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Climate Risks and Development Projects

Assessment Report for Two Community-Level Projects in Southern Honduras

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I. Executive Summary

Climate change affects poor people in particular, because of their weak adaptive capacities. Development projects of all kinds can strengthen or weaken those capacities. At the same time, they can influence greenhouse gas emissions, the main cause of climate change, positively or negatively. It is therefore important to evaluate the impacts of development projects on adaptive capacities and climate change mitigation, in order to find measures to improve projects in the face of climate change.

This Assessment Report presents the results and the lessons learned from the climate change analysis of two community-level rural development projects in Honduras. The analysis was conducted with the new Climate Proofing Tool from Swiss Interchurch Aid (HEKS), which is based on CRiSTAL, an adaptation tool. Both projects are run by local NGOs in southern Honduras, and are supported by HEKS.

The evaluation shows that the beneficiaries of both projects suffer from tropical storms, heavy rains, strong winds, and droughts. These climatic hazards can largely be associated with climate change. Since people's livelihoods heavily rely on subsistence agriculture and natural resources, they are highly vulnerable to climatic risks. Even though they have some coping strategies to deal with those risks, their adaptive capacities are low. For most effective measures, they rely on external aid.

The analysis also shows that both projects have a beneficial impact on adaptive capacities, but that much more should and could be done. First, natural resources need more protection, as they form the very basis of people's livelihoods. Second, physical resources such as dwellings and roads have not received any support so far, but are important in the climate context, too. Third, financial incomes are crucial in coping with climate change, and alternatives to increase and stabilise incomes are needed. Finally, human and social resources facilitate adaptation, too, and require adequate support.

As "light" development projects the analysed activities tend to have a beneficial impact on greenhouse gas emissions. Even though no measurement of emissions has been conducted, it can be assumed that forest protection, soil conservation, and other activities outweigh the few emissions from the NGOs' vehicles. However, more could be done on climate change mitigation, even if it is not the projects' priority. Many options, such as avoiding deforestation, have synergies with adaptation, and they could generate carbon payments which could be effectively used to finance sustainable development and adaptation.

The Climate Proofing Tool available today takes into account some experiences made during the assessment. It includes adaptation and mitigation, exists as a text document in simple language, and it is flexible in its use. The experience made in this first application of the Climate Proofing Tool also showed the high need for a careful application, particularly regarding stakeholder consultations. Many questions arise in the wider implementation of the tool within an organisation as a means to mainstream climate change into development cooperation, where it is very important to have clear responsibilities, sufficient resources and long term planning.

II. Acknowledgements

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- The participants of the workshops held in San Antonio de Padua, Pespire, and La Estancia, Lepaterique, for their time and effort
- The developers of CRiSTAL for providing the basis of this evaluation

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1. Introduction

Climate change and development are highly intertwined: The risks of global warming could jeopardise decades of development efforts, particularly in the poorest regions of our planet. It is therefore vital to ensure that development projects strengthen their beneficiaries' capacities to confront climate change. It is also important to make sure that the same projects do not lead to excessive emissions of greenhouse gases.

Swiss Interchurch Aid (HEKS) supports community-level projects in rural areas in poor countries across the planet. Many of their beneficiaries are heavily threatened by climatic risks, mainly because of their high economic, social, environmental vulnerabilities. Even though HEKS does engage in specific climate change projects, it has grasped the need to consider those threats and the related vulnerabilities.

Figure 1: Map of Honduras and Project Areas of Lepaterique (upper star), and Pespire (lower star) (Source: CIA, 2009).

In order to gain experience for HEKS as a whole, Marius Keller, a consultant, carried out 2 climate change assessments in Honduras, in March and April 2009. The analysis was conducted in two community-level projects operated by local NGOs in the South of Honduras. Both have been receiving support from HEKS over the past few years. People in project areas are very poor, and, as the subsequent analysis will show, very vulnerable.

Initially, the assessment was meant to be carried out with CRiSTAL, a climate change adaptation tool (s. Box 1). However, due to the requirements of HEKS as well as based on local circumstances, a new tool, the Climate Proofing Tool, which includes mitigation, was elaborated.

Box 1: CRiSTAL

CRiSTAL stands for Community-based Risk-Screening Tool – Adaptation and Livelihoods, and has been elaborated by the International Institute for Sustainable Development (iisd), Intercooperation, the International Union for Conservation of Nature (IUCN) and the Stockholm Environment Institute (SEI).

The present analysis was conducted with the Climate Proofing Tool, which is largely based on CRiSTAL, yet it is meant to be simpler in its use, and it includes a mitigation part, whereas CRiSTAL only refers to climate change adaptation.

Interested readers are strongly encouraged to have a look at the CRiSTAL tool. Further information is available on: http://www.cristaltool.org/

This report is organised as follows. First, both projects and their context will be briefly described. Then, the climate context in Honduras is discussed. Third, the assessment results for both projects will be presented separately, whereby each evaluation follows the structure of the Climate Proofing Tool. Fourth, some conclusions on the results from both assessments are drawn. The last section discusses some lessons learned from the application of the Climate Proofing Tool.

2. The Projects

2.1. San Antonio de Padua

The first one of the analysed projects is located in the municipality of Pespire, in the department of Choluteca. The local NGO Asociación de Desarrollo Pespirense (ADEPES) is active throughout the municipality. Most of its projects are related to sustainable agriculture. Due to the large geographic extension and climatic differences between different communities in Pespire, it was decided that the assessment should focus on a smaller area. San Antonio de Padua and other nearby communities were chosen as the zone to be assessed with a climate proofing tool.

In and around San Antonio de Padua, ADEPES' activities, which are supported by HEKS, focus on the following four main elements:

- Organisational *capacity building for local associations*: This activity focuses on the formation of leaders in order to support the consolidation of community organisations such as water councils or farmer associations. The aim is to allow the local population to become managers of their own development. The activity consists of a number of capacity building events on community organisation and political advocacy.

- *Improvement of agricultural yields*: This activity focuses on the adoption of new techniques in sustainable agriculture and on crop diversification. The aim is to help farmers improve their yields and thereby enhance food security for families. The activity consists of capacity building events focussing on:
  - Implementation of alternatives regarding agricultural techniques and environmental sanitation
  - Diversification of crops
  - Model farms
  - Post-harvest processes
- *The commercialisation of agricultural surplus production*: With this activity, producing families receive support to sell their surpluses in their own community and in Pespire, the main town in the municipality. In particular, the activity supports the organisation of farmer's markets through advertising, sales support, transport, and through supporting a seller network so the market can be organised permanently.
- *Natural resource management*, with a focus on disaster risk reduction: This element consists of measures to protect natural resources, through the following activities:
  - Strengthening the regional water council through capacity building events on the protection of drainage basins and other issues
  - Events on the advancements regarding the forestry law, to make sure regional councils monitor the government's fulfilment of laws related to natural resource protection
  - Exchange sessions between different groups to learn about successful experiences.

