

# CGIAR 2019 Annual Reporting Template

Livestock CRP Partner/Program/Priority  
Country Contributions: Vietnam

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## **Livestock CRP Partner/Program/Priority Country 2019 Annual Report - Vietnam**

The Livestock CRP partners and ILRI programs have agreed to take responsibility for implementing the CRP agenda and have aligned certain bilateral project activities and/or have been provided W1/W2 funding to support that work. The Livestock CRP priority countries are intended to serve as the CRP 'field laboratories' where the flagships can test their products and take them to scale and contribute to designing integrated livestock interventions. The priority country projects have been allocated W1/W2 funding both from the PMU and from flagships to conduct their activities.

The purpose of this report is twofold:

- (i) To ensure Flagship Leaders are aware of the progress achieved by the partner /program/priority country project and individual staff so it can be appropriately reflected in the flagship reports; and
- (ii) To provide a record of accountability for the funding allocated to the partner/program/priority country project. The focus is on capturing achievements in the reporting year and their significance rather than describing ongoing activities and future intentions.

The report has 3 parts:

- (i) Part A provides an overview of progress made by the partner/program/country project in terms of both implementing flagship activities and advancing the CRP's engagement with partners/programs.
- (ii) Part B follows the overall CGIAR Annual Reporting Template and gathers any relevant achievements or issues related to each section that could be highlighted in the flagship and overall CRP reports.
- (iii) Part C is a traffic light report on the 2019 POWB deliverables that the partner institution or program committed to achieve as the basis for the Program Partner Agreement (PPA), or the deliverables that the priority country team committed to in their Activity Sheets.

There is some duplication between Part B and Part C, but it is important to provide a record of achievement against the partner's contractual commitment and to make this readily available to the flagship leaders.

**Please complete all boxes in the template, indicating N/A if there is nothing to report**

**Write in clear language that is understandable to a non-specialist reader with no prior knowledge of the CRP and explain all acronyms**

**Partner/Program/Country:** Vietnam

**Partner Focal Point/Program Leader/Country Coordinator name:**

Sabine Douchamps/Nguyen Hung

**List of W1/W2 funded CRP staff (and location) by flagship**

*Please include all staff members with 5% or more of their time allocated to the CRP. If the staff member is involved in priority country project work, indicate the country or countries in the last column*

<b>Staff name</b>	<b>Institution</b>	<b>Job title</b>	<b>Duty station (country)</b>	<b>Flagship affiliation (Genetics/Health/ Feeds &amp; Forages/ Environment/LLAFS)</b>	<b>Priority country involvement (Ethiopia/Tanzania/ Uganda/Vietnam)</b>
Sabine Douchamps	CIAT	PI	Vietnam	F+F, L&E	Vietnam
Nguyen Hung	ILRI	Co-PI	Vietnam	Health	Vietnam
Mai Thanh Tu	ILRI/CIAT	Field coordinator	Vietnam	All	Vietnam
Mary Otieno	CIAT	F+F focal point in-country	Vietnam	F+F	Vietnam
Hu Suk Lee	ILRI	Health focal point in-country	Vietnam	Health	Vietnam
Nguyen Thinh	ILRI	Livelihoods focal point in-country	Vietnam	LLAFS	Vietnam
Nguyen Chi	ILRI	Communication	Vietnam	All	Vietnam
Le Thi Huyen	NIAS	Genetics focal point in-country	Vietnam	Genetics	Vietnam
Michael Peters	CIAT	FP leader – F+F	Kenya	F+F	Vietnam
Alan Duncan	ILRI	F+F support and G-FEAST	UK	F+F	Vietnam
Horacio Gonda	SLU	F+F support	Sweden	F+F	Vietnam
Isabelle Baltenweck	ILRI	FP leader - Livelihoods	Kenya	LLAFS	Vietnam
An Notenbaert	CIAT	FP leader for VN – L&E	Kenya	L&E	Vietnam
Jessica Mukiri	CIAT	CLEANED	Kenya	L&E	Vietnam
John Mutua	CIAT	CLEANED	Kenya	L&E	Vietnam
Lutz Merbold	ILRI	Environment	Kenya	L&E	Vietnam
Karen Marshall	ILRI	FP leader - Genetics	Kenya	Genetics	Vietnam
Ulf Magnusson	SLU	FP leader - Health	Sweden	Health	Vietnam
Barbara Wieland	ILRI	Health	Kenya	Health	Vietnam
Mark Van Wijk	ILRI	Baseline	Equador	L&E	Vietnam
Jane Poole	ILRI	Research methods	Kenya	M&E	Vietnam
Nils Teufel	ILRI	Survey design	Kenya	M&E	Vietnam

