



Terms of Reference Environmental Impact Assessment (EIA)



Program: “Improving the living conditions in rural communities of northern Vietnam through the promotion and training of efficient and environmentally friendly technologies towards the households’ environmental health and food security” Registration Nº 10-C01-036

Vietnam, 2013

1 Introduction

The following Terms of Reference are oriented to conduct an environmental impact assessment in the frame of the Program: “Improving the living conditions in rural communities of northern Vietnam through the promotion and training of efficient and environmentally friendly technologies towards the households’ environmental health and food security” conducted by CODESPA in Vietnam.

This program has been conducted in the Northern provinces of Yen Bai and Tuyen Quang since 2010, and it is oriented to mitigate the environmental impact of smallholder farmers’ practices through the strengthening of local markets and other economic drivers.

Despite the large impact achieved by the program in socioeconomic terms, CODESPA has identified the need to evaluate the environmental impact and effects of the program, regarding the environmental benefits derived from the behavioral change of the targeted households.

This EIA is oriented to achieve the following objectives:

- ✓ Set up a baseline of behavioral habits and practices of smallholder farmers in the targeted areas, focusing on the daily practices with effects on the environment.
- ✓ Establish a brief characterization of the environmental situation in the targeted area (people, flora and fauna; land, water, air, climate and landscape; material assets and cultural heritage; and interaction between the above-mentioned factors).
- ✓ Analyze the positive/negative impacts derived from the program activities.
- ✓ Make recommendations to improve the environmental impact of the programs, regarding activities to be implemented, and indicators or tools to be included in the monitoring and evaluation system of the program.
- ✓ Describe the best practices and lessons learnt in of the Program in environmental terms.

2 Program background

Program Title: Improving the living conditions in rural communities of northern Vietnam through the promotion and training of efficient and environmentally friendly technologies towards the households’ environmental health and food security”

Geo scope: Yen Bai (9 districts), Tuyen Quang (6 districts)

Length: September 2010 – September 2014

Implementer: CODESPA Foundation



An understanding of the impact of CODESPA actions on the environment is a prerequisite for sustainable development and a basis for our survival

Human beings as all other forms of life are dependent on the earth’s life-sustaining systems for their existence and their well-being. The ecocycles and ecological processes of nature regulate climate and water flow, clean air and water, recycle essential elements, create and regenerate soil and permit all forms of life to exist, reproduce and develop. These ecocycles constitute the foundation of all types of human production. Today human beings affect all ecosystems, and in all ecosystems (with very few exceptions) there are human beings who are a part of them and dependent on them. The great challenge we face today is to enable good and meaningful lives for all people in ways which respect the other forms of life on earth and which are ecologically, socially and economically sustainable in the long-term.

The relationship between a development project and the people and the environment it affects is dynamic and changeable. People affect the environment in which they live and are affected, in turn, by changes in the environment. It is against this background that environmental impact assessments are made. CODESPA assumes it is impossible to obtain complete information on its projects, the environment or the people, but it is necessary to obtain as much information as possible in order that wise decisions can be made. It is also important to assess the degree of uncertainty in the information obtained and to take this into consideration.

CODESPA is a non-profit organization that has been working for more than 27 years in international cooperation for development. CODESPA's approach to fighting poverty is helping low-income communities in developing countries to become fully involved in economic activities with which they can generate income as well as develop their own capacities and human potential. This approach has led CODESPA to be recognized as a highly effective NGO specialized in the field of economic development using market creation, capacity development and microfinance as key tools in the fight against poverty.

Overview: The Program seeks to boost the socioeconomic development of rural areas in the north of Vietnam through the generation of adapted-technology markets (e.g. agro inputs, sanitation services, etc.) to support the food security, the improvement of income sources and the environmental resources management of the local population.

The program includes the following interventions:



Health

Project: Development of the sanitation market through awareness campaigns in hygienic practices and the establishment of a sustainable supply chain of sanitation services.