The zone around San Antonio de Padua serves as a source for water for the whole municipality. Its inhabitants mostly live on subsistence agriculture. Their main crops are sugar cane and fruits, from which they can sell some surplus production. The climate is cooler than in the rest of the municipality, as the zone is located on an elevation of 400 to 700m above sea level. Yet the whole municipality is in a dry and hot climatic zone.

There are other NGOs operating in the zone: Heifer International promotes cows, Miserior supports sugar production and Trocaire implements drip irrigation systems. PRONADEL, the government's rural development organisation, used to provide its services but is no longer present in the zone.

2.2. La Estancia, Lepaterique

The second project is located in the municipality of Lepaterique, in the department of Francisco Morazán. The local organisation "Red de Comités de Desarrollo Ambiental" (Red de CODEMAS) is a network of communal organisations concerned with

environmental protection. Similar to the other project, the climate proofing was conducted for one area of the municipality only. The consultations were held in the community of La Estancia, with participants also coming from the surrounding hamlets.

HEKS has been the most important supporter of the Red de CODEMAS, which is active in the following four main areas:

- *Fighting deforestation* by organising and exercising influence on the main political bodies, i.e. the municipality and some of its committees. The main goal is to protect drainage basins.
- *Soil conservation*, through the capacity building events on building live barriers, on avoiding the combustion of crop residues and trees, and similar topics.
- *Basic sanitation*: Capacity building activities.
- *Organic fertilizers*, including foliar fertilizers and fungicides.

The climate in the zone around La Estancia is temperate and dry. Lepaterique as a whole is located in a comparably cool area in the mountains, on an altitude of around 1500m above sea level, with cloudy forests dominating the landscape.

The municipality and the mayor are among the most important political institutions in the area. They operate a consultative committee on forests. The relationship with the mayor is strained, according to some representatives of the Red de CODEMAS.

A few other organisms are active in Lepaterique, even though the area has generally been rather neglected by NGOs. PRONADEL, the government's rural development organisation, operates a rural credit scheme, but this is available only in 4 communities.

3. Honduras and Climate Change

3.1. The Impacts of Climate Change in Honduras

Honduras is a highly vulnerable country in the context of climate change. According to the first National Communication submitted to the United Nations (SERNA, 2000), and UNDP (2007), the following current and future impacts are among the most important:

- Average temperatures are around 1°C higher than in the 19th century. In the next 20 years, another rise of around 0.5°C is expected. This affects, among other things, the yields of various crops.
- Variation in the intensity and frequency of rainfall.
- Average precipitation has already diminished by around 6%, and will continue to do so over the next decades. The east and the south of Honduras are par-

ticularly affected by shortages in rainfall and the consequential water shortages and droughts, which are expected to become longer and more intense.
- Nebulosity in forests on higher altitudes has diminished by some 3%, and will continue to do so in the next decades.
- The occurrence of extreme rainfalls, as well as of tropical cyclones, is increasing.
- Sea levels are, as on a global scale, rising, which affects ecosystems, settlements and water supply in coastal areas.
- Climate change could also influence El Niño, a climatic phenomenon occurring every 3-8 years in Latin America.

Honduras's vulnerability to climate change is not only due to these impacts, but also a consequence of low adaptive capacities, which are related to poverty and a general lack of economic, social, political and environmental capacities to deal with such impacts.

3.2. Honduras' Contribution to Climate Change

Honduras' greenhouse gas emission levels are relatively low, compared to the world average, or even to the average of developing countries. In 2005, emissions per capita stood at about 2 tons of CO_2-equivalents (CO_2e), compared to 6.5 tons of CO_2e globally, and around 4 tons of CO_2e in developing countries.

Yet there is still cause for concern. First, emissions have soared in the past decade, and are expected to continue rising (see Figure 2). Second, the low emission levels are mainly due to the widespread poverty, which means on the one hand that richer people in Honduras cause significant amount of emissions (compared to very little emissions caused by the poor), and that the desirable reduction of poverty through economic development would probably increase emissions. Third, the larger part of Honduran emissions stem from

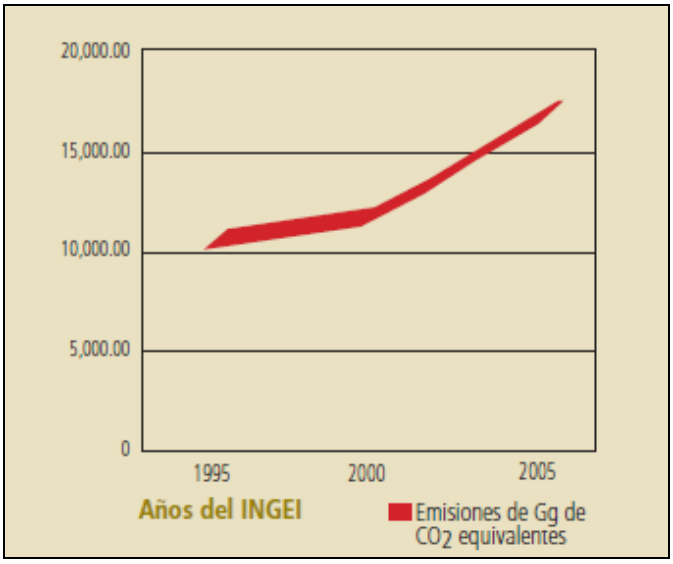

Figure 2: Emissions of CO_2-equivalents in Honduras, in 1,000 tons (Source: UNDP, 2007)

deforestation and soil degradation.

These phenomena cause a lot of damage to the country irrespective of climate change, for instance because they render the population more vulnerable to natural hazards. They also contribute little to economic development, and they have skyrocketed in recent years: Between 2000 and 2005 emissions from deforestation and degradation increased fourfold.

4. Assessment of Activities in San Antonio de Padua, Pespire

This section presents the results of the climate proofing evaluation executed in San Antonio de Padua, Pespire, in March and April 2009. The presentation follows the structure of the Climate Proofing Tool used to conduct the analysis. First, the project specific climate context is analysed. Second, current coping strategies are identified, followed by an analysis of livelihoods in the climate context. Then, the project's impact on adaptive capacities and on greenhouse gas emissions is evaluated. The last section looks at possible project revisions.

