which, if well organized, should have led to cross-fertilization and capacity development. The workshop adopted guidelines and an action plan, but these are part of the report – but maybe elsewhere.	3
Maina, K, W., Ritho, C, N., Lukuyu, B, A., and Rao., E, J, O. (2019), "Do farmers benefit financially from adopting improved forages: Evidence from adoption of Brachiaria grass among smallholder dairy in Kenya", Invited paper presented at the 6th African Conference of Agricultural Economists, Abuja, Nigeria, 23-26 September 2019.	The paper is a little 'rough' but this was an earlier presentation of the OICR 2767 work that was later accepted in a journal.	Approach and method as well as findings potentially very useful to other agricultural economists.	This conference, in Nigeria, was an ideal location for exposure of this work and for early academic feedback as well as cross-fertilizing the findings with a large number of other practitioners.	3
Opot, C., Lukuyu, B., and Kinyua, C. (2016)., Assessment of agricultural production system need for intervention in livestock feed production in Ugunja Sub County, Siaya, Kenya. FEAST Report.	Report from the founding FEAST report for this region of Kenya associated with OICR 2767. An example of the many livestock production assessments done using this tool and contributing to the dairy improvement project under P750.	Highly relevant to the next stage user (local extension actors).  It is somewhat difficult to see what, in the absence of the follow-on project funded by USAID, might have been	Seems to have been generated with local extension staff and farmers. The process of data collection will in itself have been useful to guide future local interventions.	2

Technical publications	Quality	Relevance to next stage user	Potential for capacity development	Assessment
	The conclusions are something of a wish list and do not seem to relate to the aims of the activity.	the prioritized actions to be undertaken by the local authors.		
Dhraief MZ, Zlaoui M, Jebali O and Ibidhi R., (2018), "Business plan and feasibility analysis of an on-farm solar-powered milk cooling system", National Institute for Agricultural Research of Tunisia.	A well-constructed and explained business plan with three options presented.	Highly relevant to both funders and investors.	The work seems to have been done by a local institution suggesting that the capacity has been transferred.	3
Douxchamps S, Teufel N, Nguyen T, Nguyen H, and Poole J., (undated), "Livestock CRP Vietnam 2019-21: Site Selection Process", mimeo. Project report.	Part of a larger business case for priority country selection. Very clear methodology paper with site selection criteria and process clearly explained.	The approach and method is clearly transferrable for potential national use	High potential for repetition of the approach to site selection in other sites and countries.	3
Tiemann, T., (2019), "Stocktaking review for Livestock CRP with focus on Sonla, NW Vietnam. Project report.	Synthesis of geographical data analysis of research site selection for Livestock CRP fieldwork. Single author prepared. A very useful and comprehensive situation analysis using secondary sources.	A useful synthetic approach to scoping activities. Somewhat hard to see the national (e.g., Vietnam government/local government) engagement and voice in drawing these conclusions.	Possible that an opportunity for capacity development was missed as this was single authored.	3
Gebremeskel, T, Flintan, F, Bormann, U and Nigatu, A., (2016), "Woreda (District) Participatory Land Use Planning in Pastoral Areas of Ethiopia: Development, Piloting and Opportunities for Scaling-up",	Report of an adaptation to the Ethiopian context of participatory land use planning methods developed and applied widely in the 1990's. A well-presented text reporting field practice and application in the Ethiopian context. Lessons are clearly stated and the primary issue with	This approach is highly relevant to land use planning practitioners. The challenges faced to make the approach normative and useful are not really addressed.	Lead author from the relevant Ministry in Ethiopia. This is a report of practice; how this approach marries with existing capacity (and therefore uptake) is alluded to, but not explained.	3

Technical publications	Quality	Relevance to next stage user	Potential for capacity development	Assessment
Paper prepared for the 2016 World Bank Conference of Land and Poverty, The World Bank, Washington DC, March 14-18, 2016.	participatory approaches highlighted (ie., that they raise expectations).			
Robinson, L., (2020). "Management and governance of pastoral rangelands: a review of recent CGIAR initiatives". Nairobi, Kenya: ILRI	Synthesis of 5 case studies of 'innovative' rangeland management engagement and research practices. Very clearly summarized and presented. The aim of the exercise was somewhat vaguely stated and no central hypothesis is suggested for the piece or questions posed. There is no synthesis of findings, conclusions, lessons or clarity on the way forward or direction emerging from the work. Not peer reviewed.	Synthesis of innovation and practice has high potential for relevance to next stage users. Makes an important epistemological point in development studies practice about challenge of switching from linear scientific approaches to more complex systemic frameworks. This is, however, rather hard to find and is left as an unanswered 'question'.	A useful approach to synthesizing a body of applied research, but without a central hypothesis and framework this can only really be a report on practice.	2
Shapiro, B. (2015). Livestock Master Plan (LMP): Roadmaps for the Ethiopia Growth and Transformation Plan (GTP II—2015-2020)—The Livestock State Ministry, MOA and ILRI. Presented at the Rural Economic Development and Food Security Sector Working Group Broader Platform meeting, Ministry of Agriculture, Addis Ababa, Ethiopia, 2 July 2015. Nairobi, Kenya: ILRI.	PowerPoint presentation that highlights some of the major policy trade-offs emerging from the Livestock Master Plan and relating this to the national planning exercise. Some slides are missing data. Associated notes or sound narrative would have been helpful for comprehension.	Over 5,000 views, which give some evidence that it has wider interest. Highly relevant and timely. Demonstrates potential for high-level impact through policy dialogue.	If the contextual information from this added to the slides it has a fairly high potential for building capacity.	3