## **PART A: Partner/Program/Country Annual Progress**

### **A.1 Achievements**

*Provide an overview of 2019 achievements in advancing the CRP Livestock research agenda towards its targeted outcomes, by flagship and in the priority countries (500 words max.)*

With the expansion of the country project focus from pig value chain towards a system perspective, and from a one-center project to a collaborative project between three CRP partners, considerable time had to be invested in discussing the new scope for the Livestock CRP in Vietnam. Several workshops, field visits, partners consultations, scoping studies and field assessment were needed to reach a common understanding of the issues to address and the opportunities for livestock research in Vietnam. The new vision of the Livestock CRP in Vietnam is that emerging and semi-commercial crop-livestock farmers generate more income through stronger crop-tree-livestock interactions, leading to higher whole farm productivity and reduced environmental degradation. It will contribute to advance the Livestock CRP research agenda toward its targeted outcomes by (i) intensify sustainably crop-livestock smallholder systems, (ii) commercialize livestock smallholder production, and (iii) build an enabling environment for sustainable livestock intensification.

Specifically, the main achievements of these first months are:

1. the project proposal

The project team has agreed on the project objective (“To stimulate system transformation - livelihoods, environment, equity, and market access - to empower highland farming communities through bundled livestock-based interventions in North-West Vietnam”) and on the related project concept, design, theory of change and activities;

2. the baseline design

The survey tool RHoMIS (Rural Households Multi-Indicator Survey) has been adapted for the project needs and enumerators were trained in collaboration with the implementing partners. Sampling was designed in such a way that the data can also be used for impact assessment at a later stage;

3. partners engagement

A first set of partners and officials was successfully engaged, both in project design and implementation (see section on partners engagement, and capacity building).

## **A.2 External partnerships and engagement**

*Describe any significant changes in external partnerships of the partner/program/country project contributing to CRP work, and any achievements in strengthening stakeholder engagement (200 words max.)*

Vietnamese partners were engaged through their participation in the various workshops organized to discuss and formulate the country project, including NIAS (National Institute of Animal Sciences), NIVR (National Institute of Veterinary Research), IPSARD (Institute for Policy and Strategy for Agriculture and Rural Development) and NOMAFSI (Northern Mountainous Agriculture and Forestry Science Institute). These institutions were also involved in field visits and preliminary assessments. NOMAFSI will be a main partner for the activities in Son La province, and was contracted to implement the baseline survey. CIRAD (French Center for agricultural research for development) partners in Vietnam as well as A4NH were consulted as well at several occasions during the process.

A first visit to engage officials and potential partners at provincial level was done in December 2019, including the Sub Department of Livestock and Animal Health of Son La province, the agriculture division of Mai Son district, the Agriculture service center of Mai Son district, commune level officials and extension services, as well as Tay Bac University, the biggest university in NW Vietnam.

A stakeholder meeting will be organized jointly with the agriculture division of Mai Son district in March-April to share the baseline findings and intervention plans. A partnership mapping exercise is planned for 2020.

## **A.3 Internal partnership progress**

*Describe any significant changes during 2019 that have affected the role of the partner/program/country project in the CRP, its expectations, its commitment and its capacity to contribute. Highlight any emerging issues in the relationship with the CRP and how they are being addressed (200 words max.)*

2019 witnesses a good start in the collaboration between CIAT, ILRI and SLU for coordination and joint activities in Vietnam. Three planning workshops were organized in Hanoi, including a field visit to Son La, which helped CIAT, ILRI and SLU to get a common understanding of the issues to address and to develop jointly the country project proposal. This also ensured the establishment of good communication channels, which are essential as two third of the country team is located outside Asia, including all flagship leaders. The country team is now composed of a joint ILRI/CIAT field coordinator, as well as one focal point per flagship.

## **PART B: Contributions to CRP annual report**

*Please highlight any achievements relevant to each section, using bullet points that can be extracted straight into the flagship reports. This is important as part of the justification for future W1/2 allocation to support CRP work by the partner/program/priority country. Refer to the Tables where relevant.*

### **1. Key Results**

#### **1.1 Progress Towards SDGs and SLOs (sphere of interest, with research results frequently predating the CRP)**

*a) overall contribution of CRP towards the SRF targets, based on rigorous adoption and/or impact data. Please complete Table 1: Evidence on Progress towards SRF targets (Sphere of interest) and refer to this in the text (150 words max.)*

No evidence yet in 2019 as in contrast to other priority countries a new land scape approach is being employed in different locations, though using lessons on previous CRP work on pork value chains in Vietnam

*b) any areas of learning from impact assessments which have influenced the direction of the program (100 words max.)*

No evidence yet in 2019 (see above)