4.1. Climate Context

Scientific Information

The previous chapter has already dealt with the impacts of climate change in Honduras. The South of Honduras, where Pespire is located, is particularly affected by rising temperatures, lower average precipitation, higher climatic variability and the higher frequency of extreme events, such as hurricanes. The fact that rainfall is lower on average, and less predictable leads to more intense and longer droughts. The main rivers have less and less water in the dry season. These phenomena can be expected to affect agricultural production, water supplies, health, and ecosystems in general.

Information from Stakeholder Consultations

A workshop was held in San Antonio de Padua on 12 March 2009, with over 30 inhabitants from several villages in the area. In this workshop, people identified the three most important climatic phenomena affecting them, as well as the three most important impacts of each one of these hazards.

The first hazard (which is not more important than the other two) identified is *winds*, by which people mean strong winds in the dry season. Participants found the three most important impacts of wind to be:

- Damage to crops

- Respiratory diseases, due to dust raised by the winds; Children were considered to be particularly affected
- Damage to dwellings, particularly roofs

The second hazard identified is *storms*, which refers to strong rainfall combined with winds. Hurricanes and cyclones, such as hurricane Mitch, which hit Honduras in 1998, also fall into this category. The most important impacts were perceived to be:

- Water contamination and resulting diseases
- Landslides
- Plagues affecting crops

The third hazard identified is *droughts*, with the most important impacts being:

- Damage and loss of crops
- Loss of life
- Water shortages

The phenomena identified by the local population are largely consistent with the scientific information mentioned above. In particular, the occurrence of storms and droughts can reasonably be assumed to be increased by climate change. Thanks to the scientific reports we also know that these phenomena are bound to occur even more often, and be more intense in the future. The same kind of inference is not possible with respect to wind, which might or might not be related to climate change.

4.2. Current Coping Strategies

In the same workshop mentioned above, participants were asked to explain how the react currently to the impacts listed above. They identified a coping strategy for each of the 9 impacts.

Regarding the impacts of wind, participants identified the following coping strategies:

- To avoid damages to crops, people sometimes build *wind barriers*. To the extent that this measure is feasible, it is sustainable and efficient in reducing the respective hazard. However, participants admitted that they mostly can't afford to build wind barriers.
- To avoid or cure respiratory diseases, people said they *protect children* and *attend the medical centre*. These measures are rather reactive in nature, and neither sustainable nor very efficient in reducing the risk of respiratory diseases.
- As a reaction to damages to *dwellings*, participants said they *rebuild* and in some cases *relocate* them. However, they largely depend on external aid for

these measures. It has to be noted that this coping strategy is not very sustainable nor efficient as long as the rebuilt houses are not more resilient to damages from winds.

Regarding the impacts of storms, participants identified the following coping strategies:

- To avoid diseases due to water contamination, people said they *purify water*, even though they depend on the Red Cross for this measure. At the same time, to the extent that it can be done, the strategy is sustainable and efficient.
- To avoid landslides, participants build *drywalls*. Again, this measure is sustainable and efficient, but often not feasible due to lack of resources.
- If plagues affect crops, participants said they will *manage external aid*, which essentially means that there is no local coping strategy available to deal with this risk.

Regarding the impacts of droughts, participants identified the following coping strategies:

- To prevent famines in case of damaged crops, people *store grains*. This response is sustainable and efficient to the extent that it is feasible.
- To avoid the loss of life, people *migrate* to nearby cities or other regions in search of labour. This measure is probably not desirable for the people themselves, and it is to a large extent neither sustainable nor efficient, since people often can't find work, and mostly come back again.
- To reduce water shortages, people *reforest and protect forests* in the drainage basins, and they install drip irrigation systems. These measures are largely efficient, and sustainable, but can be realised only to a very limited extent.

This analysis of coping strategies to confront climatic risks shows that the local population does have some measures to reduce or prevent some impacts, yet they depend heavily on external aid. A number of identified measures are neither sustainable nor efficient. Also, many strategies can hardly be put into practice, as people lack the necessary resources. This means that overall adaptive capacities are weak, and vulnerability to climate hazards is high.

4.3. Livelihood Resources

This section first presents the most important resources for the local populations' livelihoods, as identified in the same workshop mentioned above. In a second step, the impact of climate hazards on those resources are analysed, and in a third step, their importance for the current coping strategies is evaluated. Steps two and three were analysed in a meeting with project managers.

Identifying Livelihood Resources

Workshop participants identified the following resources as most relevant for their livelihoods:

- *Natural* resources: Forests, agricultural soils, and water.
- *Physical* resources: Roads, dwellings, and communal buildings (medical centre, schools)
- *Financial* resources: Sales of surplus production, external aid, remittances.
- *Human* resources: Skills in sustainable agriculture and health.
- *Social* resources: Local organisms (local council, water council, etc.) and external organisations (ADEPES, donors, etc.).

Impacts of Climate Risks on Livelihood Resources

In a meeting with project managers, the extent to which the climate hazards identified earlier affect the livelihood resources mentioned above was estimated. The following resources were assumed to be heavily affected:

- *Agricultural soils* are expected to be affected by all three climate risks.
- *Water* is mostly affected by droughts, but also by storms and to some extent through winds.
- *Roads* are affected by storms, but not by other hazards.
- *Sales of surplus agricultural production* are heavily affected by all risks, mostly due to the high vulnerability of agricultural soils, but also due to the impact of storms on roads.

Other resources are affected to a lesser extent. Forests, for instance, are quite affected by storms and droughts. Dwellings are affected by winds and storms. Yet the project managers didn't consider those impacts to be very strong. Social and human resources were considered not to be affected at all by climatic risks.

Importance of Livelihood Resources for Coping Strategies

In the same meeting mentioned above, project managers also estimated the importance of the livelihood resources for the coping strategies. The following resources were considered to be of high importance:

- All *natural resources*, i.e. forests, agricultural soils, and water. These resources are particularly important for constructing wind barriers, drywalls, and granaries, to reforest and to install drip irrigation systems.
- *Community buildings*, even though the importance is limited to respiratory diseases, since people assist the local medical centre to cure diseases.

- All *financial resources*, because people depend heavily on them to pay for a number of adaptive measures, such as the construction of drywalls or to buy drip irrigation systems.
- *Human resources* are also very important. Skills in sustainable agriculture, for instance, are required to construct wind barriers and are important to other measures, including emigration, where skills are needed on the labour market.
- *Social resources* are considered to be important, too, for almost all measures. Managing and implementing measures seems to be much easier for people if they have some means to coordinate their work, and external organisations are required too, which reflects the high dependency on aid noted previously.

A note of precaution: The analysis on livelihood resources in the climate context is qualitative in nature, and you are encouraged to consider each relationship between climate hazards, resources and coping strategies individually. Detailed results are available in separate documents on the climate proofing analysis.

4.4. The Project and Adaptive Capacities

This section looks at the project's impact on those livelihood resources considered heavily affected by climate risks, or important for coping strategies. Thereby the impact of the various project activities on adaptive capacities of the local population can be estimated. The analysis was conducted through a meeting with project managers.

Impact of the Activity "Organisational capacity building for local associations"

This first component of the ADEPES project was estimated to have a positive impact on the following livelihood resources:

- All *natural resources*: It was assumed that the activity influences all natural resources positively, since their management depends on the quality of community-level organisation, such as the water council, which is supposed to coordinate water use and helps to protect forests in drainage basins.
- *Sales of surplus production*: Sales have to be organised through community-level organisms, to coordinate markets and transport facilities, for instance.
- *Skills in sustainable agriculture*: This resource was also considered to be positively influenced, for instance because the activity encourages knowledge exchange between farmers.
- *Local organisms*: Strengthening them is the direct objective of the activity.

The activity has a neutral influence on other livelihood resources.

Impact of the Activity "Improvement of agricultural yields"

This second component of the ADEPES project was estimated to have a positive impact on the following livelihood resources:

- All *natural resources*: In promoting sustainable agriculture and environmental sanitation through technical capacity building, this activity contributes to the protection of natural resources.
- *Sales of surplus production*: Higher yields, particularly through post-harvest treatment and crop diversification, allow more sales of surplus goods.
- *Skills in sustainable agriculture*: The activity increases those skills directly through capacity building.
- *Skills in health*: Improving environmental sanitation relates to skills relevant to health.
- *Local organisms*: The activity supports local organisms, for example through model farms and exchanges between local farmers.

The activity has a neutral influence on other livelihood resources.

Impact of the Activity "Commercialisation of agricultural surplus production"

This third component of the ADEPES project was estimated to have a positive impact on the following livelihood resources:

- *Sales of surplus production*: This is the direct objective of this activity.
- *Local organisms*: The activity also supports local organisation by strengthening local farmer networks that organise local markets and transports to Pespire.

The activity has a neutral influence on other livelihood resources.

Impact of the Activity "Natural resource management"

This fourth component of the ADEPES project was estimated to have a positive impact on the following livelihood resources:

- *All natural resources*: The activity seeks to protect natural resources directly.
- *Sales of surplus production*: The project managers considered that soil conservation, which is an element of this activity, improves production and therefore the possibility to sale surpluses.
- *Skills in sustainable agriculture*: The activity works through capacity building for local farmers, and thereby improves their skills in sustainable agriculture.
- *Local organisms*: This component consists, among other things, in improving capacities of local organisations on protecting nature, for example through advocacy work.

The activity has a neutral influence on other livelihood resources.

Evaluation of the overall impact on adaptation

Overall, the project impacts many important livelihood resources positively. A few resources important in the climatic context, such as roads, are not particularly affected by the project. None are assumed to be negatively affected. Therefore, as a whole, the project improves adaptive capacities in the area of San Antonio de Padua. This does not mean, however, that the analysis should stop here. In many cases, the project's activities have only a light impact, and some relevant resources are not strengthened. The section titled "project revision" identifies areas where the project could be revised or a new project designed to strengthen local adaptive capacities further.

4.5. The Project and Mitigation

This section deals with the project's impact on greenhouse gas emissions, and essentially consists of looking at some potential sources or sinks for greenhouse gases, and analysing what the project's impact on those sources is. The evaluation was conducted through a meeting with project managers.

The analysis showed that the project seems to have a beneficial effect on mitigation (i.e. reduction of emissions) through the following components:

- Use of *improved cooking stoves*, which reduces the use of firewood, which in turn reduces deforestation, and thereby improves the forests' capacity to store carbon.
- *Soil conservation* through the construction of drywalls, leaving crop residues on fields, and through drip irrigation systems increases the capacity of soils to store carbon.
- Use of *biomass* as a substitute for firewood, and not burning biomass on fields reduces emissions thanks to avoided deforestation and through improvement of soils thanks to leaving crop residues on the fields.
- Using *organic fertilizer*, including *manure* and *waste products* instead of synthetic fertilizers reduces emissions from the production and excessive application of the latter.
- *Protection of forests* through combating slash-and-burn agriculture, through influencing political processes on the protection of drainage basins, and through improved cooking stoves. In some places, *agroforestal* systems are promoted, which also reduces deforestation or amounts to reforestation.

The project doesn't directly impact the use of electricity, deep water agriculture, animal husbandry, and the quantity of waste generated. At the same time, the supposedly single negative impact on greenhouse gas emissions comes from the few vehicles, namely a pick-up and a few motorcycles, the project employs.

In sum, the project appears to have a positive impact on climate change, since it reduces certain emissions sources, improves the capacity of sinks, and hardly has

any negative impact on emissions. At the same time, the project's contribution can be expected to be small, for two reasons: the project's beneficiaries contribute little to global emissions, and so their reduction potential is likely to be small. On the other hand, the project is small in scale and seems to initiate incremental rather than revolutionary change.

It is interesting to see that the emissions sources on a national scale (as analysed in a previous chapter) coincide with reduction potentials on the local level. Both see a very high importance of deforestation and degradation issues, and less importance of fossil fuel combustion, which is the most important source of greenhouse gases globally.

4.6. Project Revision

Based on the previous two sections on the project's impact on adaptive capacities and mitigation, this section seeks to identify areas where this impact could be improved by means of project revisions or the design of new activities. The Climate Proofing Tool also provides a project revision cycle to devise concrete revisions or new activities. This process is not discussed here, as it has been left to the project managers to decide how to move on regarding new or revised activities.

Suggestions for Improvements Regarding Adaptive Capacities

As mentioned above, the project already appears to improve adaptive capacities, yet there is still a lot of room to do more. On the one hand, relevant livelihood resources that have so far not been strengthened by any activity could be targeted. On the other hand, even many of those resources that received support, could be strengthened further. The following list suggests some enhancements, for each type of resources:

- Further strengthening *of natural resources* seems to be very important for improving adaptive capacities, as the people's lives crucially depend on them. Due to their key role in protecting drainage basins, conserving soils and other areas, forests need to be protected more, and reforestation activities could be contemplated. More could be done for water and soils, too. More drip irrigation systems, which are already promoted within the project and by Trocaire, another NGO, could help on both counts.
- *Physical resources* are not the most relevant for climate change adaptation in the area, yet buildings and roads are still affected by climate hazards, and they are important for some coping strategies, such as storing grains. The project does not strengthen any of those assets, yet some support for the reconstruction and/or relocation of dwelling could be helpful. Also, the importance of roads could be easily underestimated. In order to sell agricultural surpluses or other products outside (strategies that might become more and more important, see next point), an accessible road is very important

- *Financial resources* play a key role in adaptation. The analysis has shown that the population depends heavily on aid, mostly financial aid, for many coping strategies. In addition to that, the only local source of income, the sales of agricultural surpluses, is heavily affected by climate risks. The project supports this activity, but to strengthen adaptive capacities, one should start to think about alternatives inside and outside agriculture. It is important to note here that climate change will not affect all crops in the same way: Some crops are more resilient than others. Also, financial resources are not only a matter of average incomes, but also of income variation. In this context, micro-insurance and or micro-credit systems could offer potentials for reducing climate vulnerability.
- *Human resources* could be improved in certain areas, even though the project already supports some related activities. Regarding plagues, for instance, people do not seem to have any strategies on how to reduce their negative impact. Furthermore, health skills could be improved, to increase resilience against certain diseases.
- *Social resources* have been shown to be very important in facing any kind of climatic hazard. The project already supports local organisms, but some communities might still need further support.

Suggestions for Improvements Regarding Mitigation

Mitigation, i.e. the reduction of greenhouse gas emissions or the improvement of sinks, is not the primary concern of the rural poor in Honduras. First, their impact is very small compared to global averages, and second, they already have enough to worry about regarding poverty. Yet there are still reasons to think about mitigation as project planners and managers. On the one hand, many reasonable mitigation opportunities have high synergies with adaptation options. On the other hand, carefully planned mitigation measures might be eligible for carbon credits, which can serve as an additional financial source for development project. At best, carbon payments can finance measures that increase adaptive capacities, too.

These kinds of mitigation projects could be conceived, for instance, in reforestation or in soil conservation. Suggestions on activities strengthening adaptive capacities as mentioned above include measures on both forestry and soils. So carbon credits could, depending on the legal circumstances and the size of the project, yield income to finance efforts to protect woods in drainage basins, or capacity building measures to improve soil conservation, including drip irrigation systems.

More could possibly be done on improved cooking stoves. More efficient models that have already passed emission reduction measurements are available. A further option is electricity, which can also reduce greenhouse gas emissions if the sources are renewable.

To sum up this section, a number of possibilities to strengthen local adaptive capacities and mitigation exist. What kind of measures will be chosen, and whether

they will be suggested as revised or new projects is up to the project planners and managers of ADEPES. It is recommended they go through the project revision cycle suggested in the Climate Proofing Tool.

5. Assessment of Activities in La Estancia, Lepaterique

This section presents the results of the climate proofing evaluation executed in La Estancia, Lepaterique, in March and April 2009. As for the previous assessment, the analysis follows the structure of the Climate Proofing Tool. First, the project specific climate context is analysed. Second, current coping strategies are identified, followed by an analysis of livelihoods in the climate context. Then, the project's impact on adaptive capacities and on greenhouse gas emissions is evaluated. The last section looks at possible project revisions.

5.1. Climate Context

Scientific Information

Scientific information on the climate context in Honduras has been provided in a previous chapter. In the area of Lepaterique, the most important of those effects are rising temperatures, lower average precipitation, higher climatic variability, the higher frequency of extreme events, and the lower levels of nebulosity in forests. These phenomena can be expected to affect agricultural production through different crop yields, water supplies, health, and ecosystems in general.

Information from Stakeholder Consultations

A workshop was held in La Estancia on 16 March 2009, with almost 40 inhabitants from several villages in the area. In this workshop, people identified the three most important climatic phenomena affecting them, as well as the three most important impacts of each one of these hazards.

The first hazard (which is not more important than the other two) identified is *tropical storms*, which refers to strong rainfalls. Hurricanes and cyclones, such as hurricane Mitch, which hit Honduras in 1998, also fall into this category. The most important impacts were perceived to be:

- Landslides
- Damage to crops
- Retained, dirty and contaminated water leading to diseases

The second hazard identified is *stormy winds*, by which people mean strong winds that may or may not be related to the tropical storms mentioned above. Participants found the three most important impacts of wind to be:

- Destruction of trees and plants
- Destruction of dwellings
- Contamination and diseases: Diarrhoea, cough, flu, allergies

The third hazard identified is *droughts*, with the most important impacts being:

- Damage and loss of crops, particularly maize and beans
- Sun and moon eclipses, which cause crop damages and loss of life (This relationship is difficult to understand. The local population believes that eclipses have negative impacts. Also, they experience eclipses mainly in the dry season, because the skies are visible. However, this is certainly not related to climate change and not caused by humans)

One impact had to be removed from the last hazard, as it turned out that the participants confused two hazards.

Overall, the phenomena identified by the local population are largely consistent with the scientific information mentioned above. In particular, the occurrence of storms and droughts can reasonably be assumed to be increased by climate change. Thanks to the scientific reports we also know that these phenomena are bound to occur even more often, and be more intense in the future. However, not all the impacts are related to climate change. The occurrence of eclipses, for instance, is not related to climatic phenomena.

5.2. Current Coping Strategies

In the same workshop mentioned above, participants were asked to explain how the react currently to the impacts listed above. They identified a coping strategy for each of the nine impacts.

Regarding the impacts of tropical storms, participants identified the following coping strategies:

- To avoid landslides, people build *life barriers*. This measure is sustainable and efficient, but often not feasible due to lack of resources.
- To reduce damage to crops, participants said they will *unite to help people*. Obviously, this does not provide any protection from future damages, and is therefore neither very efficient. It is a reactive measure. Of course, this does not mean solidarity is useless, it is obviously still very important in coping with climate hazards.
- To avoid diseases from contaminated waters, participants said they would *plug holes where water ponds, with earth*. This is neither very sustainable nor efficient in combating diseases, and very tiresome for people.

Regarding the impacts of stormy winds, participants identified the following coping strategies:

- To avoid the destruction of trees and plants, people said they will build *life barriers*, which is sustainable and efficient, but often not feasible due to lack of resources.
- In the event of destroyed dwellings, people said they *reconstruct safer buildings* or even relocate them. This measure is only sustainable and efficient if the rebuilt houses are safer against hazards, which may often not be the case, particularly because people lack the necessary resources.
- Against contamination and diseases, participants said they would *encourage reforestation and protect existing forests*, which is sustainable, but not very efficient. It is also possible that people related this coping strategy to other dangers as well.

Regarding the impacts of droughts, participants identified the following coping strategies:

- To prevent loss or damage of crops, people said they, again, *protect forests*, which is related to crop losses via the availability of water. This measure is sustainable, but only partly and indirectly efficient. It's also possible that people can protect forests only to a very limited extent.
- In relation to eclipses, people said they would encourage *women not taking a bath*, which again sounds very strange to outsiders. Noting that locals relate eclipses to droughts though, not using much water might be reasonable in this respect (even though that doesn't explain the gender bias). The direct link with the identified impact can only be explained through local beliefs which are not supported by science.