Goal: Reduce to half the incidence of sanitation related diseases in the areas intervened by the program

Method: developing local markets generating the households' demand through awareness and social marketing campaigns and developing a profitable supply chain

Target: Up to 70% of the households change their behavior and practice hygienic habits, investing in sanitation and improving their health conditions

Environmental scope: Reduce pollution of surface water and ground water by latrines for waste management; prevent human epidemic outbreaks by reducing the infection vectors; reduce air pollution through raising awareness to stop open-field defecation practices; improve the farm ecocycle by linking compost -organic fertilizer for agricultural activities-improved yield.

Partners: Center for Preventive Medicine of Yen Bai, The Women's Union of Yen Bai, The Agriculture Extension Center of Tuyen Quang and Yen Bai, and HADEVA.



Food security – Agriculture

Development of the FDP compacted fertilizers market –see Appendix 1 'Intro FDP'- to promote the switch of fertilization practices in smallholder farmers.

Goal: Reduce the rural poverty and the environmental impact of agricultural activities through the promotion of sustainable and efficient agro inputs

Method: Promoting local markets of compacted fertilizers generating the households' demand through awareness and social marketing campaigns and developing a profitable supply chain

Target: Up to 70% of the farmers give up broadcasting powdered fertilizers to their rice paddies in the areas intervened by the program

Environmental scope: Reduce water pollution by preventing agrochemicals runoff; decreasing nitrogenized emissions (GHG) to the atmosphere by replacing powdered fertilizer (NPK) by compressed pellets to be placed underground; increase the proportion of organic material in the fertilization practices of smallholder farmers; reduce the amount of persistent organic pollutants (POPs) applied to the cultivation land; strengthen the conservation of native seeds; increase the food security level.

Partners: Center for Preventive Medicine of Yen Bai, The Women's Union of Yen Bai, The Agriculture Extension Center of Tuyen Quang and Yen Bai, and HADEVA.



Livestock

Strengthening the pig value chain to improve the income opportunities of pig raisers and reduce the environmental impact of livestock activities.

Goal: Reduce the rural poverty and the environmental impact of pig raising activities through the improvement of the households' skills and the linkages between suppliers, farmers and buyers

Method: strengthening the value chain generating the households' demand of efficient inputs, through technical training and social marketing campaigns and developing a profitable supply chain

Target: Up to 3.000 smallholders increase their incomes (100 €/year) and reduce the environmental impact of the pig raising sector activities.

Environmental scope: Reduce methane emissions through pigpens with manure management systems, such as bio digesters; reduce deforestation and avoid fumes inhalation through the usage of improved cooking stoves; reduce the fossil fuel demand by domestic biogas systems; reduce the animal infection outbreaks by setting up veterinarian services network; reinforcing the breeding of indigenous pigs; improve the farm ecocycle by linking pigs manure-biogas-organic fertilizer for agricultural activities-harvest-raw materials for feeding animals.

Partners: Center for Preventive Medicine of Yen Bai, The Women's Union of Yen Bai, The Agriculture Extension Center of Tuyen Quang and Yen Bai, and HADEVA.

3 Assessment scope, Questions and Analysis level

In order to consolidate the answers at program level, the assignment will address the questions structured at project level. Herein CODESPA shortlists the following questions, as draft to be answered in a minimum basis, nevertheless the EIA team shall submit homemade questions set, including or not the mentioned above:

3.1 *Health* Questions in the frame of the EIA:

Ad hoc & Project design

- 3.1.1 What is the environmental impact of the hygiene daily practices conducted, or not conducted, by the households without sanitation facilities?
- 3.1.2 How does the OFD practices affect to the environmental resources? including surface water, ground water, air and soil?

3.1.3 How do these environmental impacts damage the communitarian environment and the people's health?

Based on Program outcomes and results

- 3.1.4 What is the environmental impact of the hygiene daily practices conducted by the households with sanitation facilities and involved in the sanitation awareness activities, after the program implementation?
- 3.1.5 How the environmental factors boost the behavioural change and influence on the households to switch their hygiene practices?
- 3.1.6 How is the project reducing the risk of infection of sanitation related diseases?
- 3.1.7 How is the relation between the project and the reduction of pollution in the targeted communities? How it enforces to cleanse surface water, ground water, soil or air?
- 3.1.8 Does the project result in a greater or smaller risk of diseases or other negative effects on people's health are spread? How?
- 3.1.9 Does the project include communitarian education and training and/or does it contribute to a greater understanding of the prevention and solution of environment-related problems?
- 3.1.10 Does the project contribute to developing systems which permit sludge, nutritive salts, hospital/building waste and other waste products to be taken care of or to be returned after cleaning into Eco cycles?
- 3.1.11 Is there any environmental impact stemmed from the latrines construction process?
- 3.1.12 How could the project improve its impact in human's health referring to water supply and sanitation?