Technical publications	Quality	Relevance to next stage user	Potential for capacity development	Assessment
<p>Pfeifer, C., Morris, J., Ensor, J. and Soka, G., (2019). Enabling locally relevant planning for sustainable livestock sector development: The CLEANED approach. York, UK: Stockholm Environment Institute.</p>	<p>Well-presented policy brief highlighting the potential for using a combination of simple modeling tools and gaming to generate data that can guide local level plans that incorporate nutritional and environmental targets.</p>	<p>Very relevant to other users, although it is not very clear what the target of this brief is.</p>	<p>More an awareness product than</p>	<p>3</p>
<p>Triana N; Burkart S. 2019. Gender and the cattle sector in Latin America: recent trends in literature. International Center for Tropical Agriculture (CIAT) Cali, CO. 12p. FP3.</p>	<p>A rather limited assessment of the continent-wide literature. Themes from the literature are not very clearly drawn together. The language is rather 'flowery' suggesting that translation/editing/review has not been strong.</p>	<p>Has high potential but would have been better if peer critiqued and placed in a journal.</p>	<p>Rather limited, but a good starting point.</p>	<p>2</p>

**Table 5: Assessment criteria and approach for Livestock CRP research publications**

<b>Criterion</b>	<b>Assessment approach</b>
Technical publications	Examples include: working papers, project reports, conference presentation/papers, business plans, and book chapters
Quality	Rating scale 1 = poor 2 = weak 3 = good 4 = excellent
Relevance to next stage user	Clarity, simplicity, usability
Potential for capacity development	Degree to which this could build capacity and with whom

**Table 6: Assessment of selected physical outputs for International Public Good (IPG) value**

Flagship/cross-cutting theme - objective	Physical products - examples	Relevance to next stage user	Assessment of IPG	Quality assessment
FP1 - Ensure that appropriate livestock breeds are readily available, affordable and widely used by poor women and men livestock keepers.	Characterization of dairy production systems in Tanzania and Ethiopia	Potentially highly relevant. Only Tanzania report found on MARLO as a Working Paper	A useful report on a large household survey. Reports findings but lack analysis.	2
	Open-access database of cattle African samples collected for genome sequencing	Highly relevant. Essential for future breeding programs.	Highly relevant data with international significance.	4
	A database of indigenous chicken samples from Nigeria (N=120), Tanzania (N=60), and Ethiopia (N=240)	Highly relevant. Essential for future breeding programs.	Highly relevant data with international significance. Target year of completion 2019. Expected year of completion 2022. Not publicly available due to ABS issues.	4
	Characterization of dairy production systems in Tanzania and Ethiopia	Highly relevant. Availability of the underlying data not obvious.	Highly relevant with national implications.	3
	An animal genetic database tool launched in small ruminant community-based breeding programs in Ethiopia and Tanzania	Highly relevant. Connection to the related work, product lines not particularly clear.	Highly relevant. Viewed 4 times since 2018 which seems a bit disappointing. Looks like a report. Not peer reviewed. Not clear what the purpose of this specific document is.	2
FP2 - Improve livestock	Protocol to identify site-specific disease priorities	Potentially very useful synthesis of approaches for prioritizing disease priorities at community level.	The paper feels unfinished. There are several editing shortfalls and the summary/conclusions are rather thin. A short executive summary would have been helpful.	2



Flagship/cross-cutting theme - objective	Physical products - examples	Relevance to next stage user	Assessment of IPG	Quality assessment
health and health service delivery.	Design of bundled interventions in CBBP sites in Ethiopia	High relevance to next stage user but link does not give access to the tool. Product assessed through 'factsheet'.	Evidence from factsheet suggests the intervention bundle could be an important IPG.	2
	Preliminary risk models/maps for selected diseases	Database on ticks in livestock in Tunisia	Open access database of livestock ticks on ICARDA website. Useful nationally and regionally.	2
	Indicators to evaluate /determine herd health packages	Set of production and social indicators to assess herd health packages. High potential for widespread use.	Not open access so not assessed.	U
	A collection of mutant CCPP strains. Data on immunological parameters on candidate vaccine strains.	Highly relevant. A dataset of mutants and testing results in vivo for vaccine strains.	Highly relevant. Dataset on the ILRI database but not open access.	3
FP3 - Increase livestock nutrition by identifying, testing, and delivering superior feed and forage	One method prepared for cost-benefit analysis of improved forage technologies in Colombia.	Potentially high relevance to next stage user but link does not give access to the output.	Unavailable so not assessed.	U
	Mapping of players within the forage seed marketing system in Afghanistan, and identification of avenues for improving farm access to forage seeds and shrubs	Concept has high potential but product unavailable for assessment. Assessed through ICARDA blog.	AR links to MARLO link to external ICARDA site with a Blog which in turn links to a blind site on ACIAR website. Assessed through Blog. Claims to assess gender in Afghan forage value chains. Photo on site is of only men (7)!	2
	Business plans around feed production and processing	Discusses using roadside grass as fodder. Highly relevant to next stage users of feed and forage innovations. No	More a report than a business plan.	2