This analysis of coping strategies to confront climatic risks shows that the local population does have some measures to reduce or prevent some impacts, yet they depend very heavily on external aid. Many identified measures are either unsustainable and inefficient or not feasible, and they are mostly reactive rather than preventive. This means that overall adaptive capacities are very weak, and vulnerability to climate hazards is high.

5.3. Livelihood Resources

This section first presents the most important resources for the local populations' livelihoods, as identified in the same workshop mentioned above. In a second step, the impact of climate hazards on those resources are analysed, and in a third step, their importance for the current coping strategies is evaluated. Steps two and three were analysed in a meeting with project managers.

Identifying Livelihood Resources

Workshop participants identified the following resources as most relevant for their livelihoods:

- *Natural* resources: Forests, water, soils and animals.
- *Physical* resources: Roads, communal buildings, dwellings.
- *Financial* resources: External aid, sale of wood products, sale of coffee.
- *Human* resources: Skills in sustainable agriculture, unskilled labour, voluntary labour.
- *Social* resources: Local councils, groups of fathers, water councils.

Impacts of Climate Risks on Livelihood Resources

In a meeting with project managers, the extent to which the climate hazards identified earlier affect the livelihood resources mentioned above was estimated. The following resources were assumed to be heavily affected:

- All *natural resources:* Forests are particularly affected by storms; water is mostly affected by droughts as well as by winds and storms, and to a lesser extent by tropical storms; agricultural soils are expected to be affected by all three climate risks, particularly by droughts; animals are expected to be particularly affected by droughts, and to a small extent also by other climate risks.
- All *physical resources:* Roads are mainly affected by tropical storms, and only little by other risks; dwellings and communal buildings are mainly affected by stormy winds, and to a lesser extent by tropical storms.
- *Unskilled and voluntary labour* are both affected by all three risks, but mainly by tropical storms. This might be because people are less able to help others in those situations.

Other resources are affected to a lesser extent. Sales of coffee for instance, are affected by stormy winds and droughts, because agricultural soils are affected by those risks. Sales of wood products are also slightly affected by two risks, tropical storms and stormy winds. All other resources were not considered to be affected by any of the climatic hazards.

Importance of Livelihood Resources for Coping Strategies

In the same meeting mentioned above, project managers also estimated the importance of the livelihood resources for the coping strategies. The following resources were considered to be of high importance:

- All *natural resources*, i.e. forests, water, soils and animals. They were considered particularly important for reconstructing buildings and dwellings, protect forests and reforest, and all, except animals are important for life barriers.

- *Roads* were considered important for building life barriers, reconstruct buildings and dwellings, and protect forests or reforest areas.
- All *financial resources*, because people depend heavily on them to pay for a number of adaptive measures, such as the reconstruction of buildings and dwellings, or the protection of forests.
- *Human resources* are also very important. Skills in sustainable agriculture, for instance, are required to construct wind barriers, for reforestation and for the protection of forests, whereas the reconstruction of dwellings and buildings, among other things, depends mainly on unskilled and voluntary labour.

It is interesting to note that social resources such as local committees were not considered as important for coping strategies. According to the project managers, they only have some rather low importance for managing aid and building life barriers.

A note of precaution: The analysis on livelihood resources in the climate context is qualitative in nature, and you are encouraged to consider each relationship between climate hazards, resources and coping strategies individually. Detailed results are available in separate documents on the climate proofing analysis.

5.4. The Project and Adaptive Capacities

This section looks at the project's impact on those livelihood resources considered heavily affected by climate risks, or important for coping strategies. Thereby the impact of the various project activities on adaptive capacities of the local population can be estimated. The analysis was conducted through a meeting with project managers.

Impact of the Activity "Influence on Political Bodies to Fight Deforestation"

This first component of the Red de CODEMAS project was estimated to have a positive impact on the following livelihood resources:

- All *natural resources*, except animals. Exercising political influence directly helps to protect forests, particularly in drainage basins. The main motivation is to protect those basins, in order to ensure the availability of water. Through those measures, soils are also protected, on the one hand in forest areas, on the other hand in agriculture due to better availability of water.

The activity has a neutral influence on all other livelihood resources.

Impact of the Activity "Soil Conservation"

This second component of the Red de CODEMAS project was estimated to have a positive impact on the following livelihood resources:

- All *natural resources,* except animals: The activity is directed at protecting soils. Through the related promotion of sustainable agriculture and environmental sanitation through technical capacity building, this activity also contributes to the protection of other natural resources.
- *Sales of coffee*: Better soils can be expected to yield better coffee harvests, which allows selling more coffee.
- *Skills in sustainable agriculture*: The activity increases those skills directly through capacity building, which is aimed at conserving soils.

The activity has a neutral influence on other livelihood resources.

Impact of the Activity "Basic Sanitation"

This third component of the Red de CODEMAS project was estimated to have a positive impact on the following livelihood resources:

- *Water*: The activity protects clean water sources, and supports using so called grey water (recycled water), and thereby saves precious clean water.
- *Soils*: Better water quality and less contamination by waste improve the quality of soils.
- *Skills in sustainable agriculture*: The activity increases those skills directly through capacity building, for example those related to using grey water.

The activity has a neutral influence on other livelihood resources.

Impact of the Activity "Organic fertilizers and fungicides"

This fourth component of the Red de CODEMAS project was estimated to have a positive impact on the following livelihood resources:

- *All natural resources,* except animals: Organic fertilizers and fungicides replace their synthetic versions, and thereby protect the environment, particularly soils and water, but through them also forests.
- *Sales of coffee*: Better soils can be expected to yield better coffee harvests, which allows selling more coffee.
- *Skills in sustainable agriculture*: The activity increases those skills directly through capacity building in making and using organic fertilizers and fungicides.

The activity has a neutral influence on other livelihood resources.

Evaluation of the overall impact of the project

Overall, the project impacts a number of important livelihood resources positively. However, many resources important in the climatic context, such as roads, buildings and dwellings, are not particularly affected by the project. None are assumed

to be negatively affected. Therefore, as a whole, the project improves adaptive capacities in the area of La Estancia. Yet the project's activities have only a light impact overall, and some relevant resources are not strengthened. The section titled "project revision" identifies areas where the project could be revised or a new project designed to strengthen local adaptive capacities further.

5.5. The Project and Mitigation

This section deals with the project's impact on greenhouse gas emissions, and essentially consists of looking at some potential sources or sinks for greenhouse gases, and analysing what the project's impact on those sources is. The evaluation was conducted through a meeting with project managers.