3.2 **Food security – Agriculture** Questions in the frame of the EIA:

Ad hoc & Program design

- 3.2.1 What was the environmental impact of the agricultural practices conducted by the smallholder rice farmers in the targeted areas before the program implementation (meaning non-FDP users)?
- 3.2.2 Does the project offer a reasonable way of fulfilling the stipulated objectives (income generation, sustainable cropping, mitigate the environmental impact, and strengthen the local market through empowering the private sector) or might there be other alternative ways of fulfilling the objectives which are better from the environmental point of view?

Based on Program outcomes and results

- 3.2.3 What is the environmental impact of the agricultural practices conducted by the smallholder rice farmers in the targeted areas after the program implementation (meaning FDP users)?
- 3.2.4 How does the program influence on smallholder rice farmers to switch their practices?
- 3.2.5 Is the environmental factor a key driver for the households' behavioral change?
- 3.2.6 Does the switch from applying conventional powdered fertilizers to apply FDP lead to increased or decreased discharges of fossil carbon dioxide, methane or other greenhouse gases to the atmosphere?
- 3.2.7 Does it lead to increased or decreased discharges of ozone-depleting substances? (including herbicides and other POPs¹ such as pesticides).

¹ Persistent organic pollutants (POPs) are organic compounds that are resistant to environmental degradation through chemical, biological, and photolytic processes. Because of this, they have been observed to persist in the environment, to be capable of long-range transport, bioaccumulate in human and animal

- 3.2.8 Does the switch from applying conventional powdered fertilizers to apply FDP provoke an effect on cultivation land areas which are sensitive to droughts?
- 3.2.9 Does it contribute to increasing the salinity of the soil or to areas becoming waterlogged? Is any other effect on the soil quality?
- 3.2.10 Does the replacement of powdered fertilizers by FDP lead to improvements in such cultivation areas?
- 3.2.11 Does the switch from applying conventional powdered fertilizers to apply FDP lead to increased or decreased discharges of agrochemical pollution to the water streams or other surrounding hydric resources?
- 3.2.12 How this change could damage or improve the human's health? (including hygiene, drinking, food security, etc.)
- 3.2.13 Does the FDP production (compressing pellets, packaging and distribution) contribute to a situation in which untrained personnel handle chemicals? Does it contribute to training personnel in handling chemicals and providing them with protective equipment?
- 3.2.14 Could the FDP production result in acute and/or long-term health hazards for personnel who handle chemicals or for the population, or reduce such risks?
- 3.2.15 How the project take up work safety issues in a satisfactory way in all other respects? And there any alternative to reduce the material waste derived from the FDP production?

3.3 *Livestock* Questions in the frame of the EIA:

Ad hoc & Program design

- 3.3.1 What was the environmental impact of the daily activities conducted by the smallholder pig raisers in the targeted areas before the program implementation?
- 3.3.2 Does the project offer a reasonable way of fulfilling the stipulated objectives (income generation, environmental sanitation, and strengthen the pork value chain) or might there be other alternative ways of fulfilling the objectives which are better from the environmental point of view?
- 3.3.3 If there is any uncertainty in respect of environmental effects and their scope, does the project proposal follow the precautionary² principle?

Based on Program outcomes and results

- 3.3.4 What is the environmental impact of the livestock daily activities conducted by the smallholder farmers in the targeted areas after the program implementation? (meaning households involved in the program activities)
- 3.3.5 How does the program influence on smallholder farmers to switch their practices?
- 3.3.6 Is the environmental factor a key driver for the households' behavioral change?
- 3.3.7 Does the program activities cause degradation as a result of forestry activities, other mechanical impacts, of overgrazing or movements of livestock, or reduce such degradation?
- 3.3.8 Do the program activities develop systems which permit sludge, nutritive salts or other waste products to be taken care of or to be returned into ecocycles?
- 3.3.9 How does the program lead to increased or decreased discharges of fossil carbon dioxide, methane or other greenhouse gases to the atmosphere?
- 3.3.10 Do the program activities lead to increase biodiversity by supporting indigenous species? And does the program encourage or discourage local sustainable use of

tissue, biomagnify in food chains, and to have potential significant impacts on human health and the environment.