Flagship/cross-cutting theme - objective	Physical products - examples	Relevance to next stage user	Assessment of IPG	Quality assessment
strategies and options.		discussion of the potential heavy metal load on roadside grass.		
	Evaluation of characteristics, agronomic performance and nutritional quality of Napier grass accessions	Highly relevant to a wider range of users across several countries.	Report access restricted.	U
	Spectra standardization to ILRI master Near Infra-Red Spectrometry (NIRS) instruments	Highly relevant. Development of NIRS equations for assessing feed and fodder quality traits.	Highly relevant. Approach of international significance and utility.	4
	Maps of core feed issues (overall feed availability, seasonal feed availability, overall feed quality) for core Livestock CRP countries (Ethiopia, Tanzania, Uganda)	Highly relevant. Sets of map images of feed availability in a range of countries.	Highly relevant. Regional significance.	3
	Framework for assessing multiple environmental footprints for specific packages of production technologies and interventions	High potential for relevance is applied and results taken up.	CLEANED (Comprehensive Livestock Environmental Assessment for Improved Nutrition, a Secured Environment and Sustainable Development along Livestock and Fish Value Chains) Excel tool. Model applied in 3 countries.	3
FP4 - Reduce the environmental footprint of livestock production across both rapid and fragile growth trajectories, while ensuring	Improved databases for African smallholder systems.	Risks and opportunities in livestock systems differentiated by age and gender. High potential for next stage user.	Part of the Rural Household Multiple Indicator Survey (RHoMIS) dataset. Applied in 21 countries.	4
	R-based tools refined, documented and shared	Essential analysis tool for evaluating data to assess environmental sustainability.	Link to CLEANED-R not functional.	U

Flagship/cross-cutting theme - objective	Physical products - examples	Relevance to next stage user	Assessment of IPG	Quality assessment
that livestock systems in target countries are able to adapt to global environmental changes.		Potentially very relevant to those involved in data analysis.		
	Cross-regional map of rangelands and related issues in Tanzania No. 15 Conflict hot spot in Kiteto District, Manyara region	Highly relevant to next user e.g., policymaker/planner.	Highly relevant within its range.	3
FP5 - Maximize livestock-mediated livelihoods and resilience to risk among smallholder and pastoral producers and their communities, whilst enhancing availability and access to animal-source food for rural and urban consumers.	Online Template for Sustainable Livestock Management Option-by-Context (SLiM OxC)	Template for data capture. Relevant to use of SLiM OxC.	Relevance relates to appropriateness of SLiM OxC.	2
	Impact Assessment of best bets in the small ruminants value chain at 5 sites in Ethiopia	Highly relevant. Dataset of midline survey available as an excel sheet.	Potentially high but with specific relevance to Ethiopia.	3
	Training on Hands-on Animal Genetic and Genomic Evaluation Joint Course	Not particularly relevant. Described in MARLO as 'training material, but in fact a short training report with list of participants and sessions.	Not relevant as IPG – although training may have been very relevant.	1
Capacity Development				

Flagship/cross-cutting theme - objective	Physical products - examples	Relevance to next stage user	Assessment of IPG	Quality assessment
FP1				
FP2	Assessment of different delivery models for AH services focusing on women in extensive livestock production systems in Kenya	Potentially relevant. Technical guide (described in AR as 'Training Materials')	Link in MARLO is to the abstract book of the 15 <sup>th</sup> International Symposium of Veterinary Epidemiology and Economics. This training guide does not feature in this book.	U
FP3	Factsheets/R4D: Managing rangelands: promoting native shrub species: <i>Ziziphus nummularia</i> : a promising forage shrub for silvopasture in arid and semi-arid ecosystems	Relevant. Outreach product.	Produced by ICARDA but reported here. High potential.	2
	Feed the Future, (undated) How to grow Brachiaria Grass, ILRI, ICRISAT, CIP.	Highly relevant. An extension manual for Brachiaria grass which shows farmers how to develop a forage species through photographs, cartoons and numbered steps/recommendations. The product has a somewhat unpolished feel and needs some light editing. It is assumed that the reader already knows why growing this grass is interesting/useful, which may not be the case (e.g., the use of Brachiaria grass as a supplemental dairy ration is not explained). The approach is likely widely transferable.	Highly relevant with international value.	4

Flagship/cross-cutting theme - objective	Physical products - examples	Relevance to next stage user	Assessment of IPG	Quality assessment
FP4	Educational video on sweet potato vine silage making	High relevance. Not clear where more information and details can be obtained by the viewer – an introduction rather than a comprehensive guide, so the title is misleading.	More of a 'taster' video than training (it would not be possible to undertake the activity from just watching the video). Nevertheless, a useful introduction to a new method/approach.	2
	Manual on Woreda Participatory Land Use Planning (WPLUP) in pastoral and agro-pastoral areas	High relevance. Detailed and comprehensive manual. Very nicely presented.	Highly relevant.	4
FP5	ILRI manual on implementation mechanisms of public-private partnership for delivery of breeding services, Kenya	High relevance.	Highly relevant. Product unavailable.	U
Gender				
FP1	Genome polymorphism information of African indigenous chicken population and identification of signature of selection	Highly relevant. Genomic data for poultry breeding through a gendered lens.	Highly relevant.	4
FP2	Doyle, R., Lemma, M., Mulema, A., Wieland, B. and Mekonnen, M. 2019. Community conversation on animal welfare: A guide to facilitators. Nairobi, Kenya: ILRI.	Relevant. This is a training of trainers manual that summarizes the methods for a more holistic/systems approach to herd health capacity development based on a dialogue with the community. A useful manual and approach, but not without weaknesses. It was not clear what should happen next after the training (e.g., do participants have plan, how do	Relevant.	3