The analysis showed that the project seems to have a beneficial effect on mitigation (i.e. reduction of emissions) through the following components:

- Use of *improved cooking stoves*, which reduces the use of firewood, which in turn reduces deforestation, and thereby improves the forests' capacity to store carbon.
- *Soil conservation* through leaving crop residues on fields, drip irrigation systems (even though just two systems exist), and organic fertilizers which increase the capacity of soils to store carbon.
- Not burning *biomass* on fields reduces emissions thanks to avoided deforestation and through improvement of soils thanks to leaving crop residues on the fields.
- Using *organic fertilizer*, including *manure* and *waste products* instead of synthetic fertilizers reduces emissions from the production and excessive application of the latter.
- *Protection of forests* through influencing political processes on the protection of drainage basins, and through improved cooking stoves reduces deforestation.

The project does not directly influence the use of electricity, deep water agriculture, animal husbandry, and the quantity of waste generated. At the same time, the supposedly single negative impact on greenhouse gas emissions comes from the few vehicles, namely a motorcycle the Red de CODEMAS owns, as well as another motorcycle and a car they hire from time to time.

To sum up, the project appears to have a positive impact on climate change, since it reduces certain emissions sources, improves the capacity of sinks, and hardly has any negative impact on emissions. At the same time, the project's contribution can be expected to be very small, for two reasons: the project's beneficiaries contribute little to global emissions, and so their reduction potential is likely to be small. On the other hand, the project is very small in scale and seems to initiate incremental rather than revolutionary change.

As with the ADEPES project, the areas for local reduction potentials coincide with the importance of different emission sources on a national scale, i.e. a high level of emissions from deforestation and degradation compared to the global average.

5.6. Project Revision

Based on the previous two sections on the project's impact on adaptive capacities and mitigation, this section seeks to identify areas where this impact could be improved by means of project revisions or the design of new activities. The analysis according to the project revision cycle provided in the Climate Proofing Tool is not discussed here, as it has been left to the project managers to decide how to move on regarding new or revised activities.

Suggestions for Improvements Regarding Adaptive Capacities

As mentioned above, the project already appears to improve adaptive capacities, yet much more could be done. On the one hand, one could target the relevant livelihood resources have so far not been strengthened by any activity. On the other hand, those resources that have already been receiving support could be strengthened further. The following list suggests some enhancements, for each type of resources:

- The people's livelihood heavily depend on *natural resources*, and even though most of them are already strengthened to some extent by the project, they need much more support for the population to reach acceptable levels of resilience. Protecting forests, for instance, is an essential part of the Red de CODEMAS' work, but more protection and possibly reforestation is required, also in areas outside drainage basins. Soil conservation could be increased, too. Availability of water is low in some areas, so implementing drip irrigation systems could help a lot. Currently, only two farmers have such a system. Finally, people identified animals as a crucial natural resource, too. The project has so far not supported animal husbandry, which could be a new activity in the future.
- *Physical resources* are not supported in any way by the Red de CODEMAS, yet they are very much affected by some climatic hazards, and at least the roads were considered important for some coping strategies. Support could be helpful to ensure the road's trafficability. Also, people need more assistance in reconstructing and relocating their dwellings and communal buildings in the face of climate risks, particularly stormy winds.
- *Financial resources* play a key role in adaptation. According to the evaluation, almost all current coping strategies depend heavily on financial incomes. It appears that a large part of those incomes stem from external aid, yet sales of wood products and coffee also contribute to the population's ability to protect forests, rebuild dwellings, or construct life barriers. The project hardly

strengthens any of those income sources. Only coffee production is marginally supported through soil conservation. Therefore a lot of potential to strengthen adaptive capacities lies in the improvement of sustainable financial incomes, for example through commercialisation of certain crops, as well as through diversification. Possibilities to enhance sales of wood products by raising their quality should also be considered. Finally, income variation and access to finance is another issue, highlighting the importance of micro-insurance and micro-credit in reducing climate vulnerability.

- *Human resources* could be improved in certain areas, even though the project already supports certain skills relating to sustainable agriculture. More people could be trained in constructing life barriers and using drip irrigation systems, and skills are also needed relating to water contamination. Finally, the analysis highlights the importance of unskilled and voluntary labour in the climate context. The project does not affect those livelihood resources. It is not easy to conceive ways to improve those resources. One interpretation of the analysis is that those resources relate to social resources, which means that strengthening social resources such as local committees (see below) could increase the availability of labour in case of climatic events. Another interpretation is that since climate risks affect unskilled and voluntary labour, and because they are important in dealing with the impacts of those risks, all other adaptive measures reducing the impacts of those risks will automatically improve the availability of labour in case of climatic impacts, and thereby further strengthen adaptive capacities.
- Interestingly, *social resources* were not considered important in the climate context by the project managers of the Red de CODEMAS. One explanation is that mutual aid was considered a human resource (see above). Also, the low importance of local committees might mean that those organisms are not well developed, and if strengthened, could still play a positive role in adaptation, for example through improving mutual aid, as represented by unskilled and voluntary labour.

Suggestions for Improvements Regarding Mitigation

As it was argued above, the reduction of greenhouse gas emissions or the improvement of sinks is not the primary concern of the rural poor, but they could benefit from high synergies of mitigation and adaptation measures, and possibly also from carbon payments.

Considering the high importance of reforestation and avoided deforestation in the area, mitigation projects yielding carbon credits could be conceived, with incomes from carbon serving as an incentive to protect forests. Similar projects could be conceived in soil conservation, though they would probably be more complicated. More could be done on improved cooking stoves, through the introduction of more efficient models, which are already available. A further option is electricity, which can also reduce greenhouse gas emissions if the sources are renewable.

In sum, a number of possibilities to strengthen local adaptive capacities and mitigation exist. What kind of measures will be chosen, and whether they will be suggested as revised or new projects is up to the project planners and managers of Red de CODEMAS and their counterparts. It is recommended they go through the project revision cycle suggested in the Climate Proofing Tool.

6. Conclusion of Both Assessments

A comparison of both assessments shows many similarities between the ADEPES and Red de CODEMAS projects. The identified climatic risks are almost the same, and their main impacts include crop damages, landslides, loss of life, damages to buildings in both areas alike. The coping strategies are also comparable. The people in the area served by ADEPES seem to be better prepared, as they express clearer ideas on how they deal with current risks. Nevertheless, both populations are very vulnerable, and lack sufficient adaptive capacities.

Looking at the livelihood resources relevant in the climate context, the assessments coincide largely, too. Both see their natural resources very important for adaptation and at the same time at risk from climate hazards. Confronting climate change, they rely heavily on financial resources. This builds the case for strengthening sustainable sources of income. Interestingly, social resources are not considered important in the Red de CODEMAS project, as distinct from ADEPES. This might be explained, though, by the high importance of unskilled and voluntary labour in the former, a resource that also relates to mutual support and collective action.

Considering the project's impacts on adaptation, both seem to have a positive impact and no negative impacts, yet both can also be considered "light" projects in the sense that they don not enhance adaptive capacities by very much. As a result, there are important potentials for improvements through revised or new activities. Natural resources are very affected by climate risks and important for coping strategies in both areas. This is also where both projects have the largest beneficial impacts, but much more is needed to make people more resilient. Physical resources are both not affected by activities in both areas, but require support. Probably most important are financial resources, since people in both areas are very dependent on external aid, whereas sustainable financial incomes could make them more resilient. ADEPES is clearly stronger in this point, with commercialisation activities already in place, whereas the Red de CODEMAS could support sales of coffee, wood products and alternatives. Finally, human and social resources are important facilitators in adaptation, and require support, too. Mitigation has important synergies with adaptation in both regions, so that emission reduction projects could provide a financial source through carbon payments in both areas. Forestry projects are probably the most interesting ones, with improved cooking stoves activities being a related option.

The Red de CODEMAS project operates on a lower scale than ADEPES, which is more advanced and more comprehensive. Preparedness, resilience and knowhow are larger in Pespire. At the same time, as has been argued, there are many important opportunities for improving adaptive capacities, with some options for mitigation, in both projects. The present analysis has shown that many similarities exist between both regions. It can serve as a basis for new or revised activities which will improve abilities to confront climate change of the rural poor in different areas of Honduras, even though an area-specific and careful analysis is still recommended.

7. Lessons Learned from the Application of this Tool

This assessment report is not only meant to present the results and conclusion of the climate risk analysis of the two projects, but to draw some conclusions on its wider use within HEKS and possibly other organisations. Therefore, this last chapter discusses a number of lessons learned from this pilot phase, considering the usefulness of the tool in the specific context of its first application, methodological questions, as well as questions arising with respect to its further use.

7.1. From CRiSTAL to Climate Proofing Tool

Initially, the analysis was meant to be conducted with the CRiSTAL tool mentioned in Box 1. The Climate Proofing Tool, which forms the structural basis of this report, is largely a result of the experience gained in applying CRiSTAL. Three main considerations encouraged the development of a new tool:

- Inclusion of *mitigation aspects*: CRiSTAL does not look at greenhouse gas emission sources and sinks, yet Swiss Interchurch Aid (HEKS) was interested in having a tool at hand, which includes mitigation, too. Consequently, mitigation was incorporated into the Climate Proofing Tool, even though it plays a minor role next to adaptation. It is important to note that the tool does not provide any detailed mitigation analysis, as this would involve exact measurement of an emissions baseline and the change in emissions brought about by the project at hand.
- *Simplifying its use*: CRiSTAL is designed for use in the spreadsheet program Excel. At the beginning of the analysis it was discovered that a text version of the tool was needed so project planners and managers in the respective NGOs could understand the evaluation. Many representatives of small scale NGOs do not have the skills to use spreadsheet programs. Therefore, the Climate Proofing Tool was developed as a tool available as a text document, in simple language.

- Finally, CRiSTAL was not available in *Spanish* at the time of the evaluation, so it needed to be translated. The Spanish translation of CRiSTAL was about to be released at the moment the present document was finished.

As a result, the Climate Proofing Tool already reflects a number of experiences made in the application of CRiSTAL. Overall, however, CRiSTAL appears to be very suitable for the type of projects analysed. Reactions from the concerned NGOS themselves, as well as from over 20 NGOs present at a workshop where the results of this analysis were shown, indicate that local organisations consider it a very useful tool as well. This assessment report shows indeed that fairly specific areas for improving existing or designing new projects aiming at improving adaptation and mitigation capacities can be devised.

7.2. Methodological Considerations

Stakeholder consultations, particularly workshops with beneficiaries and meetings with project planners, are the core methodology of this tool. The application of the tool in two projects showed that one has to make sure the process, i.e. the questions asked in these consultations, are well understood by the consulted persons. For instance, it was noted that people had problems understanding the exact difference between climate risks and their impacts. People also tended to identify desirable rather than doable coping strategies. When discussing the project's impact on key resources with project managers, one has to make sure a critical approach prevails in the analysis, since the project owners might not be inclined to consider negative impacts of their own project. Generally, the person doing the assessment has to try to strike a good balance between ensuring the correctness and necessary criticism on the on hand, without influencing the results of the analysis too much on the other hand.

Another methodological issue relates to the geographical level at which the tool is applied. It can, for instance, be carried out for a whole region, in the whole project area of one local NGO, or only in one or a few villages. As a rule, the geographical focus should be inversely related to the expected diversity within a region regarding climatic hazards and economic, social, political, cultural and environmental aspects. The present analysis, for instance, focussed on only a limited area of each project zone, with people from just a few villages being consulted. It was decided not to include the whole area of influence of the respective NGOs, because of important climatic variation within those areas.

7.3. Organisational Considerations

During the application of the Climate Proofing Tool, and particularly with a view to the implementation of its use within an NGO in the longer term as a means to mainstreaming climate change into development cooperation, a number of questions

regarding the level and timing of implementation as well as concerning responsibilities came up.

Development cooperation often takes place within a complex network of different organisations. In the present case, HEKS initiated the climate proofing of the two projects as part of a pilot phase, yet the projects are operated by local Honduran NGOs. This is the normal mode of project implementation within HEKS. Since the local NGOs are independent partners, who in addition to that normally collaborate with more than one international NGO, the question arises to what extent HEKS can or should force them to climate proof their projects. The issue is particularly difficult to resolve when thinking of a worldwide implementation of the Climate Proofing Tool, as local circumstances vary widely. Some local NGOs might be very interested in applying the tool, where as others might lack the will and/or the capacity to do so. Generally, the tool is quite flexible and can be used by more and less sophisticated users. Still, the question at which level the tool should be promoted and who should apply it is a difficult one to tackle.

The level of implementation also relates to responsibility. Making meaningful use of the Climate Proofing Tool requires consistent and continuing organisational support. Resources need to be made available for the climate proofing itself, as well as for the development and implementation of adjusted project activities. When considering the application of the tool, one should therefore think thoroughly about responsibilities and resources.

Finally, users also have to think about the timing when applying the Climate Proofing Tool. It has been designed for evaluating existing projects, yet if an organisation seeks to use it as a means to mainstream climate change into its operations in the longer run, it may want to climate proof project proposals before they are accepted and implemented. In principle, this is perfectly possible. However, users must then be particularly cautious when estimating the impacts of certain project activities on adaptation capacities, since the analysis is prospective rather than based on observed impacts. The rest of the analysis can be conducted in very much the same way as for existing projects.

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