² Principle 15 of the Rio Declaration: "In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."

- wild and cultivated biodiversity local animal breeding and the development of knowledge of local biodiversity?
- 3.3.11 Does the program contribute to or counteract the introduction of new species in areas where they do not belong naturally?
- 3.3.12 Does the program display result in a greater or smaller risk that animal diseases are spread to other species?
- 3.3.13 Ref the training of veterinarian personnel, does the curriculum include programmes in environmental hygiene and environmentally-related diseases?
- 3.3.14 Does the project contribute to developing systems which permit medical waste and other waste products to be taken care of?
- 3.3.15 Does the project take up work safety issues in a satisfactory way in all other respects?

4 Environmental economic analysis

It is requested a brief environmental economic analyses, as part of the EIA. This is important for several reasons. An economic analysis and a valuation in monetary terms of the environmental impact for necessary measures make it possible to integrate the conclusions of the EIA into the economic and financial analysis of the project assessment. It is then possible to weigh up the project's costs and benefits and the advantages and disadvantages of different possible alternatives and scenarios.

The environmental economic analysis could also be used to find the most effective instruments to solve environmental problems which can arise as a result of the project.

Expected outputs

CODESPA brings to the EIA team the chance to propose a homemade method towards the economic analysis, on condition that it should be oriented to put a value on changes in environmental quality. As the program affects resources which have a market value, it is possible to estimate:

- Changes in productivity (increase/decrease in crop harvests, livestock outputs, etc.);
- Changes in income (increase/decrease in number of sick days due to ill health, death etc.);
- Costs of avoiding or reducing negative effects on the environment;
- Costs of compensation for damage.
- Travel cost method (to calculate the time required to fetch clean water and to collect firewood).
- Product substitution/shadow prices (for example the value of a species of pig which is not sold is compared to the value of a similar pig which is sold on the local market).

5 Methodology and working plan

The techniques for data collection and analysis will be designed by the EIA team and must take into account all the needs of the stakeholders. The report must mention the collected data, arguing their validity and appropriateness to the context.

The quality of the methods, the rigor of the statistics, the techniques and the samples must be guaranteed.

The evaluating team will outline data collection tools and its analysis and it should take on board all the demands of the actions. The Report should make reference to the collected data, proving its adequateness in the context.

The statistics' rigorousness will be taken into account, also the implementation of protocols and technical assessment for the course of action to be taken in the remaining part of the Program.

At the same time, data and the available information in the M&E system of the local partner will be taken in consideration, in order to avoid the duplication during the survey of primary data by the EIA team; however its reliability should be a main task during the EIA process.

Stages of the assessment

The EIA team tasks will be carried out in three stages:

1. Desk study: it will be necessary to analyze all the Program documents and secondary sources, as well as defining the main information needs. In this stage the main tools for data collection and analysis will be prepared, and key informants will be identified. The EIA team will prepare an evaluation matrix including the main questions to be answered by the EIA and will plan the fieldwork. These documents must be agreed and approved by CODESPA prior to starting the fieldwork. At the same time in this phase it's recommendable to contemplate the piloting of the instruments generated in case of its possible adjustment before the general application.

The products from the desk study will be: 1) Defined the EIA plan, and 2) Approved evaluation matrix.

2. Fieldwork. The evaluation must produce reliable information, covering the information needs, and evaluate the components and factors mentioned above. It is advised to test the evaluation tools in order to adjust them before starting the fieldwork. During this stage, feedback meetings must be planned and carried out with the different stakeholders.

The product in this stage will be: 1) Defined fieldwork Schedule, 2) Set up the data collection tools, 3) data collection.