Flagship/cross-cutting theme - objective	Physical products - examples	Relevance to next stage user	Assessment of IPG	Quality assessment
		they get help to implement their plan if they have one). I found the pictures rather variable: some not clear and indifferent scales and quality which recipients might find hard to understand.		
FP3	Mutua, John; Notenbaert, An, 2019, "Current and future forage suitability maps for Rwanda and Tanzania", <a href="https://doi.org/10.7910/DVN/ESK6BB">https://doi.org/10.7910/DVN/ESK6BB</a> , Harvard Dataverse, V2	Relevant. Web based GIS tool for current and future forage suitability using various characteristics.	Some relevance. Claims to take account of gender roles, but this is not mentioned in the product description either on the Harvard dataverse site or CGspace descriptor.	2
FP1 - 5	Scoping tool to characterise pig aggregators and inputs and service providers. Ouma, E., Lukuyu, B. and Dione, M. 2019. Tools to profile pig and pork aggregators, veterinary drug retailers, veterinarians and feed processors in Uganda smallholder pig value chains. Nairobi, Kenya: ILRI.	Relevant. Set of consent and reporting forms for survey enumerators. Useful to have these in the public domain, but no information on their application is included so would be hard for the next user to apply these 'tool' on their own.	Some relevance.	2
Youth				
FP1 - 5	Business model for sheep fattening. Esayas Mulatu, Jane Wamatu. (19/2/2020). Sheep Fattening Business Case for Youth Groups.	Highly relevant. Shows the detailed business case for different sheep fattening models in Ethiopia.	High relevance. Fattening projects seem particularly appropriate for youth businesses uptake. Approach easily transferrable.	4

Source: Selection from Livestock CRP Annual Reports

**Table 7: Assessment criteria and approach for Livestock CRP physical outputs**

Criterion	Assessment approach
Flagship / cross-cutting theme objective	
Example of physical product	For example: varieties, digital innovations, methodologies, tools, services etc.
Assessment of IPG	<p>Rating scale</p> <p>U = not accessible to the reviewers</p> <p>0 = not relevant to agriculture</p> <p>1 = no broader applicability</p> <p>2 = potentially broader applicability</p> <p>3 = broader applicability demonstrated</p> <p>4 = significant international applicability</p>

**Table 8: Assessment of selected communications material**

Communication product	Quality	Relevance to next stage user	Potential for capacity development	Quality assessment
Extension Brief: Brachiaria grass: New forage option for sub-Saharan Africa	Brief. Clear and informative brief. High quality pictures. Reasonably well laid out. QR codes links to more information would be helpful. Somehow these materials need to be linked into other information and capacity building materials.	Highly relevant, but hard to work out who the target is for this type of material.	Assessing the impact of this type of leaflet, briefing note or flyer is hard. It only takes one next user to take up the technology at scale for it to be worthwhile.	3
Mukiri, J, (2018), "CLEANED training kicked off in Kigali Rwanda", CIAT-Insights.	Blog. Report style blog on a training activity. Contains pictures and quotes from participants. Written in an accessible way. As a 'blog' it lacks a first-person narrative voice, so reads more like a report.	Good to have a report on the meeting in clear language. It has been tweeted 7 times and shared 13 times which shows some interest if only from the participants themselves.	For future uptake and attendance at training events this type of blog is useful. However, the aim of a blog is to give voice to views and opinions and this was not really achieved.	2
Mukiri, J, (2018), Local context is everything: It's how animals are produced that's important", CIAT-Insights.	Blog. Explains the CLEANED tool and its benefits. Has a good narrative structure. Includes a direct first-person voice and examples from experience.	Works well as a blog and can be helpful to those thinking of applying the CLEANED tool.	It is hard to see what the aim of this type of blog is unless to initiate a discussion of some kind. This particular blog does not offer that option.	3
Odongo, D, (2017), "Towards a robust national livestock market information system: Stakeholders convene to chart way forward", ILRI Blogs.	Blog. Reports on a workshop in Kenya to review the range of different market information systems available.	Identified a range of problems and opportunities for standardization of approach. Good potential for next stage user uptake of learning.	Draws a useful less from the results of the meeting on coordination of MIS approaches.	3



Communication product	Quality	Relevance to next stage user	Potential for capacity development	Quality assessment
ILRI. 2018. Why livestock matter: Making the case for sustainable livestock for development. Website. Nairobi: ILRI. <a href="https://whylivestockmatter.org">https://whylivestockmatter.org</a>	Website. Provides a repository of evidence to support the case for livestock in sustainable development. Very attractive and engaging format.	Highly relevant to policymakers, journalists, academics and decision-makers.	Pulls information about livestock and sustainable development into a single place for advocacy purposes. It is not clear how this will be maintained.	3
Karaimu, P. 2019. Harnessing livestock innovations for greater economic good. Blog post. Nairobi: ILR	Blog. Reports on 9 <sup>th</sup> Global Agenda for Sustainable Livestock (GASL) meeting, 2019. A good blog with relevant information and links.	Highly relevant. Summarizes a keynote presentation by Shirley Tarawali. Links nicely to other ILRI communications products.	Brings attention to an important presentation on livestock and sustainable economic growth.	3
Marwa, M, Mburu, J, Rao, J, Mwai, O, and Kahumba, S., (2018). "The role of ICT based extension services on dairy production in Kenya: a case of ICOW service", Poster presented at Tropentag 2019, Sept 18 <sup>th</sup> , University of Kassel, Germany.	Poster. Reports a survey assessment of the ICOW extension service. An interesting poster, but rather weak presentation (e.g., no hypothesis, no self-criticism).	Highly relevant.	Somewhat limited given the shortcomings mentioned.	2
Ojango, J. 2019. Gender in livestock development: Julie Ojango. Video. Nairobi, Kenya: ILRI	Video. Inspirational and eloquent exposition from a female researcher on the power of science and the importance of gender for livestock. A talking head, but very moving and impactful.	Relevant. Sets a wonderful and inspiring example.	This type of 'TED Talk' can inspire a new generation of scientists.	
Triana Ángel N; Burkart S. 2019. Between silences and opportunities: gender and livestock in Latin America, a	Info note. Very nicely presented 8 page 'note' synthesizing research.	A very useful starting point to locate more	Highly relevant.	4