#### **1.2 CRP Progress towards Outputs and Outcomes (spheres of control and influence)**

##### **1.2.1 Overall progress**

*Provide a brief summary narrative about how the CRP progressed towards the agreed program outcomes, highlighting (i) major pieces of work and (ii) major course corrections. Where relevant, indicate cross-flagship linkages (200 words max.)*

*Please complete the following tables and refer to them in the text, as appropriate:*

Table 2: Condensed list of policy contributions

Table 3: List of Outcome/Impact Case Reports from this reporting year (Sphere of Influence)

Table 4: Condensed list of innovations by stage for this reporting year

*Table 5: Summary of status of Planned Outcomes and Milestones (Sphere of Influence-Control)*

### 1.2.3 Variance from Planned Program for this year

*(a) Have any promising research areas been significantly **expanded**? If so, for each example, please explain clearly where the demand came from (e.g. promising research results, demand from partners) and where the money for expansion has come from? (100 words max.)*

As the work on pork value chain in the first phase has already made significant advances, particularly on the food safety side, and as the new phase aims at translating the CRP livestock research outputs into integrated transformative pilot interventions, the focus for this phase is shifted towards a more integrated topic.

Decision was taken to enlarge the pig value chain focus to a full system perspective, including beef cattle which is an emerging sector in Vietnam. Consultations with national partners and a stock taking exercise allowed assessing the needs and opportunities for livestock research, as well as the more appropriate location in Vietnam.

*(b) Have any research lines been dropped or significantly **cut back** (note that cutting research lines which do not seem to be delivering is seen by Funders and the System Organization as a sign of good management, not of failure). If so, please give specific examples and brief reasons, and if funding was reallocated to other work, explain where the money went (100 words max.)*

Although the focus on pork value chain has been dropped, research on pork will still be carried out as pigs are an important part of the smallholder crop-livestock systems targeted.

*(c) Have any **Flagships** or specific research areas **changed direction**? If so, please describe how and why (100 words max.)*

Yes, as the whole program has changed direction, please see above.  
Particularly, the new phase allows the integration in the country program of flagships that were not present in the first phase, particularly Feeds and Forages and Livestock and Environment.

### 1.2.4 Altmetric and Publication highlights

*a) Highlight any non-peer reviewed publications with an inordinate number of tweets, blog posts or other attention (100 words max.)*

Reports of preliminary assessments from each flagships as well as shared activities were prepared at the end of 2019. They provide a good overview of the context, and the constraints and opportunities faced by crop-livestock smallholder farmers in North West Vietnam, and were used to prepare the project proposal.

*b) Highlight 2 to 3 'special' peer-reviewed publications from 2019 e.g. ones with a large number of citations/downloads, high media attention, high Altmetrics score (100 words max.)*

No publications yet

### **1.3 Cross-cutting dimensions (at CRP level)**

#### **1.3.1 Gender**

*a) Using concise bullet points, list any important CRP **research findings, methods, tools, capacity development, policy changes or outcomes** in 2019 related to gender issues (150 words max.)*

The LLAFS team will conduct a 'deep dive' on gender and livestock in the selected project communes, and ensure equal participation and benefits in project activities - ensuring that women and men are giving equal opportunities to attend workshop, trainings and other events.

- b) *Mention any important gender findings that have influenced the direction of the CRP's work, and how things have changed (100 words max.)*

N/A

- c) *Have any problems arisen in relation to gender issues or integrating gender into the CRP's research? (100 words max.)*

No problems have arisen at this stage. The preliminary assessment conducted this year has not been able to identify potential differentiated constraints and opportunities for women and men.

### **1.3.2 Youth and other aspects of Social inclusion / "Leaving No-one Behind"**

- a) *Using concise bullet points, list any important CRP **research findings, methods, tools, capacity development, policy changes or outcomes** in 2019 related to issues of youth, social inclusion, and "leaving no-one behind", for example with the poorest groups, indigenous peoples, or disabled people, and intersectional analysis (150 words max.)*

The project site was chosen for its high proportion of ethnic minorities, and thus a strong focus on ensuring equity is recognized as being important to achieving maximal project impact. Activities planned for 2020 will take this aspect into account.

- b) *Mention any important youth and social inclusion findings that have influenced the direction of the CRP's work, and how things have changed (100 words max.)*

None

c) *Have any problems arisen in relation to youth and social inclusion issues or integrating youth into the CRP's research? (100 words max.)*

None

### **1.3.3 Capacity Development**

*Summarize key achievements and learning points in Capacity Development in 2019, cross-referencing to other data in this report (e.g. results tagged as principal for CapDev) where relevant (200 words max.)*

Beside the training of enumerators from NOMAFSI for the baseline survey and the training of staff members of the District Agricultural Service Center for the application of the tool G-FEAST (Feed Assessment Tool), no capacity development activities took place in 2019.

### **1.3.4 Climate Change**

*Summarize key achievements and learning points in terms of your contributions to addressing climate change issues (200 words max.)*

With a focus moving towards a system and landscape perspective, environmental aspects will be addressed more strongly in this phase with respect to the first one. Preliminary assessments were conducted this year to gather farmer's perceptions of environmental issues, and the most pressing concerns reported were erosion, soil fertility, deforestation and pollution. Although climate change is currently not perceived as a major risk by farmers, forage crops suitability will likely be strongly affected in future scenarios (Notenbaert et al., 2019). A CLEANED assessment is planned for 2020.

## **2. Effectiveness and Efficiency**

### **2.1 Management and governance**

*Describe any major changes to management, governance arrangements and practices, if any. Describe any key top-level program management challenges, if any, and how they were addressed (200 words max.)*

N/A

## **2.2 Partnerships**

### **2.2.1. Highlights of External Partnerships (300 words)**

*Summarize any interesting highlights, value added and points to improve/ learning points from 2019 and refer where appropriate to*

**Table 8: Key** external partnerships (200 words max.)

A detailed partnership mapping exercise will be carried out in 2020, and will allow defining the needs and roles for external partners in the country project. However, we have already engaged different partners at local and central level in the project through project workshops and meetings. The key partnership developed with national research namely the National Institute of Veterinary Research (NIVR) and National Institute of Animal Sciences (NIAS), both under MARD, became implementing partners for some flagship works. At local level we could engage the NOMAFSI research center and the Sub-Department of livestock and animal health in Son La. These local partners are key for implementing fieldwork and future policy implication.

**2.2.2. Cross-CGIAR Partnerships (300 words)**

*Summarize general points on highlights, value added and points to improve/ learning points from 2019 and refer where appropriate to*

**Table 9: Internal** Cross-CGIAR Collaborations. *Any points you can include on added value of Platforms and integrating CRPs would be very useful (200 words max.)*

Collaboration with A4NH has been helpful in designing and implementing activities in this first year of the project, and closer interactions are expected in 2020, as the two CRP work in the same province. There is an overlap between the two programs on the topics of food safety, nutritional value and environmental footprint of livestock products in the area targeted. Regular communication and participation to each other events has ensured information sharing in 2019, and data and methods sharing are being discussed.

### 2. 3. Intellectual Assets

*(a) Have any intellectual assets been strategically managed by the CRP (together with the relevant Center) this year? E.g. taking out intellectual property rights, licensing, new innovative practices. Note that strategic management implies involvement of PMU, flagship or cluster leaders in decision making, in furtherance of the CRP Theory of Change (50 words max.)*

N/A

*(b) Indicate any published patents and/or plant variety right applications (or equivalent) associated with intellectual assets developed in the CRP and filed by Centers and/or partners involved in the CRP, giving a name or number or link to identify them (100 words max.)*

N/A

*(c) List any critical issues or challenges encountered in the management of intellectual assets in the context of the CRP (50 words max.)*

None

## **2.4 Monitoring, Evaluation, Impact Assessment and Learning (MELIA)**

**a)** *Complete*

b)

Table 10: Monitoring, Evaluation, Learning and Impact Assessment and add a short narrative here to introduce the table and highlight any key points of interest (max. 50 words)

N/A

c) Complete Table 11: Update on Actions Taken in Response to Relevant Evaluations

## 2.5 Efficiency

Describe any examples of efficiency gains and successes in 2019 and points to improve in future, providing numbers where possible. For previous examples, see 2017 CGIAR performance report, p. 45 (100 words max.)

N/A

## 2.6 Management of Risks to Your CRP

*Summarize any encountered risks and mitigation measures taken under the three following headings: programmatic, contextual and institutional risks (for more information see the [CGIAR Risk Management Guidelines](#) (100 words max.)*

Contextual risks:

The field work carried out by foreigners in the selected site depends highly on permits delivered by local authorities. With proper preparation, these permits are obtained without difficulty under the current national regulations.

The current coronavirus outbreak starts to impede field work in some areas of the country bordering China, with non-issuance of permits. Although the project site has not been affected until now, it cannot be completely excluded that the site becomes unreachable for foreigners for a brief period in the coming month.

## 2.7 Use of W1-2 Funding

Complete

**Table 12: Examples of W1/2 Use in this reporting period (2019), and briefly elaborate below on any particularly interesting points on your use of W1/2: e.g. any important achievements and/or cross-cutting work made possible (100 words max.)**

N/A

## Annual Report Tables

### Table 1: Evidence on Progress towards SRF targets (Sphere of interest)

*Complete this table with any available high-quality evidence on progress that was published or made available in 2019. Do not hesitate to state, “no new evidence available this year”, in column 2 if appropriate. For examples of how this information can be phrased and referenced, please see Annex Table A [here](#) in the 2017 CGIAR Annual Performance Report.*

*If the adoption or impact data comes from a relevant innovation or contribution of the CGIAR prior to the CRP start-up (e.g. varieties released before the CRP start-up, which for most CRPs would be approximately 2012), then please support statements with published references, as shown in the 2017 Annual Report Annex Table A above. Nearly all adoption or impact studies fall into the above category. There are a few cases in which the estimated figures for at-scale adoption or impact result from an innovation released within the current CRP period. If this is the case, then the statement must be supported by a link to an Outcome/ Impact Case Report **Maturity Level 3**.*

<b>SLO Target (2022)</b>	<b>Brief summary of new evidence of CGIAR contribution</b>  <i>[Put N/A if the specific SRF target is not applicable to your CRP. Put "No new evidence in 2018" if the target is potentially relevant, but there is no new evidence available. Spell out all acronyms.]</i>  <i>Max. 150 words</i>	<b>Expected additional contribution before end of 2022</b> (if not already fully covered).  <i>[Optional narrative. Evidence not required.]</i>  <i>Max. 100 words</i>
<b>1.1.</b> 100 million more farm households have adopted improved varieties, breeds, trees, and/or management practices	No new evidence available in 2019	
<b>1.2.</b> 30 million people, of which 50% are women, assisted to exit poverty	No new evidence available in 2019	
<b>2.1.</b> Improve the rate of yield increase for major food staples from current <1% to 1.2-1.5% per year	No new evidence available in 2019	
<b>2.2.</b> 30 million more people, of which 50% are women, meeting minimum dietary energy requirements	No new evidence available in 2019	
<b>2.3.</b> 150 million more people, of which 50% are women, without deficiencies in one or more essential micronutrients	No new evidence available in 2019	
<b>3.1.</b> 5% increase in water and nutrient efficiency in agroecosystems	No new evidence available in 2019	
<b>3.2.</b> Reduction in 'agriculturally'-related greenhouse gas emissions by 5%	No new evidence available in 2019	
<b>3.3.</b> 55 M ha degraded land area restored	No new evidence available in 2019	
<b>3.4.</b> 2.5 M ha forest saved from deforestation	No new evidence available in 2019	

**Table 2: Condensed list of policy contributions in this reporting year (Sphere of Influence)**

List policy contributions here. (The indicator guidance for indicator #11 number of policies includes an explanation of what is covered under the term ‘policy’.)

Title of policy, legal instrument, investment or curriculum to which CGIAR contributed (max 30 words)  <i>Spell out acronyms in every row</i>	Description of policy, legal instrument, investment or curriculum to which CGIAR contributed (max 30 words).	Level of Maturity	Link to sub-IDs (max. 2)	CGIAR cross-cutting marker scores				Link to OICR (obligatory if Level of Maturity is 2 or 3) or link to evidence
				Gender	Youth	Capdev	Climate Change	
	No new evidence available in 2019							

**Table 3: List of Outcome/Impact Case Reports from this reporting year (Sphere of Influence)**

List any Outcome/ Impact Case Reports (OICR) generated in this reporting year. The report can be for a new Outcome/ Impact Case or one previously reported that has progressed to a new level of maturity or has been updated but is at the same level of maturity. Please note that you have to use the common CGIAR outcome/impact case report template. The levels of maturity (column 2) are described in the OICR template, with examples.

Title of Outcome/ Impact Case Report (OICR)	Maturity level: 1, 2, or 3	Indicate if this is: - new outcome - updated Case- same level of maturity - updated Case- new level of maturity
No new evidence available in 2019		

**Table 4: Condensed list of innovations by stage for this reporting year**

Please see [indicator guidance](#) for details of innovation descriptions, types, stages.

Title of innovation (with link if possible)	Innovation Type	Stage of innovation	Geographic scope (with location)
No new innovation in 2019			

**Table 5: Summary of status of Planned Outcomes and Milestones (Sphere of Influence-Control)**

*For each outcome, outline highlights of progress, setbacks and changes of direction this year, and briefly explain how the set of milestones have contributed to current progress/direction (100 words max.). Indicate the status of milestones and include links or references for supporting evidence where appropriate.*

Flagship	Outcome	Summary narrative on progress against outcome in 2019	Milestone	2019 milestone status (complete, extended, cancelled, or changed)	Evidence for completed milestones or explanation for extended, cancelled or changed
F1	Outcome 1.1: Data on livestock diversity and systems, including from a gendered lens, used to develop or refine genetic improvement and / or conservation strategies by policymakers, national research and development partners, and the private sector, in 5 CRP priority countries and other locations.		2017 extended to 2019 - Milestone 1.1.1 Increased (household survey, productivity and genomics characterization) data availability (published open-access) on livestock diversity and systems, including from a gendered lens)		
F1	Outcome 1.2 Genetic improvement strategies for improved livestock genetics implemented by national research and development partners, and the private sector in 6 CRP priority countries and other locations.		2017 extended to 2019 - Milestone 1.2.2 Breeding schemes developed and piloted in CRP priority countries		
F1			2017 extended to 2019 - Milestone 1.2.3 Protocols in place for the collection of data for phenotypic and production systems characterisation, for genome editing and ex-situ conservation.		

F1			2019 - 1.2.4 Availability of zebu x taurine admixture SNPs chips for screening of dairy cattle crossbreed in Ethiopia and Tanzania by August 2019.		
F2	Outcome 2.1 Assessment tools for significance of animal diseases and risk maps for emergence of animal diseases are used by 100 local and national and 50 international research partners and donors to prioritise research and development interventions to reduce livestock disease risks for livestock keepers.		2019 - 2 epidemiological risk models (pig and small ruminant disease) developed, and modelling framework for assessment of PPR control and eradication defined, by end of 2018.		
F2	Outcome 2.2 Context specific herd health management packages adopted by farmers, extension and animal health workers in priority countries and other locations.		2019 - Tool to determine herd health packages for the pig value chain in Uganda developed by the end of 2018.		
F2	Outcome 2.4 National and international research partners, government agencies and the private sector use 2 novel diagnostic assays and vaccines for control of ASF, CBPP, CCPP, ECF and PPR in at least 6 priority countries.		2019 - Agreements with at least 2 private partners to commercialise improved diagnostic tests for CBPP in Kenya, Uganda, Ethiopia, Tanzania and Mali by the end of 2018.		
F2	Outcome 2.5 Improved access to livestock-related health services and products for female and male livestock keepers in 4 priority countries		2019 - Market for diagnostics in Kenya, Uganda, Tanzania, Ethiopia and Mali assessed and cost effectiveness of producing		

			thermostable PPR vaccine analysed by July 2018.		
F3	Outcome 3.1 - Local, national and international research and development partners, the private sector, decision-makers and livestock producers are able to diagnose feed constraints and opportunities and to effectively prioritize and target feed and forage interventions, resulting in: a 10% improvement in utilization of feeds and forages, a 20% increase in animal production using improved feed and forage technologies, a 10% accuracy increase for biomass and quality estimation and at least 250,000 annual visitors to global databases, repositories, interactive tools and maps and the Tropical Grasslands/Forrajes Tropicales journal website.		2019 - 3.1.2 Research and development partners, decision makers and the private sector (input suppliers) evaluate and use improved tools such as Gendered-FEAST for on-farm (one country), and feed supply demand assessment tool for regional (one priority country) and national feed assessment (one priority country). 2 partners at each scale (on-farm, regional, national).		
F3			2019 - 3.1.6 Research partners and the private sector use refined CGIAR stationary and mobile NIRS hubs in Eastern Africa: in 1 priority country and one other country with at least on key NARS and private sector partner each in each country		
F3			2019 - 3.1.12 Access of research partners to CRP generated knowledge on forages increased through 3 issues of the Tropical Grasslands journal (January, May, September) and 1 released and updated tool (SoFT)		

F3	Outcome 3.3 - National and international research and development partners and the private sector are using CRP developed forage and rangeland resources (with enhanced traits), in 30 countries and reaching producers who plant over 2 million ha, to increase the rate of genetic gain and exploit the genetic diversity of forages and rangeland species to enhance stress-tolerance, biomass productivity and nutritive value.		2019 - 3.3.2 A total of 100,000 new hectares planted in 2019 with forage hybrids in a total of at least 15 countries (calculated based on seed sales). The total area of hybrids scaled will have reached 1,000,000 hectares in 2019 and includes all hybrids scaled since 2001		
F3			2019 - 3.3.4 10 barley genotypes with higher biomass, higher grain yield, better tolerance to biotic and abiotic stresses disseminated to NARS partners in Morocco and Ethiopia		
F3	Outcome 3.4 - New forage and crop cultivars, superior to local (based on food, feed and fodder traits weighted according to target domains), made available by development partners, government agencies and the private sector and applied by farmers in 7 priority counties and other locations.		2019 - 3.4.1 Identified dual-purpose crops (food and feed) applied by 100,000 farmers in at least one country.		
F3	Outcome 3.5 - National and international development partners, government agencies and extension services, the private sector and community-based organisations in 3 priority countries are using CRP-related research outputs for better utilization of existing and novel feed and forage		2019 - 3.5.2 Training modules in feed processing and feeding targeting key actors in feeding, mainly women, are used by at least one national and one international development partners in at least 1 priority country		

F3	resources. This will be through (a) scalable processing technologies, (b) management strategies to conserve and rehabilitate rangelands and (c) diet formulation that increases productivity while reducing overall feed and forage costs and environment impacts.		2019 - 3.5.4 At least two scalable and gender-responsive feed production and feed processing technologies are used by national and international development partners, the private sector and community-level organizations in at least one priority country		
F3	Outcome 3.6 - Livestock producers in 3 priority countries: apply management strategies to conserve and rehabilitate rangelands and pastures while ensuring ongoing ability to produce, preserve and store feed biomass and use diets that increase productivity while reducing overall feed and forage costs and environmental impacts (with the environment and livelihoods flagships).		2019 - 3.6.1 Well adapted cactus accessions and agronomic practices made available to a total of 1000 farmers in two different agro-ecological sites in India		
F3	Outcome 3.8 - Increased delivery and uptake of feed and forage resources through proof-of-concept scaling, business model development and value-chain approaches by development partners, the private sector (feed and forage traders, feed processors) and (1 million by 2022) farmers across diverse environments in priority countries and other locations in Latin America, North and East Africa and South and Southeast Asia.		2019 - 3.8.2 At least 1 Inclusive business model for improved supply of forages and feed processing systems tested and validated in 2 countries		
F3			2019 - 3.8.6 National and international development partners and other value-chain actors pilot test at least 3 extension approaches (including at least 1 that improves women's access to information) in at least 1 country		

F3			2019 - 3.8.9 Private Sector is supporting uptake of improved forages in East Africa (2 countries): a) at least 1 seed company by working on improved availability of seeds and b) at least 1 dairy enterprise by supporting uptake of improved forage by their deliverers/milk farmers		
F3			2019 - 3.8.14 At least 1 Innovation/Multi-stakeholder Platform in at least 1 country is functioning on its own		
F4	4.1 Environmental concerns are considered in decision making across at least 10 priority countries and other locations, by national and international development partners, government agencies and extension systems, including technology developers seeking to improve cattle, small ruminant and pig production.		2019 - 4.1.2 Technology developers take environmental issues into account in their research priority setting in three countries.		
F4	4.2 Targeted solutions are used by research and development partners, across at least 10 priority countries and other locations, to increase the productivity of cattle, small ruminants and pigs in the face of ongoing environmental changes.		2019 - 4.2.1 Novel approaches for ex-ante environmental assessment are widely adopted by extension systems, development partners and government agencies in three countries to identify win-win options.		

F4	4.3 Government agencies and development partners at local and national levels across at least 10 priority countries and other locations are promoting environmental management options.		2019 - Five sustainable rangelands interventions in Kenya, Tanzania, Tunisia and Ethiopia are identified, tested and disseminated to livestock producers by the end of 2018.		
F4			2019 - 4.3.2 Quantification of environmental benefits leads to selection and further development of management options by at least one partner in three priority countries		
F4	4.4 Gender responsive environmental management options that are well adapted to Global Environmental Change are adopted by households (women and youth) in 6 countries.		2019 - Tools to enhance gender inclusion in environmental management identified: four tools identified by end of 2018 across five types of sustainable land management projects, based on a global review.		
F4	4.5 National government agencies across at least 5 priority countries design and implement key policies to improve the environmental management of livestock systems		2019 - 4.5.2 National government agencies in three priority countries use flagship outputs to improve land governance arrangements, thereby helping to reduce land degradation.		
F5	5.2 International researchers and agencies use improved livestock system modelling tools and apply them to new problems based on their mandate areas		2019 - Scenarios and modeling approaches agreed upon for integrated macro-meso analyses		

F5	5.3 Policy- or decision-makers in 4 countries use the packages developed and the evidence on the benefits of including gender equity considerations In the development of livestock projects and planning at community and national level (Ethiopia, Kenya, Nicaragua, Vietnam)		2019 - Benchmark publication on gender and livestock to identify frontiers in research and development published by December 2018.		
F5	5.4 Local or national development partners in four priority countries adopt gender-transformative and youth-supportive approaches (using the evidence from the strategic gender research done under the CRP)		2019 - 5.4.3 1 journal article submitted entitled "A retrospective on gender empowerment"		
F5	5.5 Local and national development actors, government agencies, and the private sector invest in and adopt the most successful approaches for enhancing livestock-mediated nutritional impact, including institutional arrangements and behavioural change, in 3 priority countries.		2020 - 5.5.4 Local and national development actors and government agencies adopt tailored options for nutritional impact through livestock development, including cost-effective institutional arrangements and behavioural approaches, within communities in Kenya		
F5	5.6 Livestock communities across 4 priority countries apply tested technologies, management strategies and institutional arrangements, taking the multiple functions of livestock into account		2019 - 5.6.4 Livestock communities across 2 countries (Ethiopia and Kenya) apply tested technologies and management strategies based on CRP related research		

F5	5.7 Development partners, private sector and government agencies across 4 priority countries apply innovative institutional arrangements to enhance competitiveness and inclusiveness		2020 - 5.7.3 Development partners, private sector and government agencies in 2 priority countries apply innovative institutional arrangements to raise competitiveness and inclusiveness		
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**Table 8: Key external partnerships***List up to five important partnerships for 2019*

<b>Lead FP</b>	<b>Brief description of partnership aims (30 words)</b>	<b>List of key partners in partnership. Do not use acronyms.</b>	<b>Main area of partnership (may choose multiple), Research/Delivery/Policy/Capacity Development/Other, please specify _____</b>
	Sub Department of Livestock and Animal Health of Son La province (provincial level).	We gained great insights on animal health issues, livestock production in Mai Son and livestock product markets in Son La. Note that livestock products like smoked buffalo, sausage are more in Son La city, quite small business take place in Mai Son but obviously livestock production is more from Mai Son. Sub-DAH will be involved in animal health FP with NIVR and broadly on livestock production.	Policy Capacity Development
	The agriculture division of Mai Son district	This is a local authority at district level to manage agriculture including livestock policy. We discussed and agreed that the stakeholder meeting in March- April to share RHoMIS findings and intervention plans should be co-organized by Mai Son district authority and the project.	Research Policy
	Tay Bac University	This is the biggest university in NW Vietnam training Vietnamese and Lao student. With about 500 staff (300 faculty), 5000 students (1000 Lao) they have a faculty of Ag with crop, livestock, vet training and some other faculties in natural sciences and econ. They showed their	Capacity Development

		interest in being informed and if possible part of the project and training.	
	NOMAFSI research and development center for agro-forestry	We collaborate with this center to implement the RHoMIS study	Research Capacity Development
	MARD	This is at central level, we interacted with sub-MARD institution such as NIAS, IPSARD, Sub DAH, NIVR to engage them in the projects through workshops, meetings. Some of them became implementing partners in certain flagships, in particular with NIAS and NIVR.	Research Policy



**Table 10: Monitoring, Evaluation, Learning and Impact Assessment (MELIA)**

*Indicate the Status of Evaluations, Impact Assessments etc. conducted in 2019 – contact Nils Teufel for guidance on types/descriptions if necessary*

Studies/learning exercises in 2019	Type of study or activity	Description of activity / study	Links to MELIA publications
None			

**Table 11: Update on Actions Taken in Response to Relevant Evaluations**

Name of the evaluation	Recommendation number (from evaluation)	Text of recommendation (can be shortened)	Status of response to this recommendation: Completed/ Ongoing	Concrete actions taken for this recommendation (one row per action)	By whom (per action)	When (per action)	Link to evidence
None							

**Table 12: Examples of W1/2 Use in this reporting period (2019)**

*The objective of this table is to self-report key activities and deliverables that were funded through W1/2 in the past year.*

<p><b>Please give specific examples, one per row (including through set aside strategic research funds or partner funds)</b></p> <p>Max 50 words/example, but aim for 30</p>	<p><b>Broad area of use of W1/2: Research / Delivery / Partnerships / Capacity Development / Other cross-cutting / Policy / Pre-start up / Contingency or Emergency / MELIA / Other (specify)</b></p>
None	

**Part C: 2019 Deliverables**

Please insert a table with the agreed deliverables in your PPA/program agreement/priority country project, indicating the status of each: complete (providing evidence link), extended (giving year), or cancelled (giving reason).

Flagship	Deliverable	Status	Reason for delay or cancelation
Shared	Stocktaking review	Completed	
Shared	Policy review	Revision of the document pending	Availability of reviewers and editors
Shared	Site selection document	Completed	
Shared	Workshop minutes	Completed	
Shared	Baseline data	Postponed to 2020	The survey is postponed to Feb 2020 due to delays with ethical approval and finalization of the survey instrument
Shared	Baseline report	Postponed to 2020	idem
Shared	Partnership mapping report	Postponed to 2020	Difficulties to find date with busy schedule of everyone.
Shared	Project proposal	Completed	
Genetics	Recommendations for genetic improvement strategies for cattle, pigs and chicken within ethnic minority communities in the highlands of Vietnam	Completed	
Health	Assessment report	Completed	
F+F	Seed systems study	In progress	Study done, draft paper in progress
	Focus Group Discussions report	Completed	
L&E	Assessment report	Completed	
LLAFS	Presentation of results of the VC scoping study	Completed	