3. Reporting. The EIA report must follow the structure and recommendations agreed during the desk study (phase 1). A draft version is required for feedback from all the stakeholders at least 15 days prior final report deadline. The report must include the results and data from the fieldwork.

The draft version of the report should be shared with all the stakeholders to ensure they could provide comments and clarifications to the mentioned document.

The products of this stage will be: 1) Final report draft, 2) Workshop to share conclusions and improvement recommendations with CODESPA and its stakeholders and 3) Agreed final report.

The final report must include separately the following points:

- Report and data interpretation.
- Questions set and answers.
- Best practices and lessons learnt.
- Recommendations (suggestions to improve the cause-effect relation and the design's logic of the environmental impact caused by the Program).
- A technical note describing the findings within each action (sanitation, agriculture and livestock) ref their environmental impact.

CODESPA shall review and approve the products in each stage. The final report will be discussed together with all the involved stakeholders.

6 Structure and presentation of the EIA report

The EIA report must be clear, concrete and precise. The report should be written in both English and Vietnamese. The document should be within 20-35 pages (excluding annexes), including an executive summary of no more of 3 pages.

After delivering a soft copy of the report and being approved, the team will submit the techniques and the full database in the format that has been worked with.

The members of the EIA team will delegate all of the author's rights to CODESPA so that if is deemed convenient it can follow on to publish the report, in which case the evaluators and/or the consulting company would be mentioned as authors in the text. As an additional mechanism of circulation of the conclusions CODESPA could ask the team leader to present the results and lessons learnt in following workshops hold by CODESPA. The EIA team leader would commit to lending this service in the moment that it is required, according to his/her availability.

The report should have a similar structure to the proposed below:

Cover

0. Executive Summary

1. Brief introduction explaining the purpose of the assessment, the questions and the main results:
 - i. *Background and Objectives of the assessment.*
 - ii. *Methodology used in the assessment.*
 - iii. *Conditions and limits of the study carried out.*
 - iv. *Presentation of the work team.*
2. Brief description of the Program from an environmental approach. *Brief history and background; organization and management; organizational frame and socioeconomic, political and institutional context during the intervention.*
3. Analysis of the gathered info. *according to the evaluation matrix and criteria. Giving an answer to the variety of questions of the EIA, and organized according to the classification of these for each action and the whole Program. The interpretation of the data should base itself in the qualitative and quantitative techniques employed and in the available info.*
4. Recommendations: *The EIA recommendations will be oriented towards the improvement of the evaluated intervention through the specific indications made to improve the environmental impact of the program.*
5. Annexes, *such as the EIA proposal, the data collection tools, and the gross information gathered, the technical notes, the work plan, the composition and description of the mission (complete relation of every process), and other files to ease the report review.*

7 The EIA team

The team is required to have previous experience in EIA and strong working experience in the Vietnamese rural context, with an understanding about the public programs and policies, environmental trends and strategies, and local culture and beliefs.

The team should be made up of at least two staff; one of them will take on the task of team leader, in which the final responsibility for the work will fall. The team leader also has the task of permanent link with CODESPA. At least one staff should have solid know-

how about field trials, human waste management, and agro and industrial pollution to soil, water and air.

Required team profile:

- **Team leader** shall be an expert with a minimum of 5 years of experience in the field of environmental impact assessment, preferably in rural activities, including agriculture and livestock. Experience in technologies, pro-poor and gender policies will be valued.
- **Team members** Consultant experts, preferably with at least 2 years of experience conducting environmental impact assessments in the rural development sector. Experience in cooperation projects' evaluations and knowledge of the local context are valued.

Independent international, national and local companies or freelancer professionals can present themselves to this call. If the team uses local staff they will be positively valued and if it is necessary, there is the chance to propose additional staff such as fieldwork interviewers or high level assessors to supervise and review the team work on a part time basis.