Communication product	Quality	Relevance to next stage user	Potential for capacity development	Quality assessment
state of the question. Infonote. International Center for Tropical Agriculture (CIAT). Cali, Colombia. 8 p. FP3.		detailed outputs from the CRP.		
Mukiri J; Notenbaert A; Nzogela B. 2019. Weather posters to schools and farmers of Tanzania. International Center for Tropical Agriculture, Nairobi, Kenya.	Infographic. Weather posters to schools and farmers of Tanzania. Particularly targets youth.	Very relevant. Graphic seems a little 'busy'. Not sure how youth will have responded to it.	Highly relevant.	3

Source: Selection from Livestock CRP Annual Reports

**Table 9: Assessment of criteria and approach for Livestock CRP communications products**

Criterion	Assessment approach
Communication product	Examples include: Newsletters, digital outputs, manuals, blogs
Quality	Rating scale 1 = poor            2 = weak 3 = good            4 = excellent
Relevance to next stage user	Clarity, simplicity, usability
Potential for capacity development	Degree to which this could build capacity and with whom

**Table 10: Reported number of technical innovations by FPs per year by Technology Stage**

FP	No. of Technical Innovations/Level/Year															
	2017				Total/ FP/ Year	2018				Total/ FP/ Year I	2019				Total/ FP/Year I	Total
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>		
FP 1	0	0	0	0	<b>0</b>	3	0	4	0	<b>7</b>	4	1	4	0	<b>9</b>	<b>16</b>
FP 2	0	0	0	0	<b>0</b>	8	9	4	0	<b>21</b>	2	6	2	0	<b>10</b>	<b>31</b>
FP 3	2	0	2	0	<b>4</b>	8	5	3	0	<b>16</b>	4	1	8	0	<b>13</b>	<b>33</b>
FP 4	1	1	2	0	<b>4</b>	0	1	3	1	<b>5</b>	2	0	2	2	<b>6</b>	<b>15</b>
FP 5	2	0	1	0	<b>3</b>	2	1	2	0	<b>5</b>	0	1	3	1	<b>5</b>	<b>13</b>
<b>Total/Innovation level/year</b>	<b>5</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>11</b>	<b>21</b>	<b>16</b>	<b>16</b>	<b>1</b>	<b>54</b>	<b>12</b>	<b>9</b>	<b>19</b>	<b>3</b>	<b>43</b>	<b>108</b>

Source: Livestock CRP Annual Reports

Notes: Stages of innovation are as follows:

1 = end of research phase (discovery/proof of concept)

2 = end of piloting phase (if relevant)

3 = available for uptake

4 = uptake by next user

Source: CGIAR (2018), "CGIAR Indicator #C1: Number of Innovations" from Marlo, <https://marlo.cgiar.org>

## Annex 9: Results-based Management in the Livestock CRP - Findings

Planning and reporting documents are not structured around the ToCs so the link between planned outputs and outcomes as identified in the ToCs and FP/CRP achievements as reported in the Annual Reports (ARs) not feasible. Planning is mainly focused on 'Delivery' which is broken down into: "Expected Annual Milestones towards Outcomes 2022" and "Output towards Outcomes 2022", whereas reporting is focused on achievement of outputs and milestones, though not systematically i.e. all outputs identified in the POWBs are not reported on in corresponding ARs. Achievement of higher-level results is reported in the AR by means of tables on "Evidence on progress towards the SLOs (sphere of interest)", however in most cases there is "no new evidence" of progress on this level. "Outcome Case Studies" (Sphere of Influence) and the "Common Results Reporting Indicators" (CRRI) are also used to track achievement of higher-level results but these are not identified in the POWBs so it is difficult to assess to what extent planned results have been achieved. In addition, the targets set for outcomes (2022) in the ToCs are not being tracked and have no corresponding baselines.

The current suite of metrics fails to provide a coherent overview of progress. The lack of indicators (and corresponding monitoring system) mapped to the CRP and FP ToCs has resulted in the emergence of a suite of metrics heavily focused on milestones and CRRI, which do not adequately capture progress towards higher-level goals and which do not provide a coherent overview of progress. This is changing somewhat with the country focus e.g. common indicators and development of baselines, but this shift is coming late in the process. Although originally conceived as a means of assessing progress mid-way through the CRP (and at the end), **milestones** are now established on an annual basis and have evolved into one of the preferred means of measuring CRP progress. Progress with regard to milestones over the three-year period under review is summarized in the table below.

As seen in the table below, of the 118 milestones set for the 2017-2019 period, 81 (64.9%) have been completed while 39 were extended and 3 canceled (12 of the 29 milestones set for 2017 were completed, in 2018, 35 of the 48 and in 2019, 34 of 53).

**Table 1: Proportion of Milestones that were completed, extended, <sup>4</sup>or canceled, by Flagship (2017-19)**

Milestone status	FP1		FP2		FP3		FP4		FP5		CRP level	
	(%)	#M	(%)	#M	(%)	#M	(%)	#M	(%)	#M	(%)	#M
Cancelled	5	1	0	0	3	1	0	0	5	1	2	3
Completed	53	10	55	15	89	31	69	11	67	14	69	81
Extended	42	8	48	13	14	5	37	6	33	7	33	39
<b>Total</b>	<b>100</b>	<b>19</b>	<b>100</b>	<b>27</b>	<b>100</b>	<b>35</b>	<b>100</b>	<b>16</b>	<b>100</b>	<b>21</b>	<b>100</b>	<b>118</b>

Source: Dashboard data pre-analyzed by CAS and MARLO.

However, various questions arise about the relevance/ robustness of these "milestones" to measure the performance of CRPs/FPs and there is a lot of misunderstanding /dislike around them. In the first place, there is a wide variation in the number of milestones set per FP e.g. FP3 has recorded 35, while FP4 has recorded 16; it is not clear what this data tells us about performance and the achievement of goals i.e. it is not evident that more milestones mean better performance and vice versa. Also, the impact of a given milestone varies widely e.g. how do we compare the achievement of these two milestones: (i). Five sustainable rangeland interventions in Kenya, Tanzania, Tunisia, and Ethiopia are identified, tested, and disseminated to livestock producers by the end of 2018 and ii). Two events will be influenced by the end

<sup>4</sup> Note: Column totals do not add up. The explanation given by CAS for this was "this analysis takes into consideration the number of different Milestones. It applies the distinct count which returns the number of "unique" values for Milestones (Milestone ID)". In other words, a milestone that is extended one year and concluded in a subsequent year is recorded on both occasions so there is double counting of the same (unique) milestone.

of 2018: a high-level communication on livestock and environment at the GFFA and a side event on livestock and environment at UNFCCC COP 24? i.e. where one is an outcome and the other an activity. The relevance of milestones as a means of measuring progress along a given trajectory is also questionable e.g. if we consider the planned outcome to be: "National government agencies across at least 5 priority countries design and implement key policies to improve the environmental management of livestock systems (Outcome 4.4), the relevance of "Synthesis of policy issues on reducing GHG emissions from livestock published" as a milestone, is only useful if we know what the full trajectory is i.e. what the next steps are. Closely linked to this is the lack of subsequent reporting on milestones given **their annual nature which does not allow for a longer-term perspective on the achievement of goals** and targets. By focusing on the annual achievement of milestones, there is a strong risk that progress towards higher-level goals is not being adequately planned and/or captured e.g. there is no systematic reporting of milestone progress in subsequent years. In addition, it is not clear what should be concluded from the data on completed, extended, and canceled milestones. According to the data in Table 1, FP3 might be deemed the most productive/successful FP with nearly 89% of planned milestones completed and FP1 the least productive/successful with only 53% completed, but conclusions cannot be reliably drawn in this regard. Also of note is the difference in the number of canceled milestones per FP, with FP1 reporting over 5%, and FP4 reporting none; can we conclude that FP4 performed better than FP1 etc.? A final point worth noting is the use of this metric to draw conclusions regarding the performance of different CRPs as evidenced by the comment by the ISC at their 2018 annual meeting: "We note that in the annual report for 2017, it appears that many of the milestones were not met. Even more startling was the comparison of the achievements of the Livestock CRP relative to other CRPs with regards to milestones, publications, innovations, and policies. We note the explanations about different definitions and approaches to reporting across the CRPs, but we recognize that, if not corrected, could impact negatively on future funding".

Other means of assessing progress (the CGIAR Common Results Reporting Indicators-CRRI) used by the CRP include the number of 'innovations' and the number of 'policies', where an innovation is defined as new or significantly improved outputs or groups of outputs - including management practices, knowledge or technologies and is classified according to four categories/stages: Stage 1: discovery/proof of concept; Stage 2: successful piloting; Stage 3: available/ ready for uptake and Stage 4: uptake by next user (USE). "Policies" refer to policies, legal instruments, investments or curriculum that have been modified in design or implementation, informed by CGIAR research, and are broken down into three levels: Level 1: research taken up by next user (decision-maker or intermediary); Level 2: Policy/Law etc., enacted, and Level 3: Evidence of impact on people and/or natural environment of the changed policy or investment.

In the case of **innovations**, the table below shows that 2018 was the most productive year, while FPs 2 and 3 are the most productive in terms of innovations, being responsible for 64 of the 107 (60%) reported innovations during the period under review.

**Table 2: Number of different Innovations by Flagship and year**

Flagship	2017	2018	2019	Total
FP1	0	7	9	16
FP2	0	21	10	31
FP3	4	16	13	33
FP4	3	5	6	14
FP5	3	5	5	13
<b>Total</b>	<b>10</b>	<b>54</b>	<b>43</b>	<b>107</b>

In the case of **policies**, of the total of 21 'policies' reported for the CRP over the three years, FP2 has contributed the most (7) while FP3 has only contributed 1.

**Table 3: Number of different Policies by Flagship and year**

Flagship	2017	2018	2019	Total
FP1	1	0	2	3
FP2	1	4	2	7
FP3	0	1	0	1
FP4	1	0	4	5
FP5	2	2	1	5
<b>Total</b>	<b>5</b>	<b>7</b>	<b>9</b>	<b>21</b>

As these two indicators (innovations and policies) are not mapped to outcomes in the FP ToC, they do not serve as an appropriate means of capturing FP progress. However, given the different stages/levels associated with them, there is scope to better exploit them for that purpose e.g. the trajectory of an 'Innovation' through the four stages of discovery/proof of concept; successful piloting; available/ ready for uptake and stage and uptake by next user adequately captures the trajectory from output to outcome. If an additional level were added to capture impact on people or the natural environment of that innovation, this would be a more appropriate means of measuring progress linked to the underlying ToC. In the case of Policies, the three levels of research taken up by next user; Policy/Law etc. enacted, and evidence of impact on people and/or natural environment of the changed policy or investment adequately captures the trajectory from outcome to impact. If the output level were included i.e. the research, this would provide a good means of capturing progress along the ToC.

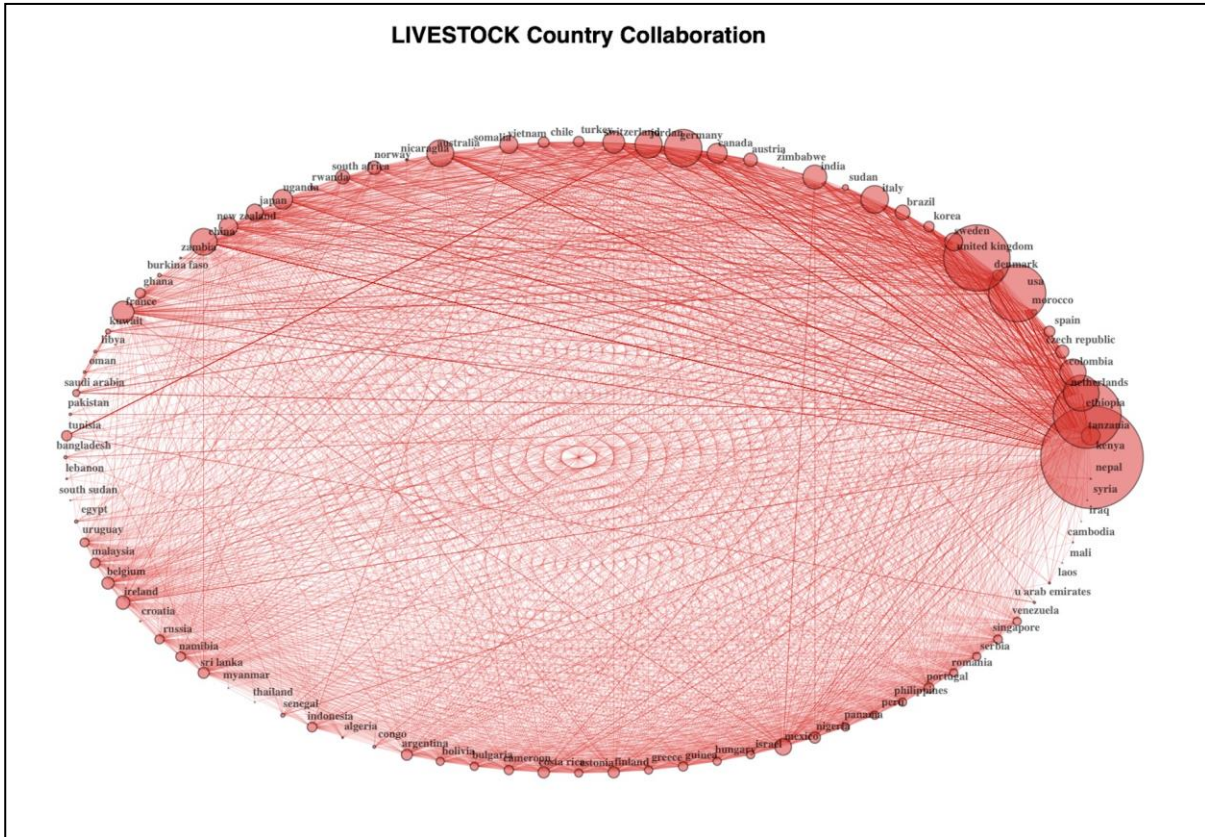
Another metric used by the CRP to capture higher-level results is the "Outcome Impact Case Report" (**OICR**). From the table below, it can be seen that of the 22 OICRs produced over the three-year period, notably 14 i.e. 61% were produced by FPs 4 and 5.

**Table 4: Number of OICRs by Flagship**

Flagship	Number of OICRs
FP1	3
FP2	5
FP3	1
FP4	8
FP5	6
<b>Total</b>	<b>23</b>

Whilst OICRs are clearly very useful for communication purposes they have limited value for reporting progress towards achievement of higher-level results as they are not systematic, and they are "once off" products i.e. the full trajectory of the desired change process is not captured as would be the case with indicators. In addition, there are issues around the double counting of OICRs e.g., of the 7 FP4 OICRs, 3 are with PIM and one is with FP2 (2114) and of the 8 FP5 OICRs, 1 is with A4NH, one is with RTB and A4NH, two are with FP3 (2110 and 2767) and one is with FP2 (3092). The joint FP4 FP5 one (2729) is with CCAFs.

# Annex 10: Author Journal Collaboration by Country



**Figure 1: Author journal collaboration by country**

Source: Dashboard data pre-analyzed by CAS



## **Annex 11: List of Key Documents Provided and Reviewed and Not Referenced Elsewhere**

Baltenweck, I., Kassie, G.T., Omore, A., Ouma, E., Poole, J. and Teufel, N. (2019). Protocol to guide the testing and evaluation of innovations for improved value chain performance within the CGIAR Research Program on Livestock. Version 1. ILRI Manual 34. Nairobi, Kenya: ILRI.

Dror, I., Cadilhon, J.J., Schut, M., Misiko, M. and Maheshwari, S. (2016). Innovation platforms for agricultural development: Evaluating the mature innovation platforms landscape. UK: Routledge

Dror, I. and Wu, N. (2020). Scaling better together: The International Livestock Research Institute's framework for scaling. Nairobi, Kenya: ILRI.

Dror, I., Wu, N. and Kangethe, E. (2020). Scaling better together—A Mural overview of scaling process of the livestock CRP. Nairobi: CGIAR Research Program on Livestock.

ILRI. 2013. ILRI research publishing procedure 4: Authorship. Nairobi, Kenya: ILRI.

ILRI, (2016). Livestock Agri-food Systems CGIAR Research Program: Proposal CRP and Flagship Narratives.

ILRI, (2016). ISPC Assessment of the Livestock Agri-Food System (LIVESTOCK) CRP-II revised proposal (2017-2022).

ILRI. (2016). ILRI Research Contract Template 2a: Memorandum of Understanding on co-authorship. Nairobi, Kenya: ILRI.

ILRI, (2017). Independent Steering Committee of the Livestock Agri-Food Systems CGIAR Research Program (ISC-CRP) Report on the 1st Meeting. ILRI, Nairobi, 12-14 December 2017.

ILRI. 2017. Guidelines and Procedures on benchmarking scientists' performance. Nairobi, Kenya: ILRI.

ILRI, (2017). CGIAR Research Program on Livestock Agri-Food Systems 2017 Annual Report

ILRI, (2017). Plan of Work and Budget 2017.

ILRI. 2018. ILRI research publishing procedure 10: Ethical photography guidelines. Nairobi, Kenya: ILRI.

ILRI, (2018). CGIAR Research Program on Livestock Agri-Food Systems 2018 Annual Report

ILRI, (2018). Plan of Work and Budget 2018.

ILRI. 2018. ILRI Executive Coaching Program. Nairobi, Kenya: ILRI.

ILRI, (2018). Independent Steering Committee of the Livestock Agri-Food Systems CGIAR Research Program (ISC-CRP), Report on the 2nd Face to Face Meeting. ILRI, Nairobi, 24-26 September 2018.

ILRI, (2019). CGIAR Research Program on Livestock Agri-Food Systems 2019 Annual Report

ILRI, (2019). Plan of Work and Budget 2019.

ILRI, (2019). Presentation to the 3rd Meeting of the Independent Steering Committee



Nairobi, 22-24 October 2019. Report to the ILRI Board, 27 October 2019

ILRI, (2020). Plan of Work and Budget 2020.

ILRI. (2020). ILRI policy procedure on obtaining prior informed consent in research activities. Nairobi, Kenya: ILRI.

ILRI. (2020). ILRI policy procedure on disclosure of confidential research data. Nairobi, Kenya: ILRI.

ILRI, (2020). Report of the first CRP Livestock cross-country Learning Week, April-May 2020. Helena Posthumus, Boudy van Schagen, Froukje Kruijssen, Mona Dhamankar (KIT) and Peter Ballantyne (ILRI)

ILRI, (2020). Introduction to the Livestock CRP. Tom Randolph. CRP Review Virtual Meet & Greet, 7 August 2020.

ILRI, (undated). Gender strategy for the CGIAR research program on Livestock: Delivering gender-appropriate livestock solutions to benefit men and women.

ISPC. (2017). Quality of Research for Development in the CGIAR Context, Brief N. 62. Rome: Independent Science and Partnership Council.

Kangethe, E., Symekher, L., Lemma, M., Sambati, P. and Dror, I. (2018). Capacity needs assessment of Livestock CRP. Nairobi, Kenya: ILRI.

Khaemba, E. (2016). ILRI research compliance update. Presented at ILRI Nairobi, 31 May 2016. Nairobi, Kenya: ILRI.

## Annex 14: Conflict of Interest Statements

### Annex 1 - Conflict of Interest Statement

1. Main employer and any other organization that provides you with remuneration (which may be named participants in the project/program/proposal you are being asked to review/evaluate)

Please provide details: N/A

2. Are you aware whether a relative, close friend, close colleague or someone with whom you have financial ties is receiving funding from or giving advice to a project/program/proposal you are being asked to review/evaluate?

Yes  No

If Yes, please provide brief details:

3. Does any project/program/proposal you are being asked to review/evaluate cite any of your own current research?

Yes  No

If Yes, please provide brief details:

4. Does any project/program/proposal you are being asked to review/evaluate name researchers with whom you have active collaborations, recently published joint papers or are in regular email correspondence?

Yes  No

If Yes, please provide brief details:

5. Does any project/program/proposal you are being asked to review/evaluate name any of your past PhD students as active participants?

Yes  No

If Yes, please provide brief details:

**Declaration:** I declare that the information provided on this statement is true and complete.

Name: KAREN MCHUGH

Signed: 

Date: 09-04-2020

v1 dated 12/01/2020

## Conflict of Interest Statement

1. Main employer and any other organization that provides you with remuneration (which may be named participants in the project/program/proposal you are being asked to review/evaluate)

None

Please provide details:

2. Are you aware whether a relative, close friend, close colleague or someone with whom you have financial ties is receiving funding from or giving advice to a project/program/proposal you are being asked to review/evaluate?

Yes/No

If Yes, please provide brief details:

3. Does any project/program/proposal you are being asked to review/evaluate cite any of your own current research?

Yes/No

If Yes, please provide brief details:

4. Does any project/program/proposal you are being asked to review/evaluate name researchers with whom you have active collaborations, recently published joint papers or are in regular email correspondence?

Yes/No

If Yes, please provide brief details:

It is possible that some of the work I am being asked to view was done by Dr Karl Rich. Dr Rich was co-author of a paper with me last year (reference below). This paper refers to work completed by Dr Rich whilst he was a Faculty member at Lincoln University. The work was commissioned by the Norwegian Economic Research Council. Karl joined ILRI from Lincoln.

**Bennett B**, and Rich K, (2019), "Using preferential trade access to promote global development goals: the case of beef and market access to Norway from Namibia and Botswana", *Agrekon*. 58(4), pp 485-502

5. Does any project/program/proposal you are being asked to review/evaluate name any of your past PhD students are active participants?

Yes/No

If Yes, please provide brief details:

**Declaration:** I declare that the information provided on this statement is true and complete.



**Name:** Prof. Ben Bennett **\_Signed:**

**Date:** 29/6/20



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