8 Basic premises of the EIA

The basic premises of ethical and professional behavior of the EIA team are:

1. **Anonymity and confidentiality.** The EIA should respect the rights of the persons giving information assuring their anonymity and confidentiality (not only the people but also the gross information obtained in the EIA).
2. **Responsibility.** Any disagreement or difference of opinion that could appear between the team members or between them and others stakeholders in relation with the conclusions and/or recommendations should be mentioned in the report. The team should sustain any affirming information.
3. **Independence.** The evaluating team should guarantee their independence to the intervention evaluated, and certified they are not linked with their management and their components.
4. **Incidents.** By presuming the appearance of problems during the realization of the fieldwork or in other EIA phase, these should be communicated immediately to the EMC. If this does not happen, the existence of such problems should not be used to justify the lack of the products included in these ToR.
5. **Validation of the information.** The EIA team guarantees the veracity and quality of the information gathered, and lastly will be responsible for the info included in the final report. The evaluating team will assure the quality in all phases, at technical levels, methodology and fieldwork, analysis of the information, interpretation and indictment reports. If the work carried out is not of the quality required, the report will be returned and the last payments will not be made until the deficiencies have been rectified.
6. **Reports submission.** In case of delay in the submission of the reports or if the quality of the reports submitted are of inferior quality in that of the agreed requirements with the Evaluating Committee of CODESPA the report will be returned and the last payments will not be paid until proper adjustments.

9 EIA time frame

The EIA may **start** on 1st **August 2013**, once CODESPA selects the EIA team, and it is expected to end on 15th **September 2013** (flexible deadline to submit the final report).

The approximate work plan would be:

- Desk study, approximately 7 days.

- Field work in the program areas, approximately 15 days.
- Data analysis and reporting, approximately 23 days.

All the organizations and professionals interested to conduct the consultancy service shall submit a proposal via email before Monday 28th July 2012.

10 Submission of the technical proposal and evaluation criteria

The criteria to evaluate the proposals are:

- Technical quality of the proposed methodology.
- Experience, multidisciplinary skills and qualification of the EIA team.
- Economic proposal.
- Added-value of the synergies generated among the team members

Furthermore, the following will be valued positively.

- Articulation of the qualitative and quantitative techniques.
- Proposed methodology, tools and techniques for data collection and analysis.
- Realistic timeframe to apply the data collection tools.

The EIA proposal must include, at least:

- *A technical proposal*, stating clearly the **EIA methodology**, the use of **data collection tools**, and the **work plan** in order to give a response to the questions in the EIA.
- *A human resources proposal*, including CVs and highlighting relevant qualifications and experience (to include a copy of previous EIA would be highly valued).
- *An economic proposal* that takes into account an adequate use of the economic resources in each stage of the assessment. A template format will be provided by CODESPA, and any other format will not be accepted.

The EIA proposal could be presented in Vietnamese, Spanish or English, and it could not exceed 5 pages.

The total amount in the economic proposal for the EIA should not exceed 5.000 U\$D (including VAT and other expenses).

The technical, economic and human resources proposal must be presented in electronic format before 28th July 2013 to the following email addresses:

Vietnam Delegation in Vietnam: vietnam@codespa.org

CODESPA would be pleased to solve any particular question until the deadline for the applicants. Please do not hesitate to contact us for further details.

Contact details:

CODESPA Delegation in Vietnam
No 25 Lane 9/2, Dang Thai Mai Street; Hanoi, Vietnam.
Tel: 043 718 63 56



⟨EIA team name⟩

⟨Proposal name⟩

Program: "Improving the living conditions in rural communities of northern Vietnam through the promotion and training of efficient and environmentally friendly technologies towards the households' environmental health and food security"

EXPERTS FEES								
EXPERT	CHARGE	DAYS	VND		USD			
			DAILY	TOTAL	DAILY	TOTAL		
1.				0			0	
2.				0			0	
3.				0			0	
4.				0			0	
TOTAL							0	
2. REFUNDABLE								
CONCEPT	UNIT	AMOUNT	VND	VND		USD		
				UNIT COST	TOTAL	UNIT COST	TOTAL	
ALLOWANCE - FOOD	DAY				0		0	
ALLOWANCE - HOTEL	TRIP				0		0	
INTERVIEWS	TRIP				0		0	
WORKSHOP/FOCUS GROUP	DAYS				0		0	
DOCUMENTATION	DAYS							
REPORTING	DAYS				0		0	
OTHER SERVICES					0		0	
TOTAL							0	
TOTAL USD							0	

DATE, PLACE AND SIGNATURE:	AUTHOR: