EVALUATION 2009/5

SDC'S CONTRIBUTION TOWARDS BIODIVERSITY: IMPACT IN THE ANDEAN REGION

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Swiss Agency for Development and Cooperation SDC

Evaluation of

SDC's Contribution towards Biodiversity: Impact in the Andean Region

Commissioned by the Evaluation + Controlling Division
of the Swiss Agency for Development and Cooperation (SDC)

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Bern, October 2009

Evaluation Process

Evaluations commissioned by SDC Senior Management were introduced in SDC in 2002 with the aim of providing a more critical and independent assessment of SDC activities. Joint SDC/SECO programs are evaluated jointly. These Evaluations are conducted according to DAC Evaluation Standards and are part of SDC's concept for implementing Article 170 of the Swiss Constitution which requires Swiss Federal Offices to analyse the effectiveness of their activities. SDC's **Senior Management** (consisting of the Director General and the heads of SDC's departments) approves the Evaluation Program. The **Corporate Controlling Section**, which is outside of line management and reports directly to the Director General, commissions the evaluation, taking care to recruit evaluators with a critical distance from SDC.

The Corporate Controlling Section identifies the primary intended users of the evaluation and invites them to participate in a **Core Learning Partnership (CLP)**. The CLP actively accompanies the evaluation process. It comments on the evaluation design (Approach Paper). It provides feedback to the evaluation team on their preliminary findings and on the draft report.

The CLP also discusses the evaluation results and recommendations. In an **Agreement at Completion Point (ACP)** it takes a stand with regard to the evaluation recommendations indicating whether it agrees or disagrees and, if appropriate, indicates follow-up intentions. SDC's Senior Management discusses the evaluation findings. The CLP may also identify **overall Conclusions** which are generic lessons applicable in similar contexts.
The stand of the CLP and the Senior Management Response are published with the Final Evaluators' Report. The Senior Management Response forms the basis for future rendering of accountability.

For further details regarding the evaluation process see the Approach Paper in the Annex.

Timetable

Step	**When**
Evaluation Programme approved by Senior Management	September 2007
Approach Paper finalized	March 2008
Implementation of the evaluation	Sept. 2008 – March 2009
Agreement at Completion Point	June 2009
Senior Management Response in SDC	October 2009

I Evaluation Abstract

Donor	SDC
Report Title	Evaluation of SDC's Contribution Towards Biodiversity: **Impact in the Andean Region**
Geographic Area	Andean Region (Bolivia, Peru, Ecuador)
Sector	Agriculture, Forestry
Language	English
Date	Submitted March 31, 2009
Authors	Le Groupe-conseil Baastel s.p.r.l. (Alain Lafontaine, Eduardo Fuentes, Jorge Elgegren, Mario Baudoin)

Subject Description
This report presents the findings of an evaluation of a portfolio of projects/programmes examining Swiss Agency for Development and Cooperation's (SDC) Contribution Towards Biodiversity in the Andean Region. The biodiversity portfolio included 13 projects/programmes covering the period 1996 to present, and focused on three countries: Ecuador, Bolivia and Peru. SDC was particularly interested in the impacts its biodiversity portfolio has had and what lessons can be learned from this to improve future planning.

Evaluation Methodology
The methodology for this evaluation has built on the key questions provided by the SDC for this evaluation. A mixture of qualitative and quantitative methods was used. The team performed an extensive documentation review. Three country case studies covering a total of four projects/programmes were carried out via field visits. Overall, triangulation of quantitative and qualitative data obtained via the documentary review, interviews, semi structured focus groups with local beneficiaries as well as observation of physical sites of implementation along with the knowledge and expertise of four consultants, was performed.

Findings
Biodiversity was in principle of *relevance* to the project/programme designs and approaches. An effort to alleviate poverty through various uses of biodiversity resources is shown and can be considered to have been relevant to the needs and demands of beneficiaries. The projects/programmes are also relevant in terms of international, regional and national frameworks regarding poverty reduction, socioeconomic development, and biodiversity conservation. They are relevant to Climate Change and Food Security but here there is potential for further integration.

Few projects/programmes have evidenced limited *impacts* on local *biodiversity*. The outputs and outcomes are often at most stepping stones towards biodiversity management. Very few interventions may contribute to the three main *goals of the CBD*, but most of them will contribute to CBD criteria, namely those related to capacity building at individual, organisations/governments and systemic levels. The review also suggests there may be positive *environmental impacts* of economic activities, in a number of cases, although those are not quantified, nor adequately monitored.

With respect to *impacts on local beneficiaries*, most interventions did lead to impacts, in particular in terms of improved livelihoods (improved income), albeit generally not quantified. A majority of SDC biodiversity-related interventions reported efforts and some noted impacts in terms of maintaining or improving that *access or the sustainable use of resources. S*ustainability of these changes was neither proven nor documented. Projects/programmes do not have noticeable or adequate methods to assess impacts on gender equity.

When it comes to policies and institutions, impacts on participation and institutional strengthening at the community level for at least half of the portfolio are noted, as well as impacts at the meso level. Institutional impacts in general relate to increased awareness and knowledge and service delivery capacity for research and training. Policy impacts focused on norms and plans at the community, municipal and, some, at the regional level. The portfolio had influences on national policies and initiatives such as poverty alleviation, or has strengthened some national institutions. With some SDC programmes, there were benefits arising from regionality in terms of exchanges of experiences, and of the simultaneous coordination for a number of its activities as well. However, the biggest challenge resides in this sustained institutionalisation of these regional functions.

When it comes to ***effectiveness***, overall the portfolio tends to demonstrate that in the case of projects/programmes that do not have biodiversity or integrated and sustainable resource management as their central objective, the inclusion of the biodiversity results might be done to some extent at the expense of the central poverty alleviation related outcomes. In this context, when linking the two themes, it is paramount to work with the right assumptions regarding the market for biodiversity related goods. That being said, it must be noted that within the framework of striving for sustainable change, and poverty alleviation in the longer term, the inclusion of the biodiversity dimension becomes a prerequisite.

There is a mixed picture on ***sustainability*** of the results achieved. SDC's approach has allowed for a strong and maintained focus on organisational capacity strengthening, a prerequisite to sustainability, and to sustained policy dialogue, at different levels. The biggest challenge has been financial sustainability after interventions end, either for institutional financing, and/or maintained access to quality markets for products or technological development. Interventions were not designed to test if their interventions were ecologically sustainable. The small scale of intervention impacts is in many cases a limiting factor in ensuring sustainability at the ecosystem level.

Recommendations

The evaluation recommended that:

- Biodiversity objectives and strategies be clearly stated and articulated right from the project design stage, along the poverty alleviation objectives.
- Biodiversity related components, projects/programmes must be designed with appropriate baselines, indicators and monitoring and evaluation systems.
- Resources and activities must be well targeted to the different actors involved, with a clear awareness raising strategy.
- SDC should continue to strengthen the capacity of pre-existing institutions, building on the partnerships it has developed with local institutions, in particular at the micro and meso levels.
- SDC's work at micro and meso levels and its niche and value added in established approaches and partnerships in biodiversity must not be lost in the scaling up and harmonization process.

- Conservation interventions must address the most important threats to biodiversity and a significant fraction of the threatening population must be addressed.
- Adequate assessments of market conditions and their projected evolution must be made to help ensure broader impacts that are also sustained after project end.
- SDC should continue to promote an integrated approach in its programming at two levels: In terms of dimensions of sustainability tackled: Cultural, social, institutional, political and ecological, but also in terms of areas of interventions.
- SDC could build on potential in its future biodiversity programming to: a) maintain the strong linkages developed between its biodiversity portfolio and food security concerns; and, b) further strengthen the potential linkages with climate change challenges in the Andean region.
- To conclude, due attention must be paid *right at design stage* of regional projects to the follow up regional institutional and financial sustainability aspects.

II Senior Management Response and Agreement at Completion Point

Stand of Senior Management Response regarding the evaluation

A. Overall Appreciation of the Senior Management

In view of the upcoming International Year of Biodiversity (2010), the senior management welcomes the present external evaluation as it represents a significant contribution to get a broader insight of SDC's contribution to biodiversity made in the Andes. It agrees with the Core Learning Partnership's overall appreciation. As the CLP does, it regrets that the results and recommendations remain relatively vague and therefore provide little management orientation and policy advice.

B. Overall Conclusions of the Senior Management

Based on the findings of the study and the experience made with the data basis, the following overall conclusions can be drawn:

1. Overall conclusions for SDC biodiversity programs in the Andes

1.1 The majority of the SDC programs and projects in the Andes related to biodiversity and examined in this study did not appear to have taken biodiversity as a central objective. Biodiversity (as an implicit side objective) was assumed but not tested. These programs – most of them in the agricultural sector – aimed at promoting alleviating poverty by offering more lucrative agricultural practices or better access to markets. In achieving these objectives, they were undoubtedly effective as shown in this study. Most success in achieving poverty alleviation and pursuing (agro)biodiversity conservation has been found in SDC programs that have promoted germplasm banks (e.g. agricultural and forest seeds development, ex-situ conservation) and commercialisation of native agricultural products. These experiences should be taken into account and scaled up in future interventions.

In particular in Bolivia where SDC continues to promote agricultural innovation (through its program "Programa de innovación continua") the lessons learnt from the promotion of the commercialisation of native agricultural products should be taken into account, hereby pursuing a contribution to agrobiodiversity conservation.

1.2 If biodiversity conservation is to be pursued by SDC in the Andes in the future, biodiversity objectives, including the true contribution to the International Convention on Biological Diversity (CDB), have to be made explicit at the design stage of the program and then tested and monitored with adequate indicators. Program resources have to be allocated accordingly (including for monitoring).

BioCultura, SDC's large biodiversity conservation program in Bolivia (a descendent of the ancient GUP programs), needs to make its biodiversity objectives explicit and monitor them accordingly (both qualitatively and quantitatively). A special accountability effort based on empirical evidence will required with respect to the program's contribution to the CBD.

1.3 The evaluation has highlighted SDC's expertise and reputation gained through its yearlong presence at the local, meso and macro level and its continuous support to national partner institutions. In particular the knowledge gained through local activities has provided SDC and its partners in many occasions the authority to effectively influence the policy dialogue (example National Biodiversity Strategy in Bolivia). Although SDC has committed itself to deliver its aid more aligned and harmonized, SDC needs to make sure that it keeps touch with local activities and institutions (in BioCultura) in order to maintain its on the ground expertise.

1.4 At the regional level programs that have promoted genetic diversity and programs with a conservation approach need to be distinguished. Whereas agricultural biodiversity programs produced major impacts by successfully disseminating genetic diversity throughout the region, programs with an ecosystem conservation approach (in particular Ecobona and BioAndes) seemed to show only mixed results. For the latter benefits arose in terms of exchanges of experiences. Yet relatively little policy influence has been achieved so far as compared to the programs' explicit objectives. However, these comparatively modest achievements need to be seen in view of two major constraints. First, these programs are relatively recent. As such, they may have not yet developed their full potential. Second, while years ago the regional integration process (mostly around the CAN[1]) seemed to be dynamic and promising, it has come to virtual halt in recent years. In this unfavourable context, biodiversity conservation, traditionally not a priority of governments, attracted even less attention.

For the promotion of genetic agricultural biodiversity, a regional approach should be applied as the up scaling potential is high. For programs with an ecosystem conservation approach, the regional approach should be carefully reviewed as national approaches may be more appropriate.

2. Overall conclusions for SDC biodiversity programs in general

2.1 Conservation objectives can be in opposition to poverty alleviation. If SDC includes potential biodiversity impacts within its poverty alleviation portfolio, it needs to include these objectives explicitly already in the program design, monitor them and allocate resources accordingly. Reaching biodiversity objectives may not merely be assumed but need to be verified. This is of particular importance if a program is intended to contribute to the CBD.

Trade offs between conservation and poverty alleviation goals have to be analyzed specifically and carefully for each program. Most promising for reaching both development objectives simultaneously have proven programs that combine conservation goals with sustainable use of biodiversity, such as marketable native agricultural or forest products. Such programs are particularly relevant in ecologically and climatologically fragile contexts. Each program that includes both development objectives needs to make them explicit. An appropriate level of resources has to be allocated to both objectives.

2.2 Biodiversity conservation has a long term nature, it depends on a country's long term commitment to put in place appropriate legislation and adequate funding for enforcement or incentives. The study underlines the four most promising intervention areas for SDC: a) policy dialogue, b) capacity building for national and local institutions for implementation and enforcement, c) support and strengthening of the country's monitoring capacity, and d) awareness building among the involved stakeholders. Future interventions to promote biodiversity should intervene in one or more of these areas.

[1] „Comunidad Andina de Naciones".

3. Overall conclusions - methodological aspects

3.1 The evaluation's principal weakness is the lack of a sound basis of result data and information at the outcome level for program objectives in general and biodiversity in particular. Although varying from one project to another, the level of information on results and outcomes was found low in the available program literature (external evaluations, end of phase reports, etc.) and, in general terms, insufficient to meet the requirements for the objectives of the evaluation as stipulated in the approach paper. This lack – not known to this extent at the beginning of the study and revealed during the evaluation process – limits the significance of the study. Therefore, substantial improvements in the monitoring of outcomes (including adequate definition of outcome indicators, base lines, balance between qualitative and quantitative aspects) and more rigor in outcome reporting will be required if the SDC achievements are to be demonstrated rather than just assumed.

The need for more rigor in outcome monitoring and reporting is not specific to biodiversity programs but a generic imperative to all SDC programs and projects. Outcomes of SDC interventions need to be better understood not only for accountability reasons but for steering purposes as well if the interventions ought to become more effective.

3.2 Both terms of reference as well as the approach paper included a relatively ambitious set of evaluation objectives on biodiversity while not being fully aware of the unknown limits in the available results information basis found at headquarters and cooperation offices. This was in particular true for quantitative aspects of the supposed biodiversity outcomes. In future external evaluations, approach papers need to be developed and tested against the limits in the information basis before study begin.

In order to achieve a reasonable cost-benefit ratio, pre-examination of the quality of information available is undoubtedly required.

Agreement at Completion Point - Stand of the Core Learning Partnership regarding the evaluation

A. Overall Appreciation of the Core Learning Partnership

The Core Learning Partnership (CLP) welcomes the present evaluation on SDC's contributions, made during more than a decade, to conserve biodiversity in three countries of the Andes. This study provides a unique opportunity for new insights on an extraordinarily complex issue across SDC's intervention portfolio in a way that has never been offered before. The CLP acknowledges the thematic and methodological professionalism of the evaluation team and appreciates the general results of this comprehensive analysis.

No standardized broadly accepted approach or scientific methodology exists to evaluate the complexity of biodiversity assessed transversally across a large and heterogeneous portfolio as it was the case in this study. Without a doubt the major constraint to this evaluation has been the limited availability of information both quantitative and qualitative; a fact that limited the evaluation team in conducting more comparative based analyses and demonstrating results on biodiversity conservation at the impact level. Still, the CLP considers the study a significant contribution to both SDC as well as to the Latin America Division as the responsible operational unit. It also welcomes the gained insights in the light of the upcoming International Year of Biodiversity (2010).

Despite numerous gaps and weaknesses in the available information base a substantial part of the ambitious objectives of the evaluation has been achieved. The evaluation reveals a series of important findings. The conclusions and lessons learnt address both performance results but also several methodological aspects. Some of these findings have an importance that go clearly beyond biodiversity related projects and programmes; these insights, in particular the ones calling for a better outcome monitoring, ought to be considered for SDC's interventions in general.

With regard to the recommendations (chapter 11), the CLP regrets that they are generally vague, despite interesting "lessons learnt" in the previous chapter. It lacks the conceptual explanatory power in order to be more meaningful and applicable for management and strategic portfolio decisions at both SDC Headquarters as well as in the field offices. With the objective to provide to the management more concrete issues and recommendations to decide on, the CLP has chosen to further develop in its comments some ideas and issues presented in the recommendations chapter.

The evaluation underlines in its introduction the relevance of the portfolio to the Convention on Biodiversity (CBD). However, the achievements of CBD objectives or contributions to the CBD have not been analyzed in more detail.

Finally, the CLP appreciates that it has been provided the opportunity to discuss milestones and preliminary results of the study. Altogether this has been an important learning process for all CLP's members.

B. Recommendations

Recommendation 1
The issue and areas of focus of SDC programming in the Andean region offer a great opportunity to further mainstream biodiversity concerns in development cooperation. However, for this to be effective, biodiversity objectives and strategies must be clearly stated and articulated right from the project design stage, along the poverty alleviation objectives, and clearly linked to reinforcing components and activities.

Stand of CLP
The CLP agrees with this general recommendation. However, as a general recommendation, the CLP emphasizes that natural resource concerns in general rather than biodiversity only should be mainstreamed in development cooperation programs. All development efforts should be analyzed and evaluated with regard to their impact on natural resources, considering the entire ecological footprint. This evidently includes but is not limited to biodiversity. Other aspects need to be included as well (e.g. effects on climate change).

The CLP agrees with the second statement (in the second phrase), where the recommendation calls for making biodiversity related objectives more explicit. This applies primarily to development interventions where promoting or conserving biodiversity is the major outcome. In such cases, biodiversity related objectives need to be explicitly and clearly defined already at the outset of the project.

Recommendation 2
Furthermore, in future SDC programming, biodiversity-related components, of projects and programmes must be designed with appropriate baselines, indicators and monitoring and evaluation systems to detect changes in the biophysical environment as well as before-after changes in behavior of institutions and people towards biodiversity, especially behaviors linked to threats to biodiversity. Given the challenges of measuring changes in biodiversity itself, measuring reductions/increases of threats against biodiversity in the targeted regions can be very cost-effective. In addition, these contrasts may provide evidences of the ecological and social sustainability of the results.

Stand of CLP
The CLP fully agrees with this recommendation. Beyond its thematic findings, the study has revealed a systemic weakness in measuring development results in general, and in particular in measuring biodiversity objectives in the examined set of projects. If objectives are to be explicitly related to biodiversity in future, the monitoring and evaluation system needs to be designed accordingly (including appropriate indicators and the establishment of a base line). Resources have to be reserved to implement the monitoring periodically. The CLP recognizes that monitoring and evaluating biodiversity is a complex and hence cost-intensive issue. Biodiversity monitoring should therefore be inserted into national information systems wherever the quality of data allows doing so. Instead of establishing an own monitoring system for mere accountability purposes, joint efforts with other donors to strengthen national monitoring systems should be considered as an alternative. SDC has to improve its internal monitoring and evaluation standards and practices.

Recommendation 3
To lead to durable impacts on biodiversity and sustainable resource management, resources and activities must target all key actors involved. Key participants should share the goals and approaches of the intervention. Within this framework, if livelihood benefits are to be linked to changes towards more sustainable resource management, local populations should be fully aware and share the biodiversity significance of the trade-offs involved.

Stand of CLP
The CLP agrees partially with this recommendation. Resources and activities must not always target all key actors, resource have to be prioritized to fund activities with the highest effectiveness to reach a certain objective. For key participants to share goals and approaches, a consensus based on information and common understanding is required. The CLP thus highlights the importance of promoting and raising awareness about biodiversity. In many cases, biodiversity is not a priority to locals because of a lack of information and awareness about the true value of biodiversity and its fundamental role to wealth creation. Development projects targeting at biodiversity conservation should therefore foresee measures for the recompensation of people living in the buffer zones of biodiversity relevant areas, who are to renounce to the use of these surfaces or invest labour for their conservation, by creating incentives, like property-rights, long-term oriented user-rights (for the future) or tax money from central budget for the payment of environmental services.

Recommendation 4
To enhance its prospect for longer term and broader impacts on biodiversity conservation, SDC should build on the approach it has developed over the years in the region and continue to strengthen the capacity of pre-existing institutions, building on the successful partnerships it has developed with local institutions, in particular at the micro and meso levels.

Stand of CLP
The CLP agrees with this recommendation as it recognizes that only strong and committed local and existing institutions together with appropriate regulatory frameworks can induce long term structural changes that lead to better conservation of biodiversity. In the Andean region, national policies often have no effect at the meso or micro level. The outreach of centralized government programs is often limited. It is therefore important to strengthen links between the different government levels (micro, meso, macro). In addition, the links have to go beyond the national sphere, for information exchange and other reasons links have to be established to international conventions (e.g. Biodiversity Convention) and bodies.

Recommendation 5
This also links up to the strategy to emphasize in scaling up impacts and aligning to the Paris Declaration in the years to come. This should be done keeping in mind the niche and value added of SDC established approaches and partnerships in biodiversity conservation. Typically, SDC has grounded its work at the micro and meso level, working through local structures and actors. This strength must not be lost in the scaling up and harmonization process. Harmonization could focus on micro and meso level for instance, and use that entry point as a way to continue to influence the broader national processes, and develop more explicit strategies to ensure replication of the successful pilots it supported, with the support of other development partners. Such a strategy emphasizes building on sustainable, longer term, capacity development processes.

Stand of CLP
The CLP agrees with recommendation 5 but with the following modification: *"SDC is committed to scaling up its successful interventions and making them more effective, among others by implementing the Paris Declaration (harmonization, alignment)"* instead of the first sentence of the recommendation *"This also links up to the strategy to emphasize in scaling up impacts and aligning to the Paris Declaration in the years to come"*. However, the CLP underlines that it considers this recommendation not being specific to biodiversity conservation only. Because of its limited resources compared to other donors, SDC has traditionally been strong at the micro and meso level. Its reputation is based upon the expertise on these two levels. This has been and is especially true for natural resource management and biodiversity conservation projects in Latin America. These specific on-the-ground experiences have continually been valuable to SDC to its policy dialogue. The CLP recognizes this fact and recommends maintaining as far as possible interventions at these two lower levels. Yet up scaling strategies must be defined right from the beginning.

Recommendation 6
In the same vein, given that conservation interventions must address the most important threats to biodiversity, a significant fraction of the population putting pressure on biodiversity must be addressed. Should SDC not have the sufficient resources to ensure that, it should at least ensure that in their design, its pilot interventions are linked to broader programs of action financed by other partners, be they national or international.

Stand of CLP
The CLP agrees with the recommendation (it considers that two messages are included in this recommendation). First, it welcomes the suggestion to prioritize areas of intervention and to target a sufficiently large fraction of the population in order to be effective in the effort. Secondly, conscious that the linkages between SDC's "pilot interventions" and "broader programs" have to be secured by alignment of SDC with national programmes and by coordinating with donors, the CLP highlights the fact that not only governments may be the target but civil society and private sector as well.

Recommendation 7
For projects and programmes that intend to work through markets, adequate assessments of market conditions and their projected changes must be made to help ensure broader and more sustainable impacts.

Stand of CLP
The CLP partially agrees with the recommendation although it is considered too general and thus little meaningful. The CLP would like to specify that markets can be a driver in favor of conservation of biodiversity but also a threat against conservation. The hypothesis of making a market become a driver of biodiversity conservation is most applied in SDC Latin America Division's portfolio by promoting local native agricultural products (e.g. old and resistant varieties) as well as promoting income generating activities for local populations (e.g. eco-tourism). So far, little or no evidence exists on whether promoting native varieties can per se conserve biodiversity. In any case, such assumptions need to be carefully verified and tested. In such analysis also links to livelihood improvement, food security and ecological sustainability have to be examined.

Recommendation 8
SDC should continue to promote an integrated approach in its programming at two levels: In terms of dimensions of sustainability tackled: Cultural, social, institutional, political and ecological, but also in terms of areas of interventions. Indeed, the evolution of the portfolio has shown the value added of focusing on ecosystems. From this perspective, and given the manifest interest in maintaining downstream waters supplies, working with watersheds may be a win-win approach to biodiversity management and poverty alleviation.

Stand of CLP
The CLP only partially agrees with this recommendation. The CLP likes to exchange the focus on ecosystems with a more comprehensive "landscape management approach". This later looks beyond just ecosystems. It integrates, in a given delimited territory, most often a watershed, the ecosystem and the needs of urban and agricultural areas as well. Biodiversity and water are both public goods. They are a resource base to many. Yet both natural resources have to be seen in a more holistic perspective and not just from a conservation point of view. The landscape management approach better allows finding links and equilibriums between biodiversity, food security and other societal objectives. In addition, climate change together with demographic growth will exacerbate the pressure on natural resources, making a holistic approach even more urgent. This is particularly true for the Andean countries which will be hit harder than others by the climate change.

Recommendation 9
Furthermore, working with watersheds offers a potential for SDC to pay due attention in its future programming with regards to: a) building strong linkages between its biodiversity portfolio and food security concerns; and, b) further strengthening the linkages – which are many – with climate change adaptation and mitigation challenges in the Andean region.

Stand of CLP
The CLP agrees to this recommendation. The appreciation is given in recommendation 8.

Recommendation 10
To conclude, in order to ensure broader, longer term sustained impacts of biodiversity conservation efforts at the regional level, due attention must be paid *right at the design stage* of regional projects to the follow-up institutional and financial sustainability of regional management, coordination and information exchange functions.

Stand of CLP

The CLP agrees with this recommendation. The Latin America Division has supported various initiatives and programs at the Andean regional level to promote biodiversity. These efforts have had principally a focus on information, awareness raising and knowledge exchange. The CLP wants to highlight that for such regional efforts to have a chance of success the following three minimal preconditions need to be fulfilled. Firstly, SDC has to cooperate with existing, well-established regionally legitimised institutions or bodies with a sufficiently solid work history in the area of biodiversity. Secondly, at best it supports already existing initiatives in order to count on good ownership. Thirdly, it needs to make sure that the regional body or institution is sufficiently enough connected with the corresponding national institutions in order to secure national ownership of the recommended measures, thus guaranteeing their effective implementation.

C. Overall Conclusions of the Core Learning Partnership

Based on the findings of the study and the experience made with the data basis, the following overall conclusions can be drawn:

1. Overall conclusions for SDC biodiversity programs in the Andes

1.1 The majority of the SDC programs and projects in the Andes related to biodiversity and examined in this study did not appear to have taken biodiversity as a central objective. Biodiversity (as an implicit side objective) was assumed but not tested. These programs – most of them in the agricultural sector – aimed at promoting alleviating poverty by offering more lucrative agricultural practices or better access to markets. In achieving these objectives, they were undoubtedly effective as shown in this study. Most success in achieving poverty alleviation and pursuing (agro)biodiversity conservation has been found in SDC programs that have promoted germplasm banks (e.g. agricultural and forest seeds development, ex-situ conservation) and commercialisation of native agricultural products. These experiences should be taken into account and scaled up in future interventions.

1.2 If biodiversity conservation is to be pursued by SDC in the Andes in the future, biodiversity objectives, including the true contribution to the International Convention on Biological Diversity (CDB), have to be made explicit at the design stage of the program and then tested and monitored with adequate indicators. Program resources have to be allocated accordingly (including for monitoring).

1.3 The evaluation has highlighted SDC's expertise and reputation gained through its yearlong presence at the local, meso and macro level and its continuous support to national partner institutions. In particular the knowledge gained through local activities has provided SDC and its partners in many occasions the authority to effectively influence the policy dialogue (example National Biodiversity Strategy in Bolivia). Although SDC has committed itself to deliver its aid more aligned and harmonized, SDC needs to make sure that it keeps touch with local activities and institutions (in BioCultura) in order to maintain its on the ground expertise.

1.4 At the regional level programs that have promoted genetic diversity and programs with a conservation approach need to be distinguished. Whereas agricultural biodiversity programs produced major impacts by successfully disseminating genetic diversity throughout the region, programs with an ecosystem conservation approach (in particular Ecobona and BioAndes) seemed to show only mixed results. For the latter benefits arose in terms of exchanges of experiences. Yet relatively little policy influence has been achieved so far as compared to the programs' explicit objectives. However, these comparatively modest achievements need to be seen in view of two major constraints. First, these programs are relatively recent. As such, they may have not yet developed their full potential. Second, while years ago the regional integration process (mostly around the CAN[2]) seemed to be dynamic and promising, it has come to virtual halt in recent years. In this unfavourable context, biodiversity conservation, traditionally not a priority of governments, attracted even less attention.

[2] „Comunidad Andina de Naciones"

2. Overall conclusions for SDC biodiversity programs in general

2.1 Conservation objectives can be in opposition to poverty alleviation. If SDC includes potential biodiversity impacts within its poverty alleviation portfolio, it needs to include these objectives explicitly already in the program design, monitor them and allocate resources accordingly. Reaching biodiversity objectives may not merely be assumed but need to be verified. This is of particular importance if a program is intended to contribute to the CBD.

2.2 Biodiversity conservation has a long term nature, it depends on a country's long term commitment to put in place appropriate legislation and adequate funding for enforcement or incentives. The study underlines the four most promising intervention areas for SDC: a) policy dialogue, b) capacity building for national and local institutions for implementation and enforcement, c) support and strengthening of the country's monitoring capacity, and d) awareness building among the involved stakeholders. Future interventions to promote biodiversity should intervene in one or more of these areas.

3. Overall conclusions - methodological aspects

3.1 The evaluation's principal weakness is the lack of a sound basis of result data and information at the outcome level for program objectives in general and biodiversity in particular. Although varying from one project to another, the level of information on results and outcomes was found low in the available program literature (external evaluations, end of phase reports, etc.) and, in general terms, insufficient to meet the requirements for the objectives of the evaluation as stipulated in the approach paper. This lack – not known to this extent at the beginning of the study and revealed during the evaluation process – limits the significance of the study. Therefore, substantial improvements in the monitoring of outcomes (including adequate definition of outcome indicators, base lines, balance between qualitative and quantitative aspects) and more rigor in outcome reporting will be required if the SDC achievements are to be demonstrated rather than just assumed.

3.2 Both terms of reference as well as the approach paper included a relatively ambitious set of evaluation objectives on biodiversity while not being fully aware of the unknown limits in the available results information basis found at headquarters and cooperation offices. This was in particular true for quantitative aspects of the supposed biodiversity outcomes. In future external evaluations, approach papers need to be developed and tested against the limits in the information basis before study begin.

III Evaluators' Final Report

Evaluation of SDC's Contribution Towards Biodiversity: Impact in the Andean Region

Commissioned by the Corporate Controlling Section
Of the Swiss Agency for Development and Cooperation (SDC)

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Le Groupe-conseil baastel s.p.r.l.

Alain Lafontaine (International Team Leader)
alain.lafontaine@baastel.be

Dr. Eduardo Fuentes (International Consultant)
dr.eduardo_fuentes@yahoo.com

Jorge Elgegren (National Consultant)
cocoelgegren@speedy.com.pe

Dr. Mario Baudoin (National Consultant)
mariobaudoin@gmail.com

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ABBREVIATIONS AND ACRONYMS

ADERS	Asociación para el Desarrollo Sostenible del Peru
AOPEB	Asociación de Productores Ecológicos
BASFOR	Centro de Semillas
CAN	Andean Community
CAPAC	Cadenas Productivas Agrícolas de Calidad
CBD	Convention on Biological Diversity
CIP	International Potato Centre
CLP	Core Learning Group
CONADIB	National Commission on Biological Diversity
CONAM	National Environmental Council
CONPAPA	Consorcio de Productores de Papa
DAC	Development Assistance Committee
DGPA	General Directorate of Agrarian Promotion
DINFOCAD	Ministry of Education and the National Direction of Teacher Training
EMDEFOR	Empresa de Desarrollo Forestal
ETC	Andes Educational Training Consultants (International Group)-Andes
FAO	Food and Agriculture Organisation of the United Nations
FOVIDA	Fomento de la Vida
GRAIN	Genetic Resource International
INEFAN	Ecuadorian Institute of Forestry, Natural Areas and Wildlife
INIA's	National Institute of Agrarian Innovation
INRENA	National Institute of Natural Resources
ITDG	Soluciones Prácticas
ITTO	Italian-Peruvian Debt Swap Fund
IUCN	The World Conservation Union
LIDEMA	Liga de Defensa del Medio Ambiente
M&E	Monitoring and Evaluation
MACA	Ministerio de Asuntos Campesinos y Agropecuarios-Bolivia
MAELA	Latin-American Agro ecological Movement
MAG	Ministry of Agriculture and Livestock
NGOs	Nongovernmental Organisations
NPAS	National Protected Areas System
NTFPs	Non Timber Forest Products
OECD	Organisation for Economic Co-operation and Development
PAs	Protected areas
PAFE	Ecuadorian Forestry Action Plan
PCPA	Production Chain Participatory Approach
PEC	Proyecto EL CÓNDOR
PITA's	Applied Technological Innovation Projects
PNS	Programa Nacional de Semillas
PRODUCE	Ministry of Production
PRSP	Poverty Reduction Strategy Paper
REDD	Reducing Emissions from Deforestation and Forest Degradation
SDC	Swiss Agency for Development and Cooperation
SENASA	Servicio Nacional de Sanidad Agraria – Peru
SERNANP	National Protected Areas Service
UMSS	Universidad Mayor de San Simón
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
US	United States

EXECUTIVE SUMMARY

This report presents the findings of an evaluation of a portfolio of projects/programmes examining Swiss Agency for Development and Cooperation's (SDC) Contribution Towards Biodiversity in the Andean Region. The biodiversity portfolio included 13 projects/programmes covering the period 1996 to present, and focused on three countries: Ecuador, Bolivia and Peru. SDC was particularly interested in the impacts its biodiversity portfolio has had and what lessons can be learned from this and how to improve future planning. The evaluation examines the relevance, impacts, sustainability and effectiveness of this portfolio at the micro, meso and macro levels. The Evaluation team was comprised of four consultants: one senior international team leader, a second international consultant and two local consultants (Peru and Bolivia). The field missions took place in totality, from January 12 – February 12, 2009. An End of Field Work Workshop was hosted in La Paz, Bolivia on February 12, 2009. This allowed for the presentation and discussion of preliminary findings and conclusions at the national, regional and portfolio level. The outcome of this discussion was then fed into the analysis.

Methodology

The methodology for this evaluation has built on the key questions provided by the SDC for this evaluation. A mixture of qualitative and quantitative methods was used while carrying out the evaluation. The team performed an extensive documentation review for the 13 biodiversity related projects/programmes commencing firstly with documents provided by SDC headquarters, then others subsequently retrieved from local SDC offices in the field. Three country case studies covering a total of four projects/programmes (including two regional programmes) were carried out via field visits in order to further document and to present areas of success, challenges and lessons learned of SDC biodiversity-related projects/programmes. The case studies were: Agro-Ecology Centre of University Mayor of San Simón in Cochabamba, Bolivia (AGRUCO), Fund to support the production of forest seeds (FOSEFOR), Promotion of Peruvian Potatoes (INCOPA) and Protection of Mountain Forests in Bolivia, Ecuador and Peru/ Regional Programme for the Management of Andean Forest Ecosystems of Bolivia, Ecuador and Peru (PROBONA/ECOBONA). Overall, triangulation of quantitative and qualitative data obtained via the documentary review, interviews, semi structured focus groups with local beneficiaries as well as observation of physical sites of implementation along with the knowledge and expertise of four consultants, was performed.

Summary of Trends: Regional and National Biodiversity Policy Context

Generally speaking, native Andean forests have not always been prioritised by governments in the region and most forest policies were oriented towards the protection of Amazonian regions as they were deemed to be a much more reliable source of income and employment. By the early 1990s, recognition of the importance of Andean forests and Andean forest ecosystems began to grow, even as the countries fell into difficult economic times. This interest was also strengthened by the 1992 Rio Earth Summit which led all three countries to become signatories and parties of the Convention on Biological Diversity (CBD) in the early 1990s[1]. This served as an impetus for all three countries to develop their own national biological diversity strategies, which they all presently possess.

Agro-biodiversity has also become a more prominent theme in recent years, especially in terms of improving food security of small scale farmers. This has been especially relevant

[1] www.cbd.int

to the potato crop. The year of 2008 marked the International Year of the Potato (IYP), an effort to raise awareness regarding the importance of this native Andean crop to world food security. In the early 2000s the three countries began regional coordination with various activities such as through most recent Regional Biodiversity Strategy for the Tropical Andean Communities (approved in 2002) and the most recent Andean Environmental Agenda (2006-2010) of the Andean Community (CAN). The latter addresses themes of biodiversity, climate change, water resources, disaster prevention, food security, and environmental education to name but a few.

Overview of SDC Biodiversity Portfolio in the Andean region

Over the period covered by the portfolio examined, it was noted that the projects/programmes have been grouped into various thematic priorities including reforestation, forest seed diversity, native Andean potato diversity, improved market access, agricultural technology and general ecosystem management (for the Andean native forest in particular). Generally, SDC's portfolio has progressed from one of specific, micro oriented projects to one of more macro oriented programmes reflecting a changed view on the uses and management of biodiversity in general. A variety of partners and synergies has been maintained and nurtured throughout the period covered, at all levels. This mixture has been crucial to maintaining impacts at the micro level while strengthening institutions at the national and regional level to promote regional initiatives.

Findings

Relevance

Overall, documentary review and the case studies demonstrate that biodiversity was in principle of relevance to the project/programme designs and their approaches. Generally speaking, the portfolio tends to show an effort to alleviate poverty through various uses of biodiversity resources. Due to the fact that for the most part, the overall goal of all projects/programmes in the portfolio was poverty alleviation and not biodiversity conservation, except some projects/programmes, overall, they can be considered to have been relevant to the needs and demands of beneficiaries. Evidence also highlights the relevance of the projects/programmes in terms of international, regional and national frameworks regarding poverty reduction, socioeconomic development, and biodiversity conservation. They also show relevance to Climate Change (adaptation/mitigation) and Food Security concerns. There is potential for the further integration of these two priorities into future planning.

Impacts

- **On Biodiversity and the Environment**

In sum, there is evidence that only a few projects/programmes in the portfolio have led to limited impacts on local biodiversity. In terms of ex-situ conservation, one notes the significant germplasm banks set up for both potato and native tree species, which together have allowed the cataloguing and preservation so far of hundreds of species of plants. In terms of in-situ conservation, many of the projects/programmes report activities and outputs aimed at conservation and sustainable use of resources, but there is no clear evidence of conservation and sustainable use of *native biodiversity*. The outputs and outcomes produced by the projects/programmes are often at most stepping stones towards long-term biodiversity management.

A very limited number of interventions under the portfolio may contribute to the three main goals of the CBD, but most of them will contribute to other important criteria of the CBD,

namely those related to capacity building at the individual, organisations/governments and systemic (laws, national and regional regulations) levels. A number of projects/programmes also support transfer of technologies, education and increasing awareness, all of them important criteria for the implementation of the CBD. Finally, most projects/programmes, are consistent with the CBD goal of having developed country Parties help implement the CBD in developing country Parties, such the three Andean countries. With respect to environmental impacts of economic activities, the review of the portfolio and the case studies, suggest there may be positive impacts in a number of cases, although those are not quantified, nor adequately monitored.

- **On Local Beneficiaries**

In sum, evidence supports the view that in most cases projects/programmes did lead to impacts on local beneficiaries. Almost all projects/programmes reported varying impacts in terms of improved livelihoods (mostly in the form of improved income) in the areas where they worked on the ground, albeit generally not quantified. With respect to access to, and sustainable use of resources, a majority of SDC biodiversity-related interventions reported efforts and some noted impacts in terms of either maintaining or improving that access and the sustainable use of resources, even though the sustainability of these changes was neither proven nor documented. To conclude, projects/programmes do not have noticeable or adequate methods to assess impacts on gender equity.

- **On Institutions and Policies**

The evidence points to impacts on participation and institutional strengthening at the community level for at least half of the portfolio, mostly through the strengthening of farmers' organisations and their technical know-how. How produced mechanisms and outputs reflect on behavioural changes is not always clear in the absence of adequate monitoring data. The overall portfolio review points towards impacts on meso level institutions and policies. Most of this incidence is either on municipal level institutions and policies, or academic institutions. The provincial level has generally not received as much attention, given the targeted nature of SDC interventions at a more micro level and its traditional relationships with a few academic partners. The assessment of these impacts on municipal, academic and provincial institutions and policies in evaluations and progress reports remained largely at a qualitative level with a few exceptions. Institutional impacts in general relate to increased awareness and knowledge and service delivery capacity in terms of research and training. Policy impacts focused on the development of norms and plans at the community, municipal and to some extent at the regional level.

The evaluation also highlights that the portfolio, as a whole, had influences on national policies and initiatives such as poverty alleviation, or has contributed towards the strengthening of some national institutions. With some SDC programmes, there were benefits arising from regionality in terms of exchanges of experiences, and of the simultaneous coordination for a number of its activities as well. However, the biggest challenge resides in this sustained institutionalisation of these regional functions after project/programme end, which could have benefited from more attention and a clear plan from the start of the initiative.

Effectiveness

Overall, the portfolio tends to demonstrate that in the case of projects/programmes that do not have biodiversity or integrated and sustainable resource management as their central objective, the inclusion of the biodiversity results might be done to some extent at the expense of the central poverty alleviation related outcomes. In this context, when linking the two themes, it is paramount to work with the right assumptions regarding the market

for biodiversity related goods. That being said, it must be noted that within the framework of striving for sustainable change, and poverty alleviation in the longer term, the inclusion of the biodiversity dimension becomes a prerequisite.

Sustainability

The evaluation provides for a mixed picture on sustainability of the results achieved. One of the strength of SDC's approach has been its long term approach and broadly maintaining the same working areas. This has allowed for a strong and maintained focus on organisational capacity strengthening, a prerequisite to sustainability, and to sustained policy dialogue at different levels (in particular the Municipal and National level). In all cases, the biggest challenge has been in terms of financial sustainability after projects/programmes end, either in terms of institutional financing, and/or maintained access to quality markets for the products or technological development promoted. Other factors, such as the fast changing political context, are also posing challenges to sustainability. On ecological sustainability, some of the measures supported through the portfolio have the potential to provide sustained positive impacts. Unfortunately the projects/programmes were not designed to test if their interventions were ecologically sustainable. The small scale of project/programme impacts is in many cases a limiting factor in ensuring sustainability at the ecosystem level.

Recommendations

On the basis of the evaluation of SDC's Impact on Biodiversity in the Andean Region, it is recommended that:

- Biodiversity objectives and strategies be clearly stated and articulated right from the project design stage, along the poverty alleviation objectives.
- Biodiversity related components, projects/programmes must be designed with appropriate baselines, indicators and monitoring and evaluation systems.
- Resources and activities must be well targeted to the different actors involved, with a clear awareness raising strategy.
- SDC should continue to strengthen the capacity of pre-existing institutions, building on the successful partnerships it has developed with local institutions, in particular at the micro and meso levels.
- SDC's work at the micro and meso level and the niche and value added of SDC established approaches and partnerships in biodiversity conservation must not be lost in the scaling up and harmonization process.
- Conservation interventions must address the most important threats to biodiversity and a significant fraction of the threatening population must be addressed.
- Adequate assessments of market conditions and their projected evolution must be made to help ensure broader impacts that are also sustained after project end.
- SDC should continue to promote an integrated approach in its programming at two levels: In terms of dimensions of sustainability tackled: Cultural, social, institutional, political and ecological, but also in terms of areas of interventions.
- SDC could build on potential in its future biodiversity programming to: a) maintain the strong linkages developed between its biodiversity portfolio and food security concerns; and, b) further strengthen the potential linkages - which are many - with climate change adaptation and mitigation challenges in the Andean region.
- To conclude, due attention must be paid *right at design stage* of regional projects to the follow up regional institutional and financial sustainability aspects.

1. INTRODUCTION

The Swiss Agency for Development and Cooperation (SDC) mandated the evaluation of a portfolio of projects/programmes in the Andean region to Le Groupe-conseil baastel s.p.r.l. (Baastel). The portfolio included 13 projects/programmes spanning its intervention in the Andean region dating from 1996 until the present. SDC would like to evaluate what impacts its biodiversity portfolio has had and what lessons can be learned from this. It is hoped that by focusing on 3 countries, the results obtained from this evaluation will be of more use to SDC. Specifically, the mandate was to assess SDC's contribution to the conservation of biodiversity through its initiatives in Peru, Bolivia and Ecuador. The evaluation examines the relevance, impacts, sustainability and effectiveness of its projects/programmes at the micro, meso and macro levels.

After consultation with the Core Learning Group (CLP), Baastel produced a revised Inception Report which outlined the main questions to be answered by the evaluation team. The revised Approach Paper and Evaluation Matrix can be found in Annexes A and B respectively.

The Evaluation team was comprised of 4 consultants: one senior international team leader, a second international consultant and 2 local consultants (Peru and Bolivia). The 3 field missions took place in totality, from January 12 –February 12, 2009. An End of Field Work Workshop was hosted in La Paz, Bolivia on February 12, 2009. This allowed for the presentation of preliminary opinions and conclusions at the national, regional and portfolio level. Various key SDC stakeholders from other national offices and partners were present. The missions in Peru and Bolivia comprised one international consultant and one local consultant. The mission to Ecuador was carried out by one international consultant primarily due to the fact that the mission was restricted to the capital region, bringing the evaluation effort in sync with SDC's phasing out of this country. The questionnaires and interview protocols used during the field missions can be found in Annexes C, D and E. Annex F presents a project/programme title translation.

The organisation of this evaluation report is fairly simple. Chapter 2 outlines the approach and methodology. Chapter 3 presents an overview of the evolving national and regional contexts with respect to biodiversity in the region and in each country. Chapter 4 describes the evolution of SDC portfolio over the period covered.

The main findings are presented in Chapters 5, 6, 7 and 8. Chapter 5 examines the Relevance of the SDC portfolio. This section looks at whether or not the projects/ programmes were relevant vis-à-vis the needs and demands of beneficiaries, policy frameworks and the environment (biodiversity). Chapter 6 gives an assessment of the impacts of the portfolio of biodiversity related SDC interventions on beneficiaries, institutions at the meso level (municipal and provincial institutions and policies), at the macro level (national and regional institutions and policies) and finally on the environment and biodiversity itself. Annex G contains four tables reflecting data compiled from the focus groups.

Questions pertaining to the effectiveness of the portfolio, in particular, what has been the contribution of biodiversity activities to the effectiveness of the projects/programmes, are discussed in Chapter 7. Chapter 8 focuses on sustainability of the results achieved by the portfolio. Country case studies examining these same topics in more detail are found in separate documents while their main findings are reflected in the main report.

Finally, conclusions, lessons learned and recommendations are presented in Chapters 9, 10, 11 respectively. Annex H contains the references used excluding those already listed in the case studies while Annex I is a list of people interviewed in Bern, Switzerland.

The team would like to extend their thanks to all who have participated or helped to facilitate this evaluation. We are very grateful to the local SDC offices that were particularly instrumental in coordinating the field missions as well as all those government officials, SDC HQ staff, project/programme staff and others who granted us their time in order to be interviewed. We are also thankful to the CLP for providing us with their assistance, support as well as comments and recommendations throughout the entire mandate. And finally, it would be remiss not to thank all the beneficiaries with whom we met during the focus groups, whose input was crucial for this report, as well as the SDC Evaluation and Controlling Section for all its coordination efforts and guidance throughout the process.

2. APPROACH AND METHODOLOGY

2.1 Approach

The basis of the methodology for this evaluation has been built on the key questions provided by the SDC. As previously mentioned, a detailed evaluation matrix was developed which was in itself revised after the CLP meeting in early December, 2008. This reduced the number of questions to be answered and thus removed indicators and questions from the original matrix. The new matrix also incorporated questions pertaining to the relevance of the projects/programmes with respect to the new priority areas of the SDC: food security and climate change (mitigation/adaptation) as well as the contribution of biodiversity activities to the effectiveness of the projects/programmes.

It should be mentioned that the evaluation of the SDC's portfolio was restricted by time and resource factors mostly relating to the field missions. The missions were very tightly planned and as a result, sites that could possibly have been selected to visit were in fact too remote to accommodate into the mission plan.

2.2 Methodology

A mixture of qualitative and quantitative methods was used while carrying out the evaluation. Nonetheless it should be highlighted that the team was challenged by the absence of key information and restrictions in terms of time and resources. Attributing impacts to specific interventions is extremely challenging and at times subjective due to the complexity of factors impacting a region over time. Even so, the evaluation team did its utmost to make up for areas that presented particular challenges to them, as well as to guarantee the most comprehensive and accurate analysis of the information it did obtain throughout the mandate.

2.2.1 Lack of information

As was highlighted in the Inception Report, the Team identified a lack of information early on, especially in regard to baseline studies. Even after supplementary document retrieval during which documents were sent to Baastel from local SDC offices and shared amongst the consultants, in general, it was established that there was a lack of specific baseline studies directly relevant to the projects/programmes. This rendered the analysis of the preservation or loss of biodiversity even more difficult.

In order to overcome this great obstacle, the Team used three basic measures. Firstly, it referred to other documents that contained indications of baseline information throughout their texts. These included Rector Plans, project proposals and SDC strategic documents to name but a few. Relevant internet sources were also used to retrieve baseline information at times. Secondly, the team relied on information retrieved from the field visits, more specifically any indication of baseline information from focus groups as well as interviews with other stakeholders was used to set proxy indicators. Lastly, the team used the expert knowledge of Andean biodiversity of the two local consultants based in Bolivia and Peru, as well as the international consultant based in Chile, to supplement the analysis of the impacts of biodiversity components of the interventions evaluated in particular.

2.2.2 Perceptions and biases of interviewees

Although the Team was very much aware of and cautious concerning biased views and perceptions of project/programme successes and/or failures, the Team would like to highlight the importance of the data obtained from the focus groups. Given the absence of baseline studies as previously mentioned, conducting community focus group surveys with informed beneficiaries who have first-handedly witnessed a change in their community and environment, were of extreme relevance and importance. There is no other clearer or more direct source of information, combined with the Team's observation of the sites, than from the targeted group of beneficiaries that have witnessed those changes and have been affected by them. Any radically different or opposing opinions that might have surfaced in the groups were taken into careful consideration and weighed against the overall observations of the group as a whole and the other sources available, when relevant. The Team is cognizant, however, that focus groups interviewed by people perceived to be linked to SDC, however indirectly, can have a bias in favour of the projects/programmes and the analysis of the sources is adjusted to take this into account. Team members noticed that people in the focus group spoke in support of the project/programme and frequently asked for additional assistance, and that minor discrepancies tended to be corrected by seniors. Special attention was given to these latter situations.

2.2.3 Representativeness of case studies

To maintain uniformity of the field visits, as much as possible, 2 sites/communities were targeted for visits per project/programme in each country. The exceptions were Ecuador where meetings with stakeholders were restricted to the capital for reasons which will be discussed in Chapter 4, and Bolivia, where Fund to Support the Production of Forest Seeds (FOSEFOR) actions on the ground were limited. In this particular case, the site was interchanged for that of another project, Protection of Mountain Forests in Bolivia, Ecuador and Peru (PROBONA) / Regional Programme for the Management of Andean Forest Ecosystems of Bolivia, Ecuador and Peru (ECOBONA). Specific sites to visit were recommended by local SDC offices as well as project/programme staff following strict guidelines from Baastel as well as SDC headquarters. This ensured that sites maintained adequate representativeness. The selection ensured that sites were not only "success" sites so as to give a balanced view of the performance of the portfolio and that the sites also allowed for an analysis of the different dimensions of the projects/programmes covered in terms of community and livelihoods focus and biodiversity focus.

The interview protocols for the focus groups as well as other stakeholders were drafted, edited, shared and discussed amongst all team members prior to the missions to ensure a mutual understanding of the protocols, questions and general methodology of the field visits. All interview notes will be made available to the Independent SDC Corporate Controlling Section, with the understanding that they must be kept confidential to preserve the anonymity of the interviewees, which was crucial in guarantying their frank views.

However, even with the steps taken to ensure uniformity, unforeseen events took place during the missions which required the evaluation team to adapt, while keeping in check the need for representativeness in all countries. These will be discussed below.

2.2.4 Methods of Triangulation

The evaluation team used several methods of triangulation in order to evaluate the data obtained through literature review and the field visits. Thus, impacts and conclusions reached in this report were not solely based on one data collection method. Firstly, the team used data collection triangulation by using a combination of methods throughout the mandate. To begin, all consultants participated in the literature review and thus shared their expert opinions vis-à-vis the documents reviewed for the portfolio and how satisfactorily it answered the main SDC questions and matrix. During the field missions, structured questionnaires mainly conducted on a one-to-one basis, semi structured focus groups, personal observation and of course additional literature reviews were the main methods employed. It is important to note that observation did not only include observation of the physical attributes of sites visited. This technique was also applied during the focus groups since not all community members felt comfortable voicing their opinions in public. Observation regarding gender and the overall atmosphere of the focus groups were noted.

Secondly, the team ensured that more than one consultant carried out the field missions, with the exception of Ecuador, thus doing its utmost to avoid biases and lack of multiple expert opinions. In two out of the three countries visited, one local consultant and one international consultant worked as a team. At the same time, the Team as a group ensured uniformity in terms of the application of the methodology during the field visits. The End of Mission Workshop also provided three of the four consultants with an initial opportunity to discuss varying points of view and opinions regarding the data collected.

Thirdly, the team analyzed quantitative and qualitative data obtained in the field missions, with that mentioned in the literature. This included focus group answers, data pertaining to species preserved or conservation techniques now used by beneficiaries to name but a few. Once again, all the consultants contributed thus allowing for a rich compilation and detailed analysis of impacts even considering the mandate's limits.

2.2.5 Documentation Review

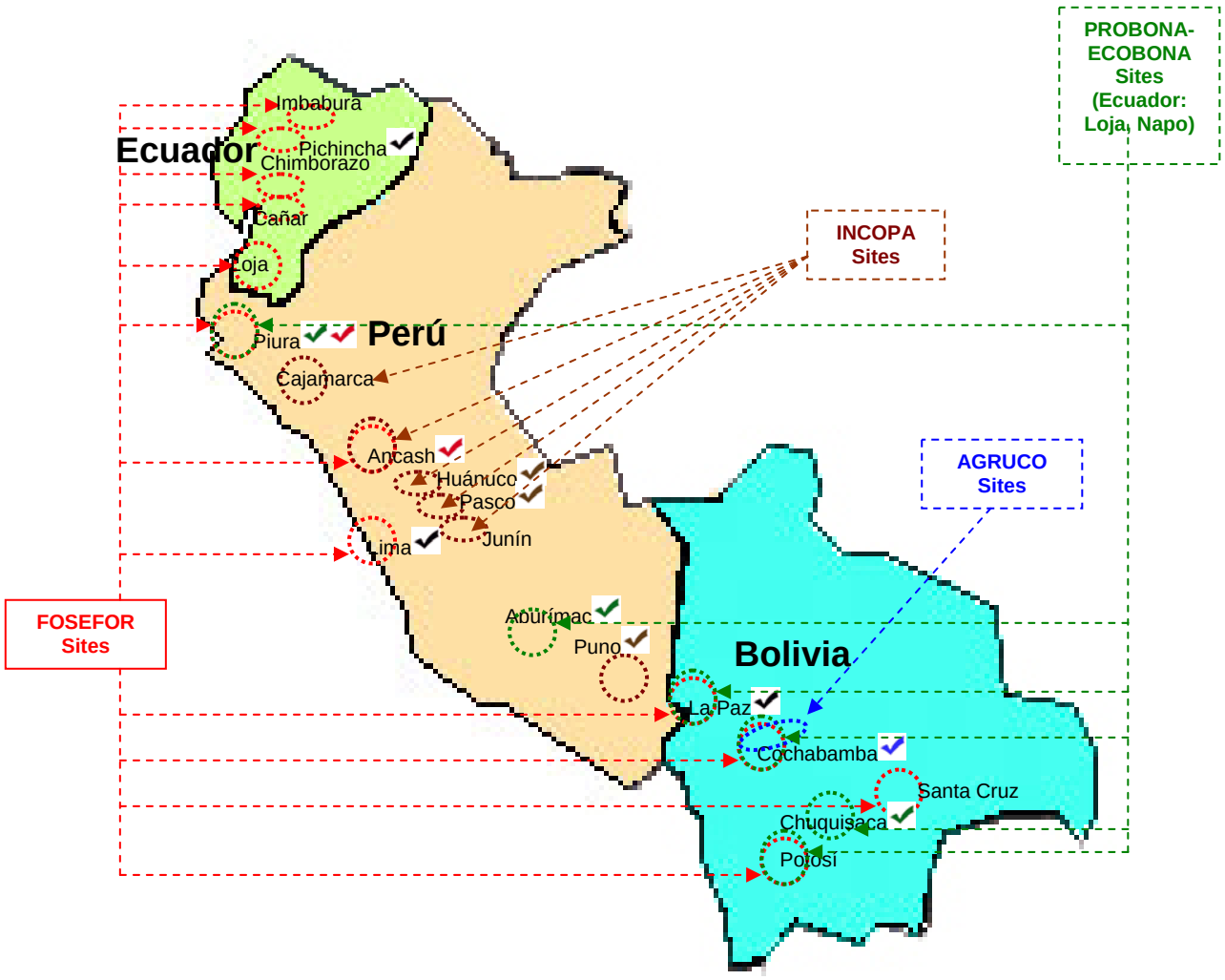
The team performed an extensive documentation review for the 13 biodiversity related projects/programmes commencing firstly with documents provided by SDC headquarters, then others subsequently retrieved from local SDC offices in the field. The documents reviewed included project/programme proposals, annual reports, external evaluations, end of phase reports, as well as complementary documentation. The documents were reviewed in reference to the evaluation matrix as relevant information was found in documents that would help answer the key questions from SDC. Relevant websites were also visited when necessary. A list of the documents reviewed for this report which complements the lists provided in each case study can be found in Annex H.

The documentation review gave an overview of the SDC projects/programmes as a portfolio. Not all documents for all projects/programmes could be retrieved. The biggest challenge remained the lack of baseline studies, something crucial when measuring impacts on biodiversity or on other dimensions.

2.2.6 Case Studies

Three country case studies covering a total of four projects/programmes (including two regional programmes) were carried out via field visits in order to further document and to present areas of success, challenges and lessons learned of SDC biodiversity-related projects/programmes. They were chosen with the use of a sampling methodology based on the following criteria: country, end of the project/programme date, budget, level of impact (macro, meso, micro), availability of documentation, and links to biodiversity (agro-biodiversity, food security and forests). In consultation with the CLP, the following final selection of four projects/programmes to be included in the three country case studies was identified out of the 13 projects/programmes from the biodiversity portfolio (see Annex F for complete list of 13 interventions): Agro-Ecology Centre of University Mayor of San Simón in Cochabamba, Bolivia (AGRUCO), FOSEFOR, Promotion of Peruvian Potatoes (INCOPA) and PROBONA (ECOBONA).

Map 1: Regional Map with Project and Field Visit Sites



Legend:
- ✔ = Black check mark means that at least one implementer, beneficiary, government officer (including SDC officers) or any other player involved or knowledgeable of any of the projects in the capital city of the country was visited
- ✔ = Blue check mark means that at least one AGRUCO community beneficiary was visited
- ✔ = Red check mark means that at least one FOSEFOR community beneficiary was visited
- ✔ = Brown check mark means that at least one INCOPA community beneficiary was visited
- ✔ = Green check mark means that at least one PROBONA/ECOBONA community beneficiary was visited

2.2.7 Field Visits

Key components of this evaluation were the field visits in Peru, Ecuador and Bolivia. These allowed the two international consultants and two local consultants the opportunity to meet with a broad range of stakeholders (partners, beneficiaries, project staff and others) in an effort to obtain more information to address the key questions of the SDC. Another important component of the field visits was the focus groups, which gave the consultants the opportunity to work directly with beneficiaries and discuss broad themes as well as set proxy indicators. The field visits also allowed the consultants to view first hand physical achievements and deficiencies.

The field visit to Peru began January 12th and was completed on January 24th. It was comprised of one international consultant and one local consultant. A detailed list of sites visited and stakeholders interviewed can be found in the case study. Unfortunately during the mission, an agrarian strike prevented the team from visiting one site and alternate plans had to be made. Therefore during the mission four out of the six sites were visited by both consultants. The remaining two sites were visited at a later date by the local consultant.

The field visit to Ecuador commenced January 26th and ended January 30th. As field visits were not conducted, the consultant met with government representatives, partners in implementation, and organisations from the two provinces where the interventions took place.

The field visit to Bolivia commenced January 28th and culminated with the End of Mission Workshop on February 12th. The international and local consultants both carried out the interviews and focus groups and visited the communities. One additional site that the local consultant was to visit alone prior to the mission for FOSEFOR, was not possible due to weather related logistical complications, and the tight deadlines for reporting after the mission did not permit rescheduling.

2.2.8 Interviews

As mentioned, interviews formed a key component of data collection. The team conducted interviews with SDC project/programme managers, implementing agencies, government officials, nongovernmental organisations (NGOs) and experts. Lists of the people met during field missions can be found in the case studies.

Although the protocols were designed and reviewed by the team as a whole, during missions, questions were either omitted or expanded on depending on the knowledge and level of implication of the interviewee. This ensured that the consultants` time was maximized and also allowed for more flexibility in the format of the interviews.

The team leader began interviews in Bern during the CLP meeting in early December. He met with key SDC staff who have been implicated in SDC interventions in the Andean region for many years. Their names can be found in Annex I.

2.2.9 Focus Groups

Focus groups were conducted in Peru and Bolivia using a community semi-structured questionnaire as shown in Annex E. The focus groups lasted approximately 1.5 to 2 hours each and consisted of a mix of men and women in the local communities. Special attention was also given to the fact that mixed men-women focus groups might hinder certain responses from certain community members. Also, the dynamic created by only having male evaluators was also taken into consideration when conducting the focus groups. Consultants used pictures when relevant to illustrate flora and fauna to increase communication with beneficiaries. Overall the focus groups were successful and allowed the evaluators the opportunities to discuss first-hand important aspects of the interventions.

In general, despite the logistical challenges encountered during the missions, considering the time and resources constraints, the team felt the field work was successful.

2.2.10 Overall methodologies used

Overall, the methodologies used in compiling quantitative and qualitative data for this report were:

- Documentary review
- Interview questionnaire with SDC project/programme staff, government officials, NGOs, experts, implementing agencies and others.
- Semi structured community Focus Group with beneficiaries (an average of two per project/programme in each country).
- Observation of physical sites of implementation when relevant as well as during the focus groups to observe which community members were responding and which were not.
- Overall triangulation of quantitative and qualitative data obtained with the knowledge and expertise of 4 consultants, and through analysis of all sources.

3. ANDEAN REGION AND BIODIVERSITY: SUMMARY OF MAIN TRENDS IN NATIONAL AND REGIONAL POLICY CONTEXT

3.1 Trends in the regional context

Bolivia, Ecuador and Peru, along with Colombia and Venezuela are host to approximately 25% of the world's total biodiversity[2]. Unfortunately it has only been in approximately the last 20 years that great efforts have been taken to preserve the natural resources of these countries. With time, national efforts, and even greater regional coordination, efforts have taken flight as world environmentalism has become a prominent international theme in almost all aspects of life.

During the 1980s and 90s, the beginning of the time frame for the portfolio, biodiversity interventions in all three countries were primarily in the form of large public and community reforestation projects/programmes promoted by their respective governments[3]. However, not much attention was given to native Andean forests and most forest policies were oriented towards the protection of Amazonian regions as they were deemed to be a much more reliable source of income and employment.[4] In fact most of the threats to Andean forest ecosystems, such as livestock grazing, timber collection, land clearing and soil erosion to name but a few, were not really recognized. Work in highland Andean forests has mostly been the effort of NGOs and municipalities that have worked in the high Andean regions to protect forests[5]. By the early 1990s, recognition of the importance of Andean forests and Andean forest ecosystems began to grow, even as the countries fell into difficult economic times. This interest was also moved by the 1992 Rio Earth Summit which led all three countries to become signatories and parties of the Convention on Biological Diversity (CBD) in the early 1990s[6]. This served as an impetus for all three countries to develop their own national biological diversity strategies, which they all presently possess.

Native agro-biodiversity had received little attention up to recently. However, it has become an important international theme in recent years as food security in many developing countries has become precarious. For instance, according to Jacques Diouf, Director-General of the Food and Agriculture Organisation of the United Nations (FAO) the "potato is on the frontline in the fight against world hunger and poverty"[7]. Its biodiversity in under threat as ancient varieties originally cultivated for thousands of years have undergone genetic erosion and have thus been lost and are presently threatened by climate change[8]. In fact it is estimated that up to 12% of wild relatives of the potato will become extinct as their growing conditions deteriorate[9]. It is a highly recommended food security crop that can help low-income farmers` livelihoods, such as in the high altitude areas of the Andean region.

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[2] CI, Andean Nations, CI sign deal to implement regional conservation Strategy, 2002. Accessed January 31, 2009, http://www.conservation.org/newsroom/pressreleases/Pages/061103.aspx
[3] Proposition de Credit FOSEFOR, No. 7F-02148.06, Phase 6. 2004, p. 2
[4] PROBONA Programa Regional de Bosques Nativos Andinos en Bolivia y Ecuador. Evaluación Externa 1996, p. i
[5] Proposition de Credit FOSEFOR, No. 7F-02148.06, Phase 6. 2004, p. 2
[6] www.cbd.int
[7] FAO, International Year of the Potato 2008. New Light on a hidden Treasure. End of year Review, 2008
[8] http://www.potato2008.org/en/potato/IYP-1en.pdf
[9] http://www.potato2008.org/en/potato/IYP-1en.pdf

Both Ecuador and Bolivia are members of the International Union for the Protection of New Varieties of Plants (UPOV) whose mission is to provide and promote an effective system of plant variety protection to encourage the development of new varieties of plants for the benefit of society[10]. The potato is also included in the International Treaty on Plant Genetic Resources for Food and Agriculture (2004) of the FAO. Similarly to the CBD, this treaty also aims at the conservation and sustainable use of crop plant diversity and the fair and equitable sharing of benefits derived from their use[11]. Most recently the International Year of the Potato (IYP) 2008, officially launched by the UN in October 2007, has helped to raise awareness of the potato's importance as a staple food of humanity and in achieving five UN-Millennium Goals, in particular the following: Eradicate extreme poverty and hunger; Reduce Child Mortality; Improve Maternal Health; Ensure environmental Sustainability; Develop a Global Partnership for Development[12].

Of particular relevance to the Andean region is despite the fact that the potato originated in the Andes, as of 2007 the largest potato country producers were China, the Russian Federation and India[13]. The International Potato Centre, (CIP) based in Peru, has become an important coordinating centre in the region for potato research and other tubers to improve the management of natural resources in the Andes and other mountain regions. Its aim is to eventually aid in poverty reduction. It is a member of the Alliance of 15 centres of the Consultative Group on International Agricultural Research (CGIAR)[14].

Also relevant to the regional context is the establishment of The Andean Pact, established based on the Cartagena Agreement of 1969, and which became the Andean Community (CAN) in 1997. This led to the establishment of regional institutions such as the Andean Parliament. Chile was once a member but left in 1976 as did Venezuela in 2006.[15] Although the Pact was initially created based primarily on economic goals, it has now come to embrace regional environmental strategies, of particular relevance to the preservation of biodiversity in the region. The CAN established a free trade area between four of the then five member countries in the 1990s (except Peru)[16] which later joined the Mercosur[17] countries in 2005[18].

Other regional tendencies that have been occurring will most likely have an impact on future biodiversity strategies and interventions. They concern the opening-up of the markets of the Andean countries. In 2006 Peru concluded agreements with the United States (US) in regard to bilateral free trade agreements[19]. Ecuador's negotiations have been suspended and Bolivia has not entered negotiations as of yet[20]. The Cuzco Declaration of 2004 established the South American Community of Nations (CAN, Mercosur and Chile, Guyana and Suriname), demonstrating yet again new efforts of South American integration[21]. These agreements are extremely relevant especially when considering benefit sharing of genetic resources as well as small farmers' access to markets and the market for native and ecological products.

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[10] http://www.upov.org/en/about/mission.html
[11] http://www.potato2008.org/en/potato/IYP-1en.pdf
[12] FAO, International Year of the Potato 2008. New Light on a hidden Treasure. End of year Review, 2008, p. 6
[13] FAOSTAT in International Year of the Potato 2008. New Light on a hidden Treasure. End of year Review, 2008, p. 47
[14] http://www.cipotato.org/cip/about.asp
[15] European Commission, Andean Community Regional Strategy Paper 2007-2013, p. 8
[16] European Commission, Andean Community Regional Strategy Paper 2007-2013, p. 10
[17] Mercosur countries comprise: Argentina, Brazil, Paraguay and Uruguay
[18] Andean Community Regional Strategy Paper 2007-2013, p. 10, 2007
[19] USA – Peru Trade Promotion Agreement was signed on January 12, 2006 and entered into force on Feb 1, 2009: http://www.ustr.gov/Trade_Agreements/Bilateral/Peru_TPA/Final_Texts/Section_Index.html
[20] Europe Commission, Andean Community Regional Strategy Paper 2007-2013, p. 10, 2007
[21] Europe Commission, Andean Community Regional Strategy Paper 2007-2013, p. 10, 2007

The three countries have also been undergoing decentralisation processes in hopes of giving more authority to provincial and municipal governments. With the decentralisation of land management processes, it is hoped that local governments will begin to further consider forests and their natural resources as part of their patrimony and therefore worth conserving and promoting their development in a sustainable manner to improve access and management of biodiversity resources.[22] However, a large part remains centralised and institutions still remain weak and therefore environmental policy is still not as effective or efficient[23].

Beginning in the early 2000s the three countries began regional coordination with various activities such as through the Andean Environmental Agenda and the Andean Biodiversity Strategy. The Regional Biodiversity Strategy for the Tropical Andean Communities was approved in 2002 to prioritize "actions for the conservation and sustainable use of the components of the biological diversity in categories where the countries of the CAN can use their comparative advantages to power the region's sustainable socio-economic development."[24] It represents a collaborative effort between the Secretary General of the Andean Community, its member states which are represented by the Ministers' Council for the Environment and Sustainable Development and the Andean Environmental Authority as well as the general public of the member states, in hopes of reaching the Strategy's goals. The Strategy embraces not only in situ and ex situ conservation and access to genetic resources but also an ecosystem approach to conservation that values traditional knowledge.

The most recent Andean Environmental Agenda (2006-2010) of the CAN addresses themes of biodiversity, climate change, water resources and Disaster Prevention, food security, environmental education to name but a few[25]. It also expresses the need for synergies among the region's other initiatives and with international agreements such as the Millennium goals, the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol and the Johannesburg Summit on Sustainable Development[26].

In general, all though all three countries are faring better economically than in the 1990s, they are still plagued by social and political instability[27]. There is an extremely uneven wealth distribution and most of the Indigenous population lives in poverty. Since the poorest of the poor are usually highly dependent on natural resources, they are even more affected by environmental problems.

[22] Bosque nativo en el mundo campesino andino por PROBONA junio, 2005, p. 23
[23] Europe Commission, Andean Community Regional Strategy Paper 2007-2013, 2007, 14
[24] Regional Biodiversity Strategy, 2005, p.i.
[25] Agenda Ambiental Andina 2006-2010, p. 8
[26] Agenda Ambiental Andina 2006-2010, p. 8
[27] Europe Commission, Andean Community Regional Strategy Paper 2007-2013, 2007, p. 12

3.2 Trends in the Bolivian context

Although Bolivia is stricken by extreme poverty rates, especially in the rural high altitude regions, it has not adequately addressed the protection and conservation of its Andean resources even though this is where 38%[28] of its population lives.

Bolivia's concern for its national environmental resources primarily began via reforestation. However, its Forest Policy has mostly been concentrated on tropical forests where the forest resource is already available and the economic benefits are reaped faster. The Forest Law (Ley Forestal No. 1700) came into effect in 1996, from which was created the Superintendencia Forestal[29]. Nonetheless these do not provide much guidance in regard to the creation of more forest resources in the Andean region of the country. This has resulted in prefectures and provincial governments being primarily responsible for forestation projects while lacking clear norms.[30]

Beginning in the mid 1990s, Bolivia began an administrative decentralisation process accompanied by the Popular Participation process. This aimed to reorganize the country and allow for dialogue between municipal, provincial and federal administrations and civil society concerning the application of national policies[31]. In 1992 Bolivia also signed the CBD and later became a party in 1994[32], demonstrating its growing interest in environmental policy and its willingness to participate in international norms. Bolivia ratified the Cartagena Protocol on Biosafety in 2002.[33]

Bolivia has been through periods of great social unrest and in recent years has undergone various social movements and protests regarding national rights and access to its own natural resources. Bolivia suffers from great food insecurity and a low production yield. Thirty-seven per cent of small farmers live in the high altitude regions of the country and occupy a meagre 6% of the available arable land[34]. It is estimated that 38% of Bolivia's population lives in rural areas[35]. In terms of agro-biodiversity, the potato is today the country's most important food crop, along with soybeans and it is cultivated across some 135 000 hectares of land by an estimated 200 000 farmers, the majority of them small holders[36]. During the past few governments, the ministries of Agriculture have stressed the development of large-scale farming in the lowlands and Ministers have been named always with the approval of the associations of large-scale farmers of the lowlands. The largest number of Bolivian farmers comes not from the lowlands but from the inter Andean valleys, and a large proportion of the crops grown for food in the country come from small farms with limited access to support from the government. They have always received low prices for their products and only recently much attention from the government[37].

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[28] Bolivia PRSP, 2001, p. 40
[29] http://www.sforestal.gov.bo/principal.aspx
[30] Propositon de Credit. FOSEFOR No. 7F-02148.06 Phase 6 01.01.04 – 31.12.05, p. 2
[31] Propositon de Credit. FOSEFOR No. 7F-02148.06 Phase 6 01.01.04 – 31.12.05, p. 2
[32] http://www.cbd.int/convention/parties/list/
[33] http://www.cbd.int/biosafety/parties/list.shtml
[34] Bolivia PRSP, 2001, p. 42
[35] Bolivia PRSP, 2001, p. 41
[36] FAO, International Year of the Potato 2008. New Light on a hidden Treasure. End of year Review, 2008, p. 78
[37] See Bolivia Case Study.

As part of the government's effort to fight poverty, the national Government passed the National Dialogue Law (a participatory process beginning in 2000 to include civil society in the design of Public policy)[38] in 2001 to use part of the debt swaps for investments in education, health, agricultural and farming production. This proposal involved prefectures and provincial governments as channels for the use of the resources[39]. Bolivia now has a Poverty Reduction Strategy Paper (PRSP) (2001) in which the Andean region and rural poverty are targeted as areas of important consideration[40]. Bolivia's departments are also enforcing Departmental Plans for Agricultural and Farming Development. It is hoped that these will help potato producers' access to international markets with native and traditional products[41]. Bolivia has also recently begun to include vast sectors of its citizens in establishing norms, the fight against national poverty and in a revitalization of traditional knowledge. The Asamblea Constituyente of 2006, greatly supported by president Evo Morales allowed for the creation of an elected Assembly to rewrite the country's constitution[42].

As of 2001, Bolivia also now holds its own National Biodiversity Strategy[43]. It addresses ecosystem conservation, species and genetic resource conservation, the attraction of investments in products and environmental services of biodiversity; the strengthening of national capacity for management of biodiversity; and education, sensitisation and social control for the management of biodiversity[44]. Bolivia has begun to embrace a more holistic and ecosystem approach to the conservation of its environmental resources. Over time more community norms regarding forest usage have also been established via projects/ programmes in the country that have begun to stimulate a growing consciousness of the importance of Andean forests. Bolivia is also a member of the CAN.

Most recently, the recent referendum in Bolivia held on January 25th, 2009, approved the new constitution from the Constituent Assembly putting more attention on indigenous populations` rights and access to resources.

3.3 Trends in the Ecuadorian context

Much like the other two countries, Ecuador's attention to the threats of Andean forest resources was very limited prior to the 1990s, and no distinction was made between reforested areas and native forests.

In 1976, the National Protected Areas System (NPAS) began as a strategy prepared by the government for the Conservation of Outstanding Wildlife Areas of Ecuador. By 1989, the preliminary strategy included 24 protected areas (PAs), an increase from 18, as a minimum requirement for the conservation of Ecuador's Biodiversity. By 1992, the Ecuadorian Institute of Forestry, Natural Areas and Wildlife (INEFAN), an institution within the Ministry of Agriculture and Livestock (MAG) was created by the government to administer the NPAS. During the earlier years of its establishment, the NPAS included 18 protected areas amounting to approximately 4 million hectares[45]. As of 1996, responsibility for forest administration was transferred to the Ministry of the Environment leading to the subsequent disappearance of INEFAN[46].

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[38] Bolivia PRSP, 2001, p. 44
[39] Bolivia PRSP, 2001, p. 44
[40] Bolivia PRSP, 2001, p. 48
[41] Plan Rector BIOANDES, 2005 (2006), p. 25
[42] Asamblea Constituyente de Bolivia, Nueva Constitución Política del Estado, 2007
[43] Plan Rector BIOANDES, 2005 (2006), p. 25
[44] http://www.cbd.int/countries/profile.shtml?country=bo#nbsap
[45] GEF, Proposal for Project Development Funds Block B., 1999, p. 1
[46] Granda, Monoculture Tree Plantations in Ecuador, 2006, p. 25

Other forestation projects included the joint initiative pine tree planting project in the central Sierra region, between the MAG, with the participation of a private forestry company, the Empresa de Desarrollo Forestal (EMDEFOR), in 1986.[47] The Food and Agriculture Organisation of the United Nations (FAO) - Netherlands PAFE (Ecuadorian Forestry Action Plan) initiative was carried out between 1991 and 1995. In late 1994, the federal government officially recognized PAFE as the reference framework for its forestry and natural areas policy.[48]

In 1992 Ecuador signed the CBD and later became a party in 1993[49]. Ecuador ratified the Cartagena Protocol on Biosafety in 2003[50]. Six years later, the Ecuadorian Constitution of 1998 was passed and included various norms expressing the need to protect national biodiversity, the sustainable use of natural resources and indigenous rights, among many others[51].

Regarding agro-biodiversity and in particular the potato, during the last 10 years, potato production has fallen and has become now more commercially oriented due to pressure from the urban population[52]. During the IYP, the Central University of Ecuador hosted a Potato congress in Quito with the support of FAO. This was the country's third Potato congress and focused on environmental impacts of potato production and land suitability to name but two topics[53]. Currently the Instituto Nacional Autonomo de Investigaciones Agropecuarias (INIAP), since its creation in 1959, leads the country in terms scientific research and the development of agricultural technology. It is committed to fighting food insecurity and hopes to contribute to improved agricultural and farming competitiveness[54].

In 1999, the Ministry of the Environment approved its Strategy for Sustainable Development in Ecuador[55] and since 2001, Ecuador now boasts its own National Biodiversity Strategy. Ecuador is also a signatory of the Binational Plan between Ecuador and Peru that promotes the development and integration in the border region through the management of projects that contribute to raising standards of living, especially of small scale farmers as well as supporting sustainable management of resources. [56]Nonetheless, priorities have remained tropical forests and the Galapagos Archipelago until recently.

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[47] McKENZIE, Merylyn (1994). La política y la gestión de la energía rural: la experiencia del Ecuador. Quito, FLACSO. In CARRERE R. Gobierno y Empresas Responsables de la Destrucción, 2003. http://revistadelsur.org.uy/revista.067/Ecologia.html In Granda, Monoculture Tree Plantations in Ecuador, 2006, p. 25

[48] FAO (1995). Miriam Abramovay, Savia Arguello. Estrategia para incorporar el enfoque de género en el plan de acción forestal del Ecuador (PAFE). Documento de trabajo No. 14. Rome. In Granda, Monoculture Tree Plantations in Ecuador, 2006, p. 27

[49] http://www.cbd.int/convention/parties/list/

[50] http://www.cbd.int/biosafety/parties/list.shtml

[51] Política y Estrategia Nacional de Biodiversidad del Ecuador 2001-2010, 2001, p. 11

[52] FAO, International Year of the Potato 2008. New Light on a hidden Treasure. End of year Review, 2008, p. 78

[53] FAO, International Year of the Potato 2008. New Light on a hidden Treasure. End of year Review, 2008, p. 91

[54] http://www.iniap-ecuador.gov.ec

[55] t.300-33(236) Projet: Appui a la gestion durable des ressource naturelles dans la zone tampon de la cordillère de El Cóndor, à travers l'amélioration des systèmes de production dans les communautés indigènes et de colons. No. 7F-02138.02. Phase 1 (avril 2003-31 mars 2006), Proposition de Crédit, avec texte détaillé, p. 3

[56] t.300-33(236) Projet: Appui a la gestion durable des ressource naturelles dans la zone tampon de la cordillère de El Cóndor, à travers l'amélioration des systèmes de production dans les communautés indigènes et de colons. No. 7F-02138.02. Phase 1 (avril 2003-31 Mars 2006) Proposition de Crédit, avec texte détaillé

In 2008 the people of Ecuador approved a new Constitution that gives rights to both people and nature. How this balance will work out is still to be seen.

Overall, these most recent documents, their contents and agreements appear to show a trend in addressing environmental and biodiversity conservation as a more integrated and ecosystems approach compared to the massive reforestation of the past.

3.4 Trends in the Peruvian context

Similarly, Peru's Andean region is home to most of its poorest members of the population who are primarily indigenous. It was mainly these populations who were victims of the period of La Violencia during the 1980s. A similar lack of initiatives to protect Andean forests combined with poverty has resulted in erosion, general degradation of the forests and a gradual loss of native Andean forest resources.

Although Peru is also plagued by great social divisions, it has much less involvement of civil society in policy formation, than for example, Bolivia[57]. Peru does not currently possess a PRSP, however it has developed its own Poverty Map, which for now, serves as a poverty plan[58].

Peru signed the CBD in 1992, became a party in 1993[59] and ratified the Cartagena Protocol on Biosafety in 2004[60]. In 2004, Law 28245 was passed establishing the National System for Environmental Management (Law source). The following year, Law 28611 instituted the General Law of the Environment[61]. From these emerged the National Environmental Council (CONAM) that worked as a decentralised unit under the authority of the President of the Ministerial Cabinet. CONAM worked at all levels of government in the design and application of national environmental policies[62]. In 2001 the National Commission on Biological Diversity (CONADIB) became a coordinating entity for the conservation, sustainable use and management of biological diversity[63]. The Ministry of the Environment of Peru was created in May of 2008 which replaced the CONAM[64]. Its goals are in accordance with the Constitution, the Millennium Goals as well as other agreements[65].

CONAM elaborated the National Biodiversity Strategy which was enacted 2001. Its aim is that "by 2021, Peru will be the first country in the world to have the best benefits for its population from its conserved and sustainably used biodiversity, as well as having restored all its biodiversity components in order to meet the basic needs and well-being for present and future generations"[66]. Its actions are consistent with the CBD and generally embrace an ecosystems approach to conservation. Peru is also signatory to the Biodiversity Agreement for Biological Diversity in Lake Titicaca (acuerdo para la Diversidad Biológica en el Lago Titicaca) (Peru-Bolivia) and the Convention for the Mountain Range El Cóndor (Peru-Ecuador) [67].

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[57] Plan Rector BIOANDES, 2005 (2006), p. 16
[58] http://www.foncodes.gob.pe/mapapobreza/
[59] http://www.cbd.int/convention/parties/list/
[60] http://www.cbd.int/biosafety/parties/list.shtml
[61] http://natlaw.com/interam/pe/en/st/
[62] National BioSafety Framework for Peru, 2005, p. 11 available at: http://www.unep.org/biosafety/files/PENBFrepEN.pdf
[63] National BioSafety Framework for Peru, 2005, p. 11 available at: http://www.unep.org/biosafety/files/PENBFrepEN.pdf
[64] CONAM was created in 1995 and was dismantled in 2008, giving origin to the Ministry of the Environment. Actually, CONAM was the driving force behind the Nat Env System Law and the Law of the Env.
[65] http://www.minam.gob.pe/index.php?option=com_content&view=article&id=3&Itemid=3
[66] http://www.cbd.int/countries/profile.shtml?country=pe#status
[67] Plan Rector BIOANDES, 2005, p. 25

In terms of recent developments in the theme of agro-biodiversity, it was the Permanent Representative of Peru to the FAO, provided the initial impetus for what was to become the International Year of the Potato 2008. Within Latin America, Peru is the largest potato producing country and in July 2008, the Government of Peru created a national register of Peruvian native potato varieties[68]. Peru also hosted the Global Potato Conference in Cusco in March 2008, where more than 100 of the world's leading authorities on potato research met to discuss strategies to increase the productivity, profitability and sustainability of the potato crop. It also held its first national potato congress in Huancayo to discuss potato production, processing, marketing and utilisation.[69] 2008 also saw the country's first National Potato Day on May 30th.

Generally, it can be seen throughout Chapter 3, that all three countries have demonstrated an evolution in environmental and biodiversity policy while attempting to attend to the extremely dire needs of their populations. The SDC projects/programmes of the portfolio under evaluation have inserted themselves into a complex realm of national and regional goals, priorities and realities. Important to consider is the great potential and steps all three countries have taken to recognize the protection of their biodiversity resources nationally and internationally.

[68] FAO, International Year of the Potato 2008. New Light on a hidden Treasure. End of year Review, 2008, p. 75

[69] FAO, International Year of the Potato 2008. New Light on a hidden Treasure. End of year Review, 2008, p. 89

4. OVERVIEW OF SDC BIODIVERSITY PORTFOLIO IN THE ANDEAN REGION

4.1 Introduction

Having provided a general overview of the regional and respective national contexts regarding biodiversity conservation in the region, this chapter will focus on a brief overview of the main changes noted during the evaluation period in SDC's portfolio in regard to thematic priorities, level of intervention and overall approach.

SDC's interventions related to biodiversity in Peru, Bolivia and Ecuador have evolved over time and have, in a way, mirrored the changing national and regional contexts previously elaborated upon in Chapter 3. SDC began its actions in the three countries in 1969 and all three countries are considered priority countries for the SDC, however SDC's office and initiatives in Ecuador will come to a close at the end of 2009 as a result of a political decision at SDC[70]. In both Ecuador and Peru, the sustainable management of environmental resources is a development cooperation priority[71].

Over approximately the last 20 years, changes in SDC's scope, approach and type of actions concerning their biodiversity related projects/programmes can be noted. It must be emphasised that the portfolio has been very broad in terms of types of initiatives as well. In terms of scope, a progression from primarily impacts at mainly the micro level to regional projects/programmes that aim to reach macro level impacts via synergies and collaboration with other projects that achieve micro level impacts is apparent, especially in the latest generation of projects/programmes. With regard to approach, the Team has noticed a progression that began with very specific projects reflecting a more compartmentalised approach to working with biodiversity. This has now become a more overarching approach including an ecosystem and a more holistic approach to biodiversity in which indigenous knowledge plays a pivotal role.

Over the course of the portfolio examined, the projects/programmes have been grouped into various thematic priorities including reforestation, forest seed diversity, native Andean potato diversity, improved market access, agricultural technology and general ecosystem management.

[70] http://www.deza.admin.ch/en/Home/Countries/South_America_the_Caribbean/Ecuador
[71] http://www.deza.admin.ch/en/Home/Countries/South_America_the_Caribbean/Peru

4.2 Main evolutions of the portfolio over time

4.2.1 Level of intervention

In the initial years of the portfolio, it appears that the interventions in the Andean region remained primarily at the micro level in terms of their scope and level of impact. Examples include actions that primarily remained working with local producers such as to improve the use of improved potato seed quality through Potato Seed Production Programme in Bolivia (SEPA) and the short lived Ecological Education for Primary School Teachers in Peru (PEEFORM) project that worked with teachers in training and students across Peru in an effort to improve environmental education. It cannot be denied that there were some actions at meso and even macro levels such as through the Ministry of Education and the National Direction of Teacher Training (DINFOCAD)[72] with the PEEFORM project. However, in general the aims and the majority of the impacts felt were mainly at the micro level.
As projects/programmes such as PROBONA, AGRUCO and the PAPA ANDINA Programme began to be implemented beginning in the early 1990s, their scope began to broaden. We also see a shift of interest to the promotion and use of native species, although the success of their impacts will be addressed in Chapter 6. Although one of PROBONA's largest aims still focused on the very micro level through concepts as the "Canje Ecológico" (or "Ecological trade-off") through which farmers were given direct technical support to hopefully substitute unsustainable forest activities for sustainable ones[73], efforts to promote meso level (regional) coordination began to appear. The PAPA ANDINA programme stimulated potato promotion in 3 different countries. Its primary goal is the development of a regional agenda followed by the development of alliances and institutional platforms, and finally the strengthening of the competitiveness of low-income potato farmers. According to the Final Evaluation 2005, it made contributions at all levels (micro, meso, and macro) by contributing to the development of platforms, the development of different methods for organising research and indirectly contributing to poverty reduction.

AGRUCO, beginning in 1990, although primarily a meso level initiative appears in this period as well, working directly with its beneficiaries in Cochabamba. The project began initially by promoting agro biological technology for rural development but then soon progressed to become a centre within the University of San Simón promoting indigenous knowledge in regard to sustainable development through post secondary education[74]. This also demonstrates a broadening of scope. Programme for Innovative Andean Products - Bolivia (PROINPA) beginning in 1989 and INCOPA, beginning in 2001 also appeared at around this time. Although they remain primarily national initiatives, a commonality they share is that they form part of the regional programme PAPA ANDINA in coordination with the International Potato Centre (CIP)[75]. PAPA ANDINA, along with its national strategic partners, promotes innovation in the potato sector to improve small scale farmers' competitiveness of potatoes in the market. Thus by working with 30 operational partners in each country, the PAPA ANDINA programme can maintain a very micro level reach of impact. These projects/programmes also tend to demonstrate greater interest in promoting native Andean biodiversity, such as native potato species. Not all projects/programmes were successful in restricting their use to only native biodiversity as will be highlighted in subsequent chapters, however, the interest in native Andean biodiversity and not only fast growing species, appears to have begun to grow by the early 1990s in the projects/programmes reviewed under this portfolio.

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[72] PEEFORM Informe Final, 1999, p. 11
[73] Informe final 2003-2006 PROBONA, p. 91
[74] http://www.agruco.org/content/view/5/6/
[75] http://www.papandina.org/en/

From approximately 2000 onwards a macro orientation became quite apparent through projects/programmes such as EL CÓNDOR, ECOBONA, and FOSEFOR. These represent larger scale initiatives aimed primarily at macro level policy and synergies between organisations in 2 or more countries. ECOBONA is an example of a regional programme that is a joint venture between all the local SDC offices in Bolivia, Peru and Ecuador. These initiatives also involve new approaches to biodiversity conservation moving away from small projects to an ecosystems approach that values and recognizes traditional Andean knowledge. The impacts these projects/programmes strive to achieve are not micro on the ground, but concrete and sustainable advances in policy and institutional development. This is not to say that these projects/programmes do not aim to reach local farmers, as for example via the increase in farmers' incomes through larger objectives such as Institutional Strengthening and Capacity Development, as BIOANDES ` first objective[76]. In this same period we see FOSEFOR beginning in 2003 (originally Red Andina de Centro de Semillas Forestales - RASEFOR[77]) promoting native forest seed norms in all three countries as well as their use by farmers.

4.2.2 Approach

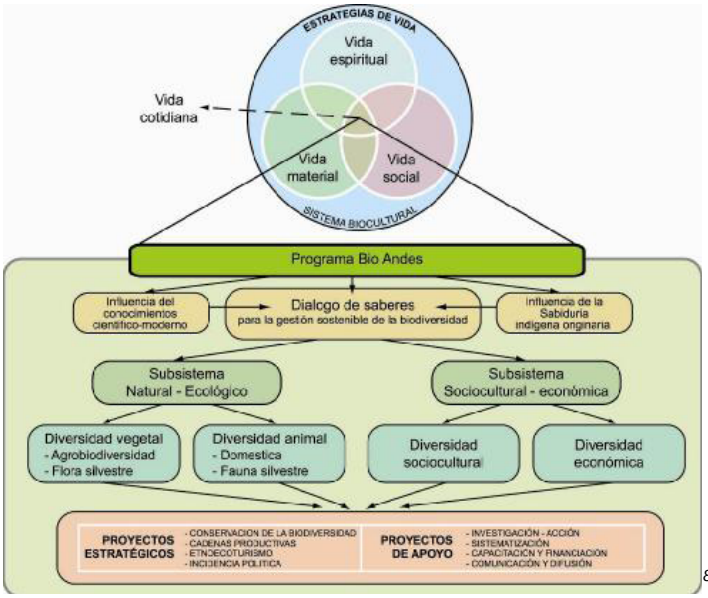
Over the years, accompanying the change in scope, an evolution in approach has also been noticed by the Team, which has already been alluded to. Projects/programmes appear to have begun with very specific tasks, such as reforestation, environmental education or even the promotion of native Andean potato species. These represent very specific components of biodiversity through whose conservation it is hoped, to contribute in part, to the improvement on larger ecosystems as a whole[78]. The goals were very specific acts of conservation that evolved into initiatives such as FOSEFOR and PROBONA that possessed a much more participatory community as well as municipal land management focus [79].

These specific projects/programmes have also evolved into joint programmes and all-encompassing ecosystem and conservation programmes such as BIOANDES and ECOBONA as previously mentioned. By the time these programmes as well as others such as Biocultura were conceived and beginning to be implemented, the focus had changed to one of ecosystem recuperation through national and supranational institutions[80]. These larger initiatives also promote national and regional norms and seem to address both bottom-up and top-down conditions that are needed for empowerment leading to sustainable development and resource management[81].

These programmes have come to value and view traditional indigenous knowledge as a primordial component of conservation, through the "Diálogo de Saberes", championed first through the pilot work done under AGRUCO in Bolivia:

[76] Propuesta Técnica y Financiera Programa Regional BIOANDES, 2005, p. 25
[77] RASEFOR: 1995-1999 Red Andina de Centros de Semillas Forestales
[78] Gestion durable Ressources naturelles Biodiversité. Expériences pratiques, 2001, p. 29
[79] Présentation de Philippe de Rham, 2008
[80] Présentation de Philippe de Rham, 2008
[81] Gestion durable Ressources naturelles Biodiversité. Experiences pratiques, 2001, p. 35

Diagram 1: Strategies for Life and Dialogue of Knowledge (Diálogo de Saberes) for Sustainable Management of Biodiversity



[82]

4.2.3 Main types of actions and partners

SDC's primordial goal in the region has been poverty reduction via good governance, an increase in social justice, the promotion of employment and incomes and sustainable management of natural resources[83]. Over the course of the portfolio, SDC has attempted to achieve this via various types of biodiversity related actions highlighted through its projects and programmes. Through the literature review it has become apparent that these actions have included and are not limited to:

- forest seed and reforestation projects,
- native potato diversity projects/programmes; other native Andean agriculture,
- research,
- market innovation & livelihood projects/programmes,
- agricultural technological advancement, primarily for potatoes but as well as other products such as quinoa, academic partnerships and,
- general sustainable management of natural resources & soil and water conservation practices while promoting a revitalisation of traditional indigenous knowledge,
- institutional strengthening at all levels with regional strengthening and coordination for larger scale projects/programmes aiming at regional ecosystems approach of conservation.

[82] Plan Rector BIOANDES, 2005, p. 16
[83] Apoyar a América Latina para reducir la Pobreza. Estrategia de COSUDE a mediano plazo 2002-2010, p. 9

Within this context of changing actions and approaches over time, as seen in section 5.2, SDC has worked with many types of actors. At the most micro level, SDC's partners & beneficiaries within this portfolio have been and are not limited to:

- local farmers in the areas of implementation,
- farmer and producers organisations, municipalities,
- local NGOs, municipal governments.

At the meso level, SDC has reflected synergies with:

- ministries within provincial governments,
- provincial academic institutions,
- provincial organisations.

At the macro level, partners include:

- ministries within the federal government,
- pre existing regional entities such as the Andean Community,
- international organisations,
- other national projects/programmes,
- donor coordination groups.

Overall, the SDC portfolio has progressed from one of specific, micro oriented projects to one of more macro oriented programmes reflecting a changed view on the uses of biodiversity in general. A variety of partners and synergies has been maintained throughout the course of time at all levels. This mixture has been crucial to maintaining impacts at the micro level while strengthening institutions at the national and regional level to promote regional initiatives.

5. RELEVANCE

Relevance is defined by the Organisation for Economic Co-operation and Development/Development Assistance Committee (OECD/DAC) as "the extent to which the aid activity is suited to the priorities and policies of the target group, recipient and donor"[84] and is the definition by which this evaluation examined the topic. This section presents the Team's findings in terms of the Relevance of SDC Biodiversity support in the Andean region. More specifically, findings will be presented in terms of relevance vis-à-vis Biodiversity, the Needs and Demands of Beneficiaries; Policy Frameworks; and finally Emerging SDC Priorities.

5.1 Biodiversity

For the purpose of this evaluation and in coherence with the CBD, it is important to keep in mind that the relevant biodiversity here refers to native flora and fauna[85], rather than to cosmopolitan human-introduced weeds and domesticated species. In this respect, projects/programmes reviewed were examined vis-à-vis their relevance to the CBD and in particular its three main objectives: the conservation of biodiversity, the sustainable uses of its components and the fair and equitable sharing of the benefits arising from genetic resources[86] .

For the most part, it can be said that most of the portfolio was relevant to biodiversity and the three main objectives of the CBD. At times, the link was not explicitly stated in project/programme documents and design but nonetheless, the relationship to the CBD was apparent through the objectives of the projects/programmes. Generally speaking, all initiatives supported improved management techniques through which natural resources and hence biodiversity was hoped to be conserved. Projects/programmes such as FOSEFOR and SEPA, concentrated on the promotion of improved native seeds (forest and potato)[87], thus promoting, in principle at least, sustainable uses of biodiversity. It should be highlighted however, that SEPA for example did not restrict itself to native varieties[88], but nonetheless it does represent an effort to maintain biodiversity. EL CÓNDOR, on the other hand, acted in Amazonian forests and seems not to have contributed to conservation of biodiversity. The project has several components that may be reducing or increasing the rate of expansion of the agricultural frontier. The project has an agro-forestry component aimed at helping families produce seedlings of coffee[89] (an introduced species) and cacao (originally from the tropics of South America). It also wants to promote the use of pitajaya, medicinal plants, fish-farming and production of livestock combined with trees. In its efforts to increase income to farmers, the project encourages expansion of the area under cultivation to assist farmers in accessing the market[90]. It also promotes increasing livestock production through silvo-pastoral practices[91] , known by project managers to produce damages to the forest (they eat seedlings and prevent recovery). Actually, if the project proves to be substituting native vegetation for cultivars and/or livestock it may actually be helping move the agricultural frontier into core Amazonia and this is not consistent with conservation.

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[84] DAC Criteria for Evaluating Development Assistance, 2000
[85] Preamble to the UN-CBD. Please see http://www.cbd.int/convention/articles.shtml?a=cbd-00
[86] http://www.undp.org/biodiversity/biodiversitycd/frameCBD.htm
[87] FOSEFOR, Plan Rector de la Fase II 2004-2005, p. 5
[88] SEPA, Informe Anual 2002-2003 Unidad de Producción de Semilla de Papa, p. 10
[89] EL CÓNDOR, Evaluación del Proyecto el Cóndor p. 5
[90] EL CÓNDOR, Evaluación del Proyecto el Cóndor, p. 13
[91] EL CÓNDOR, , Evaluación del Proyecto el Cóndor, p. 13

The conservation of agricultural biodiversity is apparent through INCOPA's promotion of native Andean potatoes in Peru. FORTIPAPA and PAPA ANDINA seem to have also supported the uses of native potato biodiversity. The latter in principle promoted regional coordination of genetic potato research and the knowledge exchange between the three countries[92], also relevant to the CBD. Generally speaking, most projects/programmes were designed to improve the livelihoods of their beneficiaries via the use of their surrounding natural resources and appear to support the equitable sharing of benefits derived from biodiversity. In some cases such as with the small PEEFORM project, the approach to the conservation of biodiversity and the sustainable use of resources may have been through general environmental education, although there is no evidence that biodiversity really played a role in this project. At any rate education and awareness are also important factors in the CBD (Article 13: Public Education and Awareness)[93]. Several projects/programmes, for example, SIBTA and FORTIPAPA, also promoted ex situ conservation through germplasm banks[94].

Larger regional programmes such as EL CÓNDOR, BIOANDES and ECOBONA also appear, in principle, to be in compliance with the CBD, by focusing on sustainable management of forest resources and offering alternative livelihoods such as beekeeping and the sustainable harvest of non timber forest products (NTFPs)[95]. In practice, however, some projects/programmes, such as for example EL CÓNDOR already mentioned above, seems not to have contributed to conservation in Amazonia. In one programme document, BIOANDES clearly stated how it acts in accordance with the CBD through in situ conservation; south-south exchange of knowledge and technology, building of public awareness through strengthening of institutions at local and intermediary levels[96]. BIOANDES has also been considered to represent a good example of the application of the principles outlined in the portfolio analysis of SDC for the reorientation of the Global Environment Programme of SDC[97]. The extent to which this will all happen during actual implementation and thus the real agreement of BIOANDES with the CBD, remains to be seen. In general, it should be stressed that a strong link in relevance particularly at the design level, does not imply that these projects/programmes in fact resulted in outcomes or impacts that maintained their relevance or intentions.

Many of these projects/programmes also intend to promote knowledge exchange, improve norms and laws at all levels for the protection of natural resources and foster education regarding native species and traditional farming practices. Examples include the work of AGRUCO to include traditional Andean knowledge into academia while also working directly with local farmers. SIBTA also promotes the transfer of agricultural technological know-how in hopes of improving sustainable farming practices that will aid farmers in improving their crops and accessing important markets for their products[98]. By doing so, these actions also support research and training, public education and awareness, general measures for the conservation of biological diversity and cooperation[99].

Case studies also highlight their relevance to biodiversity. In the case of Bolivia, the case study stressed the fact the projects/programmes were very relevant to areas of Bolivia that had not been given adequate attention vis-à-vis their resources. In the past, the priority of the government had been in the humid areas and thus threats to Andean biodiversity were not addressed. All three projects/programmes were oriented in their

[92] PAPA ANDINA, Logros y Experiencias de la Primera Fase 1998-2002, p. 83
[93] http://www.cbd.int/convention/articles.shtml?a=cbd-13
[94] SIBTA, Informe Final Informe Gestion 2002-2008, p. 31
[95] See Ecuador Case Study, Annex G
[96] Proposition de crédit BIOANDES, p. 6
[97] Proposition de crédit BIOANDES, p. 6
[98] SIBTA, Plan Plurianual 2001-2005. Ministerio de Agricultura, Ganadería y Desarrollo Rural et al., p. 8-9
[99] CBD, available at : http://www.cbd.int/doc/legal/cbd-un-en.pdf , 1992

design to the three main objectives of the CBD via different approaches. It was noted that FOSEFOR was perhaps the programme that focused the least on equitable sharing of resources while AGRUCO's focus is mainly on agro-biodiversity but still contributing to the three main goals of the CBD.

In the case of Ecuador, PROBONA/ECOBONA and FOSEFOR appeared generally relevant to the conservation of Andean forests and some selected tree stands and thus are all in support of the CBD. By assisting farmers to reach markets and improving land productivity, they also potentially support the equitable sharing of benefits. Capacity building, the transfer of technologies and education were also apparent in the design of these programmes.

In the Peru case study, project/programme documents also reveal that in principle, FOSEFOR, PROBONA/ECOBONA and INCOPA supported the CBD primarily through the sustainable use of biodiversity components. INCOPA, however, in particular does not appear to have taken into consideration the ecological impacts of improved use of native potato species such as the displacement of native vegetation onto steeper slopes to make room for more potato crops[100].

In summary, documentary review and the case studies generally demonstrate that biodiversity was in principle of relevance to the project/programme designs and their approaches. Generally speaking, the portfolio tends to show an effort to alleviate poverty through various uses of biodiversity resources. Whether projects/programmes considered the impacts of conservation of certain native species as well as alternative livelihoods, or if projects/programmes promoted only native species, will be further discussed in Chapter 6.

5.2 Needs and demands of beneficiaries

Overall, the 13 projects/programmes reviewed in this portfolio, demonstrated some form of relevance to the needs and demands of beneficiaries despite the lack of specific baseline studies or initial surveys in most, as has already mentioned. This common thread of relevance is most likely due to the fact that the primary focus of the SDC interventions in this area was *poverty alleviation*[101]. To assist in poverty alleviation, SDC's demonstrations show approaches that, if successful and sufficiently replicated, could possibly help alleviate it in the region.

Rural poverty in the high Andes region was most often at the core of the project/programme design. For example, SEPA's design recognizes the fact that the potato crop represents the primary food base for approximately 70% of Bolivia's population, especially in the poorest segments of society[102]. In fact Bolivia's PRSP states that up to 85% of rural household income is generated by agricultural production[103].

Also of relevance is the fact that most of the projects/programmes addressed or at least recognized the issue of social fragmentation in the three countries especially in regard to indigenous peoples of the high Andes. EL CÓNDOR appears to take into consideration the history of tension and mutual lack of trust between the indigenous Shuar, Mestizo and European populations of the El Cóndor mountain range[104]. BIOANDES additionally makes

[100] See Peru Case Study, Annex H
[101] SDC, Apoyar a América Latina para reducir la Pobreza 2002-2010, p. 9. The Lineas Directrices de la Division para America Latina 1995-2005 indicate that the 4 principal tendencies as being economic growth, social inequality, threats against natural resources & new role distribution
[102] SEPA, Proposition de Crédit Phase 15 2005-2009, p. 7
[103] Bolivia PRSP, 2001, p. 40
[104] EL CÓNDOR, Diseño de la Fase de Salida. Apoyo al Manejo Sustentable de los Recursos Naturales en la Zona de Amortiguamiento de la Cordillera de el Cóndor, 2007, p. 10

reference to the fact that it is primarily indigenous populations that are traditionally the most impoverished and resource- poor[105].

Most projects/programmes seem, on the whole, to address the needs of beneficiaries in either finding alternative activities that lessen negative impacts on the environment, or improving their current activities such as increasing potato production and marketing. The potato projects/programmes in this portfolio (INCOPA, FORTIPAPA, PAPA ANDINA and PROINPA) by and large, all recognize the necessities of low-income farmers whose production costs are very high in comparison to their incomes[106]. FORTIPAPA specifies the importance of small potato farmers in the Ecuadorian economy and thus the importance of improving their well-being[107]. Other needs addressed include the difficulty of small scale farmers in accessing markets for their products, more specifically native varieties. Both PROINPA and INCOPA address this market issue in their design[108]. Linked to the need of improved access to markets is the need for the diversification of livelihoods and an improvement in agricultural technology. These projects/programmes were designed hoping that as a consequence sales, incomes and finally socio-economic conditions would improve. AGRECOL and AGRUCO for example, highlight the importance of the preservation of local Andean knowledge and traditional farming methods within society as a whole[109]. SIBTA also intends to address the problem of rural poverty by promoting the transfer of agricultural technology. PROBONA/ECOBONA as well as FOSEFOR attempt to address poverty alleviation via alternative options less destructive to the surrounding forests and the marketing of forest seeds[110].

The case studies also highlight the fact that the majority of the projects/programmes examined, normally reflected the needs of the beneficiaries. In the case of Bolivia, the regions of implementation of AGRUCO, FOSEFOR and PROBONA/ECOBONA correspond to those where the population suffers extreme poverty and depends greatly on wood for fire and construction. AGRUCO works towards filling a need of its beneficiaries receiving the support and cooperation from an academic institution in order to better manage their natural resources and hopefully produce a change in attitude regarding native forests from local communities, and traditional knowledge from the students and academia. AGRUCO breaks away from the usual approach of academic institutions of maintaining a distance from local farmers and organisations. The importance of being sensitive to the needs of the local farmers is taken into great consideration in the work of AGRUCO with surrounding communities[111]. Despite AGRUCO remaining an academic effort, its goals are coherent with the improvement of livelihoods and the raising of their social and cultural profile.

In the case of Ecuador, the mission confirmed that the beneficiaries of both PROBONA/ECOBONA and FOSEFOR were located in some of the poorest regions of the country[112]. Both also attempted to address poverty alleviation, while differing in approaches to improving livelihoods. FOSEFOR attempted to improve the market for native tree seeds and PROBONA/ECOBONA to improve alternative sources of income and better use of forest resources in an effort to reduce human pressure on Andean

[105] Proposition de crédit BIOANDES, p. 2
[106] http://www.papandina.org/en/
[107] Project d`appui a la recherche et a la production de semence de pommes de terre en Équateur, FORTIPAPA, Fase IV 2002-2006, p. 2
[108] PROINPA, Plan Estratégico 2002-2006, p. 6
[109] Lorini, Arenas. Revisión Externa del Proyecto AGRECOL Fase II 2002-2006, p. 6
[110] FOSEFOR, Plan Rector de la Fase II 2004-2005,2003, p. 4
[111] Plan Rector de AGRUCO: Fase VII, (Julio 2002 – Junio 2006), Cochabamba – Bolivia, 2001
[112] See Ecuador Case Study, Annex G

Forests. In fact, PROBONA/ECOBONA attempted to offer alternative livelihood options by marketing resources outside the forests.[113]
Similarly, in the case of Peru, projects/programmes also appear to have been relevant vis-à-vis the needs of beneficiaries since all attempted to alleviate poverty in the high altitude regions. Increased incomes of the high Andes populations were manifested in all initiatives examined during the mission. In all cases, these efforts combined an increase or maintenance in access to natural resources. ECOBONA in particular appears to have appealed to the Municipality of Pacobamba because it was directly relevant to its needs to better manage its resources[114].

By attempting to link small potato farmers in the rural areas to markets and consumers in urban areas, such as Lima, INCOPA also attempted to address the need of better market access coupled with improved technology. The desired result was higher incomes and better access of urban inhabitants to biodiversity. FOSEFOR once again, attempted to reach the poorest members of society through an improved supply of forest seeds[115].

In summary, due to the fact that for the most part, the overall goal of all projects/programmes in the portfolio was poverty alleviation and not biodiversity conservation, except some projects/programmes like PROBONA/ECOBONA that combined both goals, over all, they can be considered to have been relevant to the needs and demands of beneficiaries. The documentation review which supplemented the case studies showed that projects/programmes attempted to tackle the issue of poverty in the high Andean regions of each country through different channels. These included agricultural technology transfer, improved access of small scale potato farmers to markets, alternative livelihoods, and marketing of native and exotic forest seeds. In a few cases it also included working directly with local farmers to preserve traditional knowledge.

5.3 Policy frameworks

Most projects/programmes within the portfolio demonstrate relevance to the goals of various international, regional and national frameworks (their influence on such frameworks is treated in Chapter 6). Generally speaking, due to the fact that most of the projects/programmes strived to improve the well-being of their beneficiaries, their goals are for the most part harmonious with the UN-Millennium Goals, specifically those referring to ending poverty and hunger, and environmental sustainability[116]. Many are also aligned with the Regional Andean Biodiversity Strategy of the CAN[117], such as PROBONA/ECOBONA and FOSEFOR. More specific reference to the relevance to the CBD has been made in Chapter 5.1.

For the most part, projects/programmes also demonstrated relevance to national policies and initiatives. For example, generally the goal of using biodiversity components by projects/programmes is also in accordance with the National Biodiversity Strategies of all three countries, and was expressed by activities such as the promotion of native seeds and work towards the sustainable use of resources and their conservation[118]. EL CÓNDOR supports the Binational Plan between Ecuador and Peru[119] and the declaration by the Ecuadorian government of the cordillera of El Cóndor as a priority area for

[113] See Ecuador Case Study, Annex G
[114] See Peru Case Study Annex H
[115] See Peru Case Study, Annex H
[116] http://www.un.org/millenniumgoals/
[117] See Case Studies Annexes G, H
[118] Perú: Estrategia Nacional sobre diversidad Biológica (2001), Política y Estrategia Nacional de Biodiversidad del Ecuador 2001-2010 (2001), Estrategia Nacional de Biodiversidad Bolivia (2001)
[119] EL CÓNDOR, Misión de Formulación de Proyecto, 2003, p. 6

conservation also illustrates the direct relevance of the EL CÓNDOR project to the Ecuadorian national context[120]. Most of the projects/programmes implemented in Bolivia such as AGRUCO, AGRECOL, SEPA, PROINPA as well as the regional programmes, aim at poverty reduction and thus are relevant to Bolivia's Poverty Reduction Strategy Paper (2001). The highlands region, which is the area primarily targeted by the initiatives, is also one of concern in the PRSP[121]. PROINPA is also relevant to Bolivia's Departmental Agricultural Development plans[122] while the goals of AGRECOL also appear to be in line with the demands of Bolivia's Asamblea Constituyente to promote an agro ecological focus in the national agenda[123].

The case studies also reaffirm the general consensus that projects/programmes in the portfolio are on the whole in direct relevance to various policy frameworks at varying levels. In Bolivia, the mission generally confirmed the relevance of AGRUCO, FOSEFOR, and PROBONA/ECOBONA to many of the above-mentioned policy frameworks. For example, AGRUCO is fully coherent with Bolivia's Biodiversity Conservation Strategy even though it concentrates on native domesticated biodiversity. Currently, the three projects/programmes demonstrate coherence with the new Constitution and the new government. The latter stresses decentralisation, the important value on indigenous knowledge and access to resources for the indigenous population.

In regard to Ecuador, both FOSEFOR and PROBONA/ECOBONA are on the whole in direct relevance to the goals of international, national and regional policy frameworks such as the UN-Millennium goals, the Regional Biodiversity Strategy of Tropical Andean Countries (2008) and the Agenda Ambiental Andina (2006-2010) as previously mentioned. As of 2008, Ecuador now holds a new Constitution which defends the rights of nature and Ecuadorians to food, shelter and improved well-being, among other factors. In this sense, FOSEFOR and PROBONA/ECOBONA are also relevant to these goals. Although FOSEFOR became less relevant after the government-funded massive reforestation programmes of the 80s and 90s were halted all three programmes are relevant, as they deal specifically with Andean ecosystems which are now considered fragile ecosystems in the National Biodiversity and Action Plan.

A similar link and significance to regional and international initiatives such as the Agenda Ambiental Andina (2006-2010) and the Andean Strategy for the Conservation and Sustainable Uses of Biological Diversity can be seen between FOSEFOR, ECOBONA and INCOPA in the Peru case study. INCOPA is also relevant to the goals of the International Potato Centre (CIP) that works in the region. It is also highlighted that these interventions are in line with other national initiatives such as promoted by the Ministry of Agriculture's General Directorate of Agrarian Promotion (DGPA) and the National Institute of Agrarian Innovation's (INIA's) policies in regard to the dissemination of native cultivars. The projects/programmes are also relevant vis-à-vis Peru's Biological Diversity National Strategy and Action Plan.

[120] t.300-33(236) Projet: Appui a la gestion durable des ressource naturelles dans la zone tampon de la cordillère de El Cóndor, a travers l'amélioration des systèmes de production dans les communautés indigènes et de colons. No. 7F-02138.02. Phase 1 (avril 2003-31 Mars 2006) Proposition de Crédit, avec texte détaillé p. 3

[121] PRSP Bolivia, 2001, p. 59

[122] PROINPA, Plan Estratégico 2002-2006, p. 6

[123] Arenas, Lorini. AGRECOL, Revisión Externa del Proyecto AGRECOL Fase II 2002-2006, p. 12

In summary, evidence from the documentation review and case study analysis do demonstrate the relevance of projects/programmes in terms of international, regional and national frameworks regarding poverty reduction, socioeconomic development, as well as biodiversity conservation. The portfolio has evolved with the national realities in this respect, and in some cases, has pre-empted policy change at the national level. For example, Andean forests seem to have changed their significance vis-à-vis Amazonian forests largely due to PROBONA/ECOBONA.

5.4 Emerging SDC priorities: Climate Change and Food Security

Two emerging SDC priorities, among others, to be given special attention, for future planning consist of Climate Change and Food Security. Generally speaking, the documentary review and case study analysis tend to prove to be relevant to both themes with tendency to show potential for impacts as well.

On the whole, all projects/programmes in the portfolio appear to be relevant to at least one of the two emerging priorities. In some cases, a project/programme proves relevant to both themes. From the documentary review, projects/programmes that appear to demonstrate a more explicit link, or potential, for impacts to reduce climate change include PROBONA/ECOBONA, FOSEFOR, AGRUCO and BIOANDES. Through the conservation of native Andean forests and conservation of seed producing stands, potential for avoided carbon emissions and therefore climate change mitigation is possible[124]. BIOANDES promotes improved land management and sustainable agro-ecosystems which can also aid farmers in adapting to climate change as well as mitigating further change while working with meso-level institutions[125]. This too could lead to lessening soil degradation, erosion and a contribution to mitigating climate change. EL CÓNDOR in principle promoted forest management; albeit, some actions such as cattle-ranching and land clearing may in fact reduce the potential impacts[126]. Additionally, AGRUCO also promotes and investigates soil preservation and improved natural resource management, which also could potentially contribute to furthering climate change mitigation[127].

Projects/programmes such as FORTIPAPA, PAPA ANDINA, AGRECOL and SIBTA work to improve small potato farmers' access to improved technologies, markets, crops and agricultural productivity appear to have a potential to work towards improving food security. SIBTA, for example, has aimed to improve genetic research to allow for disease resistant quinoa seeds to be developed as well as improved soil management to improve productivity, to name but two examples[128]. PROINPA developed disease-resistant strains of potatoes with the aim of improving farmers` yields, food security and livelihoods[129]. Links to food security are also apparent in many of the above mentioned projects/programmes such as FOSEFOR, AGRUCO and ECOBONA through their work with local farmers to improve their incomes and agro-ecosystems in general. The AGRUCO work on counter acting general environmental degradation such as soil erosion, and water loss, also show potential to work towards an improved food security in the region.

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[124] http://www.fao.org/climatechange/49370/en/
[125] http://www.cbd.int/doc/legal/cbd-un-en.pdf and proposition de crédit BIOANDES, p. 2
[126] EL CÓNDOR, Evaluación del Proyecto, 2006, p. 10
[127] Plan Rector de AGRUCO: Fase VII, (Julio 2002 – Junio 2006), Cochabamba – Bolivia, 2001
[128] SIBTA, Informe Final 2002-2008 Gestión 2008, p. 19-24
[129] PROINPA, Misión de Orientación Estratégica, 2005, p. 10

Further analysis in Bolivia via the case study revealed that in design the three projects/programmes do prove relevant to the two emerging SDC priorities and show potential for future impacts in this regard for future planning. By promoting forest conservation, especially PROBONA/ECOBONA and FOSEFOR, they demonstrate potential for climate change mitigation. The projects/programmes in Bolivia also show potential for synergies between Reducing Emissions from Deforestation and Forest Degradation (REDD) conservation initiatives now being promoted in Bolivia, and the SDC projects/programmes. Adaptation and food security links were also highlighted to the Team. By preserving potato biodiversity, for example, this can help to secure food availability when taking into consideration the temperature fluctuations predicted in Bolivia under the climate change scenarios. This type of strategy would be best implemented from an entire ecosystem approach or watershed management approach since water resources will most likely be affected as well as the presence of certain species at differing altitudes. The use of traditional knowledge, such as promoted by AGRUCO, could also possibly assist in adapting to climate change and improving food security by building on traditional practices such as climate bio-indicators. Also important, is more research regarding native tree and agricultural species, which these projects/programmes do generally support, in order to adapt to possibly fluctuating high altitude temperatures as a result of climate change and build resilience to local development.

In Ecuador, the case study also confirms potential for carbon sequestration and the maintenance of forest cover that can help reduce emissions. The actions of FOSEFOR and PROBONA/ECOBONA also show potential to help populations adapt to climate change by diversifying their livelihoods. Beneficiaries however did demonstrate a great interest in protecting their water resources especially concerning climate change. It appears that education regarding the value of Andean forests in direct correlation with the needs and interests of beneficiaries, such as protecting water sources, is important. Both programmes activities in Ecuador appear to present potential for both mitigation and adaptation to climate change. However, as stressed in the case study, by not assuring that beneficiaries are in fact benefitting from these new activities, it can't be ensured that they will maintain them. These aspects should be taken into consideration for further planning for climate change and food security concerns.

In Peru, as stated in the case study, FOSEFOR and ECOBONA partners at the meso level in Piura deem adaptation to climate change and strengthening of capacities as an aspect of the programmes. In terms of mitigation, the case study highlights ECOBONA's interventions in Apurimac providing households with more efficient wood-burning stoves, which was later explained to have reduced pressures on the forest. Other such activities in the communities visited include the planting of fallow areas with Achira Achira tubers as well as the collection of medicinal plants to increase income while reducing forest-degrading activities. The conservation of hydrological resources seems to be a great concern of project/programme beneficiaries as well as government officials. During focus groups, beneficiaries often mentioned their concern regarding the scarcity of water resources. The Saywite-Choquequirao-Ampay Commonwealth, an initiative formed out of mutual interests from communities and ECOBONA, attempts to align efforts for larger projects or initiatives such as ecotourism. The management of hydrological resources is also a common interest. Therefore climate change mitigation through the protection of native Andean forests will also help in maintaining such resources. INCOPA along with CIP seems to have incorporated adaptation to weather change into its activities by supporting farmers recover from severe weather events by providing them with enough seeds after the first year. The actions of ECOBONA, FOSEFOR and INCOPA generally present relevance to both of SDC's emerging priorities and demonstrate potential for future planning in this regard.

Important to keep in mind for future planning interventions is that climate change will most likely affect the Andean regions by increasing average temperatures and creating fluctuations in temperature that can have an impact on the distribution of native trees and cultivars. Originally high altitude species may no longer find suitable climates. More research concerning conservation and sustainable uses of native tree species as well as potato varieties adapted to extreme weather conditions, would be beneficial for future planning.

In summary, from documentation review and case study analysis, most projects/programmes currently supported by SDC, do show relevance to Climate Change (adaptation/mitigation) and Food Security concerns. In fact, through work to conserve and sustainably use biodiversity in the region, there is potential for the further integration of the two priorities into future planning. What appears to be of great importance to take into consideration is further research regarding potential fluctuating temperatures in the high altitude regions of the Andes as a result of climate change. Such changes could potentially pose a threat to future food security and future planning should perhaps take this into consideration, as a vector of thematic integration, through the further promotion of integrated watershed management.

6. IMPACTS

This section assesses the SDC Biodiversity[130] support in the Andean region in terms of impacts. The OECD/DAC defines Impacts as "positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended".[131] This definition has been retained in this evaluation.

Impacts of biodiversity-related projects/programmes of SDC are treated in this section in terms of 1) Biodiversity and the Environment 2) Local beneficiaries or the local area; 3) Municipal and provincial institutions and policies; and 4) National and regional institutions and policies. The following text highlights some of the main issues regarding impacts and detailed descriptions can be found in the attached Case Studies.

6.1 Biodiversity and the Environment

The review of the portfolio as well as interviews with SDC programme staff, confirmed that the vast majority of the projects/programmes in the biodiversity-related SDC portfolio did not have biodiversity conservation as a central objective. Aside from a few projects/programmes reviewed as part of the case studies (e.g. PROBONA/ECOBONA, AGRUCO, and perhaps FOSEFOR, but in Bolivia only), biodiversity was considered a resource, without explicitly addressing its sustainable management. This non-biodiversity focus of projects diminishes the potential impacts on biodiversity to be expected out of these initiatives.

6.1.1 Preservation or loss of biodiversity

There is a real paucity of information with respect to impacts on preservation or losses of biodiversity in the SDC portfolio. Projects/programmes do not provide baselines (except for ECOBONA), or evidence of monitoring progress in biodiversity management or changes in the severity of threats to biodiversity. ECOBONA is the only initiative that designed, while already under implementation, a system that will eventually provide a baseline for monitoring change in forest cover. So far, no other biodiversity-related variables have been considered.

That being said, potato-related projects/programmes in the portfolio, such as PROINPA, SEPA, FORTIPAPA, PAPA ANDINA and SIBTA, report ex-situ biodiversity management. Ex-situ efforts supposedly increased the availability and access to germplasm and/or native potato varieties[132], but no monitoring has taken place to assess these changes. Some forest related projects/programmes (EL CÓNDOR[133] and FOSEFOR) report achievements in terms of preserved tree germplasm and projects, such as PEEFORM, report general conservation of natural resources, but without evidence of native biodiversity conservation.

[130] In accordance with the CBD, biodiversity refers here to native species and varieties
[131] Development Assistance Committee. *Glossary of Key Terms in Evaluation and Result-based Management*. Evaluation and Aid Effectiveness Series. Paris, p. 24
[132] PROINPA, Misión de Orientación Estratégica, 2005, p. 10
[133] It should be noted that specific species are not listed in the Evaluation. EL CÓNDOR, Evaluación Final, p. 6

PROBONA/ECOBONA reports that it has contributed to the protection of 90 000 ha of the 738 000 ha of native Andean forests through communal and municipal norms in Bolivia as well as to 24 610 ha in which management techniques have been developed and implemented.[134] In Ecuador PROBONA also boasts contributions to the 6 088 ha of native Andean forests that are now being used under various types of management[135].

In Ecuador PROBONA/ECOBONA impacts are, however, inconclusive. The Case Study discusses the problems with assessing the success in forest conservation of "Ecological trade-offs"[136], without any measurements; claims by PROBONA and others of helping reduce forest fires without supporting statistics; and the limitations of conservation efforts so far. The main limitation being that management plans have been prepared but not implemented. The Peru Case Study shows somewhat similar trends. PROBONA/ECOBONA helps with the identification of conservation areas, supports the preparation of management plans, and assists in preparing policies supporting conservation, with little evidence that these plans and policies have been or will be appropriately implemented. In Bolivia, the Case Study revealed that the programme supported local norms designed to help reduce deforestation by limiting trespassing by foreigners and reducing charcoal-making. However, communities were happy with these norms because their livestock would benefit from having more access to the forest and in general they could make better use of it. Therefore, the ultimate conservation impact of these norms remains to be seen because livestock grazing inside forests is a serious threat to seedlings, and forest uses need to be proved sustainable. Norms may have only changed the balance of threats to these forests.

FOSEFOR in Bolivia worked mostly through private providers of seeds[137]. The main provider of seeds has been working for at least 20 years and is located at El Alto near the city of La Paz, selling seeds of both native and exotic tree species. To this day, it offers a catalogue of over 50 species mostly native and provides instructions for planting them. In addition, BASFOR, through its now formal link to the Forestry School of the University of Cochabamba, is now managing a seed bank of tree seeds encompassing more than 100 native tree species from Bolivia (see picture 1).

In Peru, FOSEFOR identified seed-producing areas for native trees, varying mostly between three and five hectares each. Some of them host valuable samples of Palo Santo (*Bursera graveolens*) and Huataco (*Loxopterygium huasango*) tree species. One important unintended contribution of FOSEFOR is that former local implementers, in coalition with local authorities, are now trying to establish conservation areas on some of the programme sites with the aim of using them in ecotourism.

[134] Philippe de Rham, PROBONA Finalización de fase y del Programa, 2006, p. 7
[135] Philippe de Rham, PROBONA Finalización de fase y del Programa, 2006, p. 7
[136] Ecological-trade-off or Canje Ecológico in Spanish, refers to the hypothetical reduction in the consumption of forest resources by farmers receiving livelihood-improving assistance from the project
[137] FOSEFOR, Informe Final 2004-2005

INCOPA in Peru presents an important challenge from the perspective of its biodiversity impacts. As discussed in the Case Study, independently of any positive or negative overall background trends in the diversity of potatoes in the highlands (see picture 2), from the review of the documentation and the interviews and focus groups conducted, it is not possible to attribute to INCOPA any positive or negative impacts on the distribution and abundance of potatoes. In other words, background trends are unknown and potential project impacts are not measured.

Picture 1: This sample, taken form a show-case at CIP in Lima shows a variety of "potatoes". Only a few of them are recognised by the market as potatoes.

AGRUCO in Bolivia is an agriculture programme with emphasis on domesticated biodiversity. Indirect effects of practices on wild biodiversity are also considered. Since the foremost cause for biodiversity losses is ecosystem conversion or habitat destruction, the programme's impacts on the sustainability of agricultural production for basic need satisfaction may result in conservation beyond agricultural land.

As can be seen from the review above, the list of activities with potential impacts on biodiversity is significant. However, projects/programmes are not measuring biodiversity or changes in threats to it. The only exception may be ECOBONA that will attempt to assess changes in forest cover during project execution. But forest cover is not the same as forest biodiversity. Forest cover may remain the same, but many valuable species, believed to be under sustainable uses may have disappeared.

The focus groups allowed the evaluation team to confirm whether impacts had indeed taken place in the targeted communities. The vast majority of interviewees in the AGRUCO, PROBONA/ECOBONA, INCOPA and FOSEFOR focus groups claimed that there was more fauna after the project compared with the situation before the project (Table 1 in Annex G). Only in the case of INCOPA, a potato project not expected to impact biodiversity in general, and FOSEFOR, an already finished initiative at the time of this review, did a significant fraction of interviewees claim there had been no changes.

When talking to local people and local governments in Peru and to local governments in Ecuador, the evaluation team found there is little interest in biodiversity. People repeatedly expressed that the importance of forests is in their role in conserving their water resources, and they seem to be uninterested in how much biological diversity remains. Moreover, they were vague when asked about maintaining forest species or the significance of potato diversity. Although from the introductory statements, they knew about the interest of the Mission in biodiversity, they asked for more income-generating activities rather than more measures for biodiversity management. This trend was not as strong an issue in Bolivia. In light of these comments, opinions of focus group participants (Table 1 in Annex G) must be taken cautiously. It seems that if SDC projects/programmes will eventually target biodiversity resources, more awareness activities about the significance of biodiversity would be needed and later the implications of this training carefully measured.

In summary, there is evidence that only a few projects/programmes in the portfolio have led to limited impacts on local biodiversity. In terms of ex-situ conservation, one notes the significant germplasm banks set up for both potato and native tree species, which together have allowed the cataloguing and preservation so far of hundreds of species of plants. In terms of in-situ conservation, many of the projects/programmes report activities and outputs aimed at conservation and sustainable use of resources, but there is no clear evidence of conservation and sustainable use of *native biodiversity*. The outputs and outcomes produced by the projects/programmes are often at most stepping stones towards long-term biodiversity management.

6.1.2 Support for implementation of the CBD

The portfolio exhibits differences with respect to its potential impacts on the implementation of the three main CBD objectives, conservation, sustainable use and equitable sharing of benefits. Project and program progress reports and evaluations suggest that all SDC BD portfolio interventions may have contributed, to some extent, to the implementation of the CBD objectives, mainly through activities with potential impacts on conservation and sustainable use. For instance, potato projects in all countries report in-situ and ex-situ (germplasm) conservation results and sustainable agricultural practices[138]. Project such as PEEFORM could be seen as contributing to the implementation of the sustainable use objective, through its claims on conservation of natural resources. But again, no clear evidence of sustainable use of *native* biodiversity if in fact provided[139]. The case studies depict a similar, albeit more nuanced picture.

FOSEFOR and PROBONA/ECOBONA support *in principle* the implementation of the CBD and its three equally complementary and important objectives. In principle because FOSEFOR and PROBONA/ECOBONA in Peru and Ecuador had the opportunity to have significant impacts on these three goals but have not been able to materialise these impacts or are unable to prove it. In the case of FOSEFOR it had a potential to contribute to the conservation and sustainable uses of forests stands producing high quality seeds. Forest management, land use plans and norms supported by PROBONA/ECOBONA may or may not lead to more controlled and hopefully more sustainable use of forests. In practice, on the ground impacts depend on the balances of political, financial and social pressures. It is very risky to assume that the mere existence of these instruments will necessarily lead to better management. In other words, *in situ* biodiversity preservation and sustainability are still unknown.

In Bolivia, however, significant impacts in terms of *ex-situ* conservation could be ascertained. AGRUCO, the third initiative in Bolivia, also showed efforts towards preserving native flora and fauna.

Both FOSEFOR and PROBONA/ECOBONA may be shown to contribute marginally to the equitable sharing of benefits arising from the uses of biological diversity. In FOSEFOR farmers obtained minimum incomes from selling native seeds, whereas in PROBONA/ECOBONA there are still unknown gains from the uses of NTFPs and ecotourism. Gains from the “Ecological trade-off approach” are unknown and are not necessarily linked to the uses of native biodiversity. “Ecological trade-off” includes

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[138] FORTIPAPA has introduced new potato varieties to potato farmers: Projet d`appui à la recherche et à la production de semences de pome de terre en Equateur: FORTIPAPA, Fase IV 2002-2006, p. 2-5; Incopa has primarily focused on sustainable uses of native varieties to penetrate the market Documento de sintesis-Creatividad Empresarial 2008, p. 26; PROINPA has produced through research disease resistant potato varieties while technical assistance in the field to improve agricultural practices has also been at the core of its mandate Mision de Orientacion Estrategica, 2005, p. 10-13

[139] PEEFORM, Evaluación de Impactos, 1999

improvements in the cultivation of native species (such as cocoa), but also of exotic species (such as coffee, tilapia fishes, and livestock). Therefore gains coming from these sources do not necessarily contribute to equitable sharing of benefits emerging from the uses of native biodiversity, which is the CBD goal.

In spite of some SDC projects/programmes not being able to prove significant impacts on conservation, sustainable use of native biodiversity and equitable sharing of benefits arising from its uses, most projects/programmes and certainly FOSEFOR and PROBONA/ECOBONA will be able to show support to other important CBD criteria, such as capacity building at the individual, organisations/governments and systemic (laws, national and regional regulations) levels. The projects/programmes also support transfer of technologies, education and increasing awareness, all of them important criteria for the implementation of the CBD. Finally, projects are consistent with the CBD goal of having developed country Parties, such as Switzerland; help implement the CBD in developing country Parties, such as Bolivia, Ecuador and Peru, by supporting the transfer of technologies and financial resources.

In summary, a very limited number of interventions under the portfolio may contribute to the three main goals of the CBD, but most of them will contribute to other important criteria of the CBD, namely those related to capacity building at the individual, organisations/governments and systemic (laws, national and regional regulations) levels. A number of projects/programmes also support transfer of technologies, education and increasing awareness, all of them important criteria for the implementation of the CBD. Finally, most projects/programmes, in particular FOSEFOR and PROBONA/ECOBONA, are consistent with the CBD goal of having developed country Parties help implement the CBD in developing country Parties, such the three Andean countries.

6.1.3 Environmental impacts of economic activities and long term safeguard of critical environment resources

Projects/programmes have not documented or monitored environmental impacts and safeguards. That being said, the literature review points towards positive impacts in a number of cases, to be inferred from the types of activities being supported rather than from factual information obtained. For instance, for SIBTA, increased production may have positive impacts on the environment through the promotion of biological insecticides, and assistance to conserve soil and water resources via the Applied Technological Innovation Projects (PITAs)[140]. For SEPA positive environmental impacts may arise from improved agricultural productivity potentially reducing pressure on other resources, and work on ecological diseases and pest control. In general, the promotion of native species, in particular in potato projects/programmes, may be considered as positive for the environment, provided their use does not destroy new habitats or species, and there is proven sustainability in their use. The latter may mean no soil erosion because of inadequate cultivation on steep slopes or appropriate irrigation and use of biocides. Unfortunately projects/programmes are not taking precautions to ensure environmental friendliness.

In the case study of Bolivia, under AGRUCO, the “agro ecological“ approach to production and science promoted through the programme ensures, to a large extent, the incorporation of these environmental concerns[141]. In Ecuador, it will not be possible to show impacts of the two SDC on environmental variables such as for example, soil fertility, and water quantity and quality. In this latter context, however, one of the

[140] SIBTA, SIBTA Informe Final. Informe Gestión 2008 (2002 – 2008), 2008, p. 10-14
[141] Evaluación Externa Prospectiva de AGRUCO 1998. Informe Final, por: Luís Arteaga, et al.

potentially most important environmental impacts of the PROBONA/ECOBONA programme refers to the post-project expressed desire of beneficiaries to maintain forests and their associated downstream water supply.

In Peru there are no observable environmental changes attributable to the projects/programmes, but beneficiaries expressed interest in capacity building for soil conservation, improved irrigation, and economic alternatives that would eventually alleviate environmental pressures.

In summary, with respect to environmental impacts of economic activities, the review of the portfolio and the Study Cases, suggest there may be positive impacts in a number of cases, although those are not quantified, nor adequately monitored.

6.2 Impacts on Local Beneficiaries or the Local Area (micro level)

6.2.1 Improvements in livelihoods

In all 13 projects/programmes reviewed (including the 4 projects/programmes covered through country Case Studies), evidence shows some form of impacts on local beneficiaries. In 12 out of the 13 cases, this was through increased or diversified production, albeit of varying and mostly non-quantified scope and level. For instance, BIOANDES started support for alternative economic activities such as beekeeping, handicrafts and ethno-ecotourism[142]. EL CÓNDOR led to economic improvement via alternative production as well (e.g. coffee/cacao production)[143]. SEPA reported increased incomes through seed sales and improved production[144] as well. FORTIPAPA[145] and SIBTA also led to increases in income via technological innovation, leading to improvements in production[146] (other impacts on community empowerment are treated under section 6.3.1 below).

In all three countries, PROBONA supported alternative livelihoods with the aim of decreasing poverty and reducing pressure on forests. In Bolivia, support given to alternatives to destructive uses of forests was accompanied by an emphasis on communal ownership of these resources[147]. In Peru, PROBONA focused on the social bases for forest management in Cuyas-Ayabaca and Apurimac by creating local management committees. In Ecuador, PROBONA benefited 1928 people in 41 communities (47% women)[148].

[142] INFORME DEL PROGRAMA REGIONAL BIOANDES (GESTION 2007) Por Freddy Delgado, Nov. 2007, p. 21, 25
[143] Evaluación del Proyecto EL CÓNDOR, 2006, p. 5
[144] Ayuda Memoria Willi Graf, Para la Planificación para la Fase 2000-2003, p. 1 and SEPA Informe Anual 2002, p. 23
[145] FORTIPAPA, Informe de Fase IV 2002-2006, p. 38
[146] SIBTA, Informe Final 2002-2008, p-. 19-24 and Memoria Fundación Altiplano 2006
[147] PROBONA. Finalización de Fase y del Programa. Nota de Síntesis de Fin de Fase. IC. Por Phillipe de Rham. 31 julio 2006
[148] Phillipe de Rham 2006. PROBONA. Nota de síntesis de Fin de Fase. Intercooperation

PROBONA designed local field activities aimed at intensifying uses outside the forests to meet income needs of people and thus, hopefully, relieving them from having to use forest resources in non-sustainable forms (the previously mentioned Canje Ecológico or Ecological trade-off)[149]. In all three countries PROBONA/ECOBONA supported local farmers in the generation of viable enterprises, producing sellable commodities. The programme also helped farmers reach markets without having intermediaries, thus further increasing net benefits to them. In Ecuador there are cases of ca. 12% increases in the incomes from cocoa and 20-30% from coffee. Data also suggest that farmers have now better food and can provide more education to their children.

Box 1 ECOBONA: Livelihood Improvement in Peru

As for livelihood improvement linked to ECOBONA's interventions, in Apurimac fifty out of one thousand target households (5%) now have more efficient wood-burning stoves. Apparently, the main impact of this change is the reduction of fuel wood consumption per household, from around 5 Kg/family/day down to around 2 Kg. In turn, this lower fuel consumption would manifest as decreased pressures on the forests from benefited families. The programme has not attempted to measure these presumed reductions. About fifty replications have taken place so far in Apurimac, most of them funded by local people. ECOBONA introduced the know-how from Cusco by bringing an expert (Camayoq, in Quechua) who showed their value to local residents in Ccerabamba (Apurimac).

However, systematic effects of these measures on the daily life of farmers are still being investigated. ECOBONA created in 2007 a baseline including information about the socio-economic situation of beneficiaries and contrasts with the expected 2009 census should be useful in verifying changes. It is very likely, that especially activities to increase productivity outside the forests and avoiding intermediaries will prove to increase incomes and overall well beings.

In the case of Bolivia, it appears that the economic benefits from PROBONA/ECOBONA were generally smaller. This is explained in part by the fact that in several communities the programme had worked with them for only a limited time. Nevertheless, there is some evidence of improvements in the basin of the Q'orimayu River, where the programme is already promoting this type of economic alternative for several years.

FOSEFOR seems to have had less positive and direct benefits. This is explained, on the one hand, by the focus of this project, attempting to improve the supply of forest seeds to varying institutions and/or organisations and, on the other, the generally low and sporadic demand for seeds reducing the chances of farmers improving their incomes. The exception, however, are increased incomes from selling Tara (*Cesalpinea spinossa*) seeds, seemingly used to buy food and clothes, and education purposes.

[149] Phillipe de Rham (2006). Nota de Síntesis de Fin de Fase. PROBONA. Chris van Dam Enero 2009 Sistematización de aprendizajes de los programas PROBONA / ECOBONA y FOSEFOR. Informe de Consultoría

The evaluation revealed that AGRUCO in Bolivia had several impacts on local beneficiaries. An illustrative example of those impacts at the local level is presented in Box 2 below.

Box 2: Some example of AGRUCO achievements with local communities in Bolivia

In the case of AGRUCO, formal agreements have been developed with local actors and a permanent relationship exists with communities, besides the personal relations developed by thesis researchers. The answer of the communities in general has been satisfactory; it seems that a balance has been achieved where the community has trust and interest in the shared work, with the security that the benefits will be mutual. This has been confirmed in the auto evaluation workshops.

AGRUCO has worked to support agricultural production of the communities. According to interviews in Tapacari the use of the Huaycha variety of potato including the use of organic methods has increased their production up to 300%. In Chorojo, mostly native species of potatoes have been reintroduced more recently through the Compass project managed by AGRUCO as well as native fruit tree species This particular potato is a native species that has been treated to reduce the presence of viruses and other diseases as a contribution of the work of an NGO that is also supported by Swiss financing, PROINPA.

Some of the areas where AGRUCO works are at the limit that climate permits agriculture. It has helped local farmers reduce the use of pesticides and instead use organic fertilizers. This has not only improved the quality of the production but it has also reduced costs. Focus groups revealed that beneficiaries feel that the newly produced potatoes have better taste because of the organic fertilizers. Facilities have been built to store production and to protect seeds. These are widely appreciated as having been important in improving production.

In the areas where trees can be grown, AGRUCO has supported reforestation. Native species of trees have been used in some cases. This has not been done before. Exotics are planted often because of their fast growth and their straight stems. As a result, there has apparently been a reduction in pressure on the scattered native tree stands that exists within the communities.

As a result of the intervention, people claim now to be more conscious of the health hazards derived from chemicals. With their increased revenues due to the project intervention, families now can buy clothes for family members. The education of children is also benefiting as they have money to send them to school longer and pay their materials. The family diet is also more diversified, as they can buy other products with the profit from the excess production sold. They can now make better use of medicinal plants for health related issues as they have no money to buy regular medicines. The project allowed the maintenance of traditional knowledge about medicinal plants.

In Peru there are impacts of INCOPA in Huánuco, Huancavelica and Puno. INCOPA is the only SDC project in that country that conducted an Impact Assessment Study[150] . INCOPA's Impact Assessment states that since project inception the value of sales has tripled in Huánuco. Regrettably, production costs have not been estimated; hence, the net income change remains unknown. According to data collected during the field work, income levels would have increased on average by around 15% as a result of INCOPA interventions. Focus group results indicate some INCOPA-related improvements in the quality of life of farmers, in the form of dietary changes, more livestock (see Picture 6.10, in Peru Case Study), better housing, more investments in the more profitable Tumbay (yellow) potato, and in being able to send their children to school (Picture 6.1 in Peru Case Study).

[150] Proyecto INCOPA. 2008. Evaluación de Impacto de la intervención INCOPA/ADERS en Huánuco (2002 – 2007)

The main drivers behind INCOPA-related income improvements have been better access to markets and to the provision of technical assistance and training with cultivation techniques, such as plant-to-plant distances and integrated pest management. The other project beneficiaries, people in Lima and other urban centres, seem to have also gained from it. At the beginning of the project people knew only about 4 to 5 varieties of native potatoes. Thanks to the project interventions in marketing and awareness about native potatoes, markets carry now 30 varieties with the potential of expanding to 57[151].

Box 3: Benefits from Alternative livelihoods promoted under ECOBONA in Peru

Field visits and interviews with ECOBONA staff allowed the Evaluation Team to learn more about some instances of "Ecological trade -off", a mechanism by which the programme supplies alternative livelihoods outside the forest to hopefully favour less use or more sustainable uses of forest resources. An example of these alternative activities reported by programme staff and implementers in Piura has been the planting of fallow areas with Achira. Achira tubers are used to make flour and bread and are promoted in an attempt to increase the income of the local population in exchange for less forest-degrading activities. Also in Piura, the programme supported another Ecological trade-off option: improved sugarcane yields and its transformation into brown sugar. Yields are increased through the use of organic fertilizers, improved plant varieties and management. Sugar cane yields would have increased by about 100% in Piura thanks to the introduction of these improved technologies, according to the programme staff. The Focus Group in Pacobamba and Ccerabamba (Apurimac) confirmed information earlier provided by programme staff that apiculture is being promoted as an Ecological trade-off in Apumirac. As a result, honey production in Apurimac has increased about 5-10 times thanks to the programme intervention, focused on a slight technological modification, namely, the use of more appropriate colony boxes. Pacobamba community representatives indicated that women are progressively more interested in this business, which they can run without leaving their houses.

Table 2 in Annex G summarises the economic benefits to local beneficiaries for the projects/programmes covered in the three Case Studies. This table is based on information provided by the focus groups. As can be seen, for the communities visited, economic impacts were generally reported positive, with changes ranging from nil, in a very limited number of cases, to more than 900%, in the case of some honey producers. The overall average increase stands at +67-90%. In this case there is a good match between the opinions of focus groups participants and other sources.

In summary, evidences support the view that in most cases projects/programmes did lead to impacts on local beneficiaries. Almost all projects/programmes reported varying impacts in terms of improved livelihoods (mostly in the form of improved income) in the areas where they worked on the ground, albeit generally not quantified. This was confirmed through the Case Studies.

6.2.2 Equity and Gender issues

Some projects/programmes did promote the increased participation of women (e.g. AGRUCO, PROBONA/ECOBONA, FOSEFOR, PROINPA, FORTIPAPA and EL CÓNDOR)[152] or, according to local informants, improved opportunities for women to market their products (INCOPA), but few reported specifically and systematically on impacts on women.

[151] This information was provided by several interviewees from the Government of Peru and Project implementers. During the INCOPA field visits in Huánuco, Pasco and Puno, the Evaluation Team was able to see at least a dozen different varieties

[152] PROPOSITION DE CRÉDIT ECOBONA Ultima Versión, fr, p. 2-3, Bosque Nativo en el Mundo Campesino Andino, PROBONA, 2005, p. 24; EL CÓNDOR Proposition de Credit. No. 7F-02148.06 Phase 6 01.01.04 – 31.12.05, p. 12; PROINPA, Misión de Orientación Estratégica, Anexos, 2005, p. 19

The three Case Studies provide some evidence of impacts. In Ecuador, the evaluation team learned that better practices in production of cocoa, coffee and post harvest management have now the whole family involved in production, whereas before the programme, women looked for work elsewhere. From this perspective, the programme may have increased incomes and helped maintain families. Evidences from Bolivia and Peru revealed that equity issues were incorporated from their inception to AGRUCO, INCOPA and PROBONA/ECOBONA, whereas in the case of FOSEFOR this does not seem to have been an issue. In AGRUCO and PROBONA/ECOBONA, gender is being introduced in a progressive manner, while attempting to respect local traditions.

From speaking to various stakeholders in both countries in AGRUCO, PROBONA/ECOBONA and INCOPA, the evaluation team's assessment is that emphasis on gender has been largely because of SDC, and that implementers are very cautious in avoiding the potentially negative reactions coming out of trespassing local traditions. This in part, may be linked to the fact that most of the SDC projects/programmes work through existing community structures. In Bolivia, for instance, this is done through the farmer's union associations, which are typically represented by men. It is not to be taken that the situation is homogeneous as was shown by the composition of the Municipal Council of El Villar, in Bolivia, where three out of five members are women, including the President.[153]

When asked during the focus group about impacts on their livelihoods, women tended to support the view that activities were benefiting the family as a whole, and that impacts were not *per se* differentiated. For instance, when discussing honey production, or improved agricultural techniques, women were apparently as involved as men. Exceptions to this trend have been activities related to the use of medicinal plants, which tend to involve more women than men. Women were also often more prompt in noting the effects of improved incomes and production on better family nutrition, clothing, and children's education.

INCOPA also paid limited attention to gender issues and it is only during the design of Phase III (2007) that they were more rigorously addressed at the request of SDC. Phase Document III has incorporated gender issues in its logical framework, but it is too early to say anything about potential impacts.

All three projects/programmes target only small fractions of the populations in these areas and it would be extremely difficult for these targeted populations to show any cultural changes when the majority of the populations still keep their traditions. For all these reasons, the evaluation team's assessment is that these projects/programmes are likely to have only limited impacts on the roles of genders in agricultural practices in the project/programme areas.

In summary, projects/programmes do not have noticeable or adequate methods to assess impacts on gender equity.

6.2.3 Access to and sustainable use of resources

A majority of SDC biodiversity-related interventions reported efforts and some even noted impacts in terms of either maintaining or improving access to the use of resources. For instance, BIOANDES promotes the use of natural resources through alternative economic activities[154] and PROINPA noted that small-scale farmers have now better access to new

[153] Interviews in site
[154] INFORME DEL PROGRAMA REGIONAL BIOANDES (GESTION 2007) Por Freddy Delgado, Nov. 2007, p. 21, 25 and Evaluación del Proyecto EL CÓNDOR, 2006, p. 5

farming techniques and improved agricultural varieties[155]. Other projects/programmes, such as INCOPA, SEPA, FORTIPAPA and also SIBTA, led to increased access to more varieties of seeds. However, there is little hard or quantitative data confirming the sustainability of changes in resource use.

The Case Studies support these claims and bring further argument to that effect. In Ecuador PROBONA supported activities outside and inside the forests. Some of these activities existed before the programme; others have been established during programme execution. In all cases, however, the programme may have helped make them more sustainable. For example, PROBONA claimed to have introduced sustainable uses of medicinal plants, sustainable firewood collection. More recently, ECOBONA is working with ecotourism and sustainable harvest of NTFPs to be used in making handicrafts.

The evaluation team found through its interviews that apparently collection of firewood was made more sustainable by limiting it to dead wood or already fallen trees. Focus groups with some local communities also confirm that access and use of the forest is now more controlled so that it can be sustainable and protect native species. The team also witnessed at least one case in the community of Sivingani in Bolivia of forest re-growth in buffer zones of a native forest (see picture 3 below), suggesting that forest protection is working in some communities. For the rest of the activities there was no real explanation of sustainability beyond mentioning that there was a plan. In general, sustainability is assumed, but abundances are not monitored.

Table 3 in Annex G summarises the findings from the case studies` focus groups with local beneficiaries on resource use, which corroborate the analysis provided above.

Picture 2: Native forest re-growth in the Sivingani, Bolivia

In summary, when it comes to local population and their access to native resources, in most cases, local population in the areas targeted by SDC support have traditionally benefited from access to local natural resources and biodiversity. A majority of SDC biodiversity-related interventions reported efforts and some noted impacts in terms of either maintaining or improving that access and in particular the sustainable use of the resources, even though the sustainability of these changes was neither proven nor documented.

[155] PROINPA, Misión de Orientación Estratégica, p. iii

6.3 Impacts on Institutions and Policies

6.3.1 At the Community Level

Documentation review points to impacts on participation and institutional strengthening at the community level for at least half of the portfolio, mostly through the strengthening of farmers' and producers' organisations such as for instance, in PROINPA[156] or FORTIPAPA. Under FORTIPAPA producers were involved in a consortium of 32 organisations: Consorcio de Productores de Papa (CONPAPA), which increased decision-making power within FORTIPAPA[157]. Other projects/programmes, such as SIBTA and AGRECOL, supported "*campesino a campesino"* institutional strengthening.

The Case Studies also provide evidence of impacts on micro-level institutional structures and their empowerment. Impacts of projects/programmes reviewed as part of the Studies and as reported by local beneficiaries, are summarized in Table 4 of Annex G. In general focus groups were of the opinion that SDC initiatives effectively contributed to improvements in community institutions.

A number of focus groups in Bolivia and Ecuador highlighted the organisational and community leadership benefits they have gained from the projects/programmes. In Bolivia, the impact of AGRUCO at the institutional level comes in the form of an increased capacity to deliver academic services, knowledge, research and training. But AGRUCO has gone well beyond training and has been working with local communities from the very beginning raising the organisational, management and productive capacity of communities and their representatives, and especially the profile of traditional knowledge and culture in development process.

Under PROBONA/ECOBONA the development of communal norms has been accompanied by an increase in ownership by local communities taking part in the process of developing the norms. Interviews revealed that these norms have not been well accepted by communities which were not part of the processes developing them. To conclude, PROBONA/ECOBONA provided training to a number of organisations, apparently contributing to their empowerment and strengthening.

In Ecuador, both FOSEFOR and PROBONA/ECOBONA seem to have increased individual capacities to manage resources. In one case it was seeds and production of seedlings, whereas in the other capacities were built to increase sustainable productivity in and outside the forests. The evaluation team did not have direct access to farmers in this country (the visit being limited to Quito) to confirm these claims.

In Peru, the three projects/programmes evaluated have done efforts in terms of promoting regulations, participation and institutional strengthening. Perhaps the most important strategic improvement driven by INCOPA relates to the Production Chain Participatory Approach (PCPA). INCOPA produced guidelines and manuals for PCPA, such as the user's guide and the trainer's guide[158]. Another INCOPA trigger of institutional improvements is the so-called Horizontal Assessment, a tool allowing sharing of knowledge and experiences among similar entities. A user's guide is already published with the trainer's guide still in progress.

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[156] PROINPA, Misión de Orientación Estratégica, 2005, p. 13
[157] FORTIPAPA, Informe de Fase IV 2002-2006, p. 12
[158] Proyecto INCOPA. 2008. Proyecto INCOPA: Generando Innovaciones para el Desarrollo Competitivo de la Papa en el Perú. Synthesis document for the Creatividad Empresarial Competition, 2008

According to different sources, ECOBONA worked with small farmers to empower them to negotiate in the Local Consensus-building Table to Fight Poverty and supported capacity building of local leaders and strengthened organisations, provided technology, and helped develop a vision for Native Andean Forests in Peru.

In all three countries PROBONA/ECOBONA strengthened communities to manage natural resources and to generate new (follow-up) projects. The programme also supported the creation of community norms for the use of Andean Forests.

In summary, the evidence points to impacts on participation and institutional strengthening at the community level for at least half of the portfolio, mostly through the strengthening of farmers' organisations and their technical know-how. How produced mechanisms and outputs reflect on behavioural changes is not always clear in the absence of adequate monitoring data.

6.3.2 At the Municipal and Provincial Level

More than 90% of projects/programmes in the portfolio (12 out of 13) reported some form of impacts on meso level institutions and policies. In one case, BIOANDES, this was still too early to assess. Impacts reported included for instance, the establishment of certification in Plague Risk Analysis (SEPA)[159], the strengthening of producer associations such as the Organic Producers Association (AOPEB) (AGRECOL)[160], the strengthening of regional agricultural institutions (PEEFORM)[161], agreements and funding from municipalities (FORTIPAPA, SIBTA), the consolidation of platforms to promote either local interests (FORTIPAPA)[162] or innovation and competitiveness of potatoes (PAPA ANDINA). EL CÓNDOR led to the preparation of official forest management norms, although weak dynamics with some public institutions and municipalities were still reported[163].

Most of the portfolio incidence is on municipal-level institutions and policies, the provincial level is not receiving much attention (with some variance between countries). The assessment of these impacts on municipal and provincial institutions and policies remained at a general qualitative level in the evaluations and progress reports reviewed.

The Case Studies shed more light at this level, highlighting in particular the role that work with municipalities and academic institutions played in raising their effectiveness as agent of change. For instance, In Bolivia, AGRUCO worked essentially through the University of San Simón in Cochabamba, while FOSEFOR worked closely with the forestry school of San Simón and with the University of Piura in Peru. The emphasis was on developing already existing competencies in research and training and the structure of those universities. The impact of these processes on society as a whole, on the well-being of native people or rural society is much more elusive. This, of course, is a problem with all educational programmes.

In all three countries, PROBONA/ECOBONA strengthened community and municipal level institutions by introducing knowledge on relations between farmers, Andean forests and various levels of governments. The case studies provide numerous examples in this respect. In Ecuador, for instance, PROBONA and ECOBONA helped generate land use

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[159] SEPA, Proposition de crédit Phase 15 (5/2005-04/2009), p. 5
[160] AGRECOL, Revisión Externa del Proyecto AGRECOL. Fase II: 01.07.2002 al 30.06.2006 por José Antonio Peres Arenas, Rodrigo Villavicencio Lorini, La Paz, abril 2006, p. 24
[161] PEEFORM Informe Final, 1999, p. 24
[162] FORTIPAPA, Informe de Fase IV 2002-2006, p. 13, 14
[163] EL CÓNDOR, Evaluación del Proyecto, 2006, p. 7, 10

plans and management plans for seven areas in Loja and Napo and helped generate the "Plan de Desarrollo de Napo" with land use planning, vegetation mapping, and strengthening of environmental management. In Peru and Ecuador municipalities have shown to have the financial resources and willingness to invest in biodiversity management. In Bolivia, similar work has been promoted with the Municipality of Independencia.

INCOPA, in Peru, also led to achievements in respect with institutional development through the creation of Cadenas Productivas Agrícolas de Calidad (CAPAC), a platform for the main actors engaged in native potato production and commercialization[164].

In summary, it is consistent with the opinion of focus groups that the overall portfolio review points towards impacts on meso level institutions and policies. Most of this incidence is either on municipal level institutions and policies, or academic institutions. The provincial level has generally not received as much attention, given the targeted nature of SDC interventions at a more micro level and its traditional relationships with a few academic partners. The assessment of these impacts on municipal, academic and provincial institutions and policies in evaluations and progress reports remained largely at a qualitative level. The notable exceptions in this respect are AGRUCO in Bolivia and Loja/Napo in Ecuador. Institutional impacts in general relate to increased awareness and knowledge and service delivery capacity in terms of research and training. Policy impacts focused on the development of norms and plans at the community, municipal and to some extent at the regional level. How the produced mechanisms and outputs reflect on behavioural changes is not always clear in the absence of adequate monitoring data.

6.3.3 At the National level

Although it cannot be said that the biodiversity-related portfolio had impacts on the poverty reduction strategies, action plans or the attainment of Millennium Development Goals of the three Andean countries, it is fair to say that overall, it contributed to alleviate rural poverty as noted above.

Review of the documentation highlights that the portfolio, as a whole, had influences on national initiatives, or has contributed towards the strengthening of some national institutions. For instance, in Bolivia SEPA has worked closely with the National Seed Programme and influenced through policy dialogue with other organisations to introduce the *Ley Agropecuaria* of Bolivia prepared by Ministerio de Asuntos Campesinos y Agropecuarios-Bolivia (MACA)[165]. AGRECOL influenced the national agenda of Bolivia regarding natural and transgenic seeds, as well as in the National Soil Platform[166]. PEEFORM led the Ministry of Education of Peru to accept curricular changes in teacher training[167]. PAPA ANDINA contributed to the consolidation of platforms to promote innovation and competitiveness of potato production and marketing in all three countries[168]. In all three countries PROBONA/ECOBONA supported policy changes addressing the relevance and uses of Andean forests.

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[164] Gonzales-Zúñiga, Alberto. 2003. Evaluación Externa del Proyecto: Promoción de la producción competitiva de la papa peruana para responder a nuevas oportunidades del Mercado, INCOPA, financiado por COSUDE. Informe de Consultoría. Lima, July 21, 2003

[165] SEPA, Proposition de Crédit Phase 15, p. 5

[166] AGRECOL, Revisión Externa del Proyecto AGRECOL. Fase II: 01.07.2002 al 30.06.2006 por José Antonio Peres Arenas, Rodrigo Villavicencio Lorini, La Paz, abril 2006, p. 24

[167] PEEFORM, Informe Final, p. 20-23

[168] PAPA ANDINA, Informe Anual 2002-2003, p. 16

SDC, through its involvement in policy dialogue on environment and biodiversity related issues, has made significant efforts to be an active policy partner. In the three countries, FOSEFOR helped produce one piece of regulation, the Norma Nacional de Semillas, describing standards for commercial seeds. The evaluation team did not find documentation that actual practices had changed after its approval, except in Bolivia.

At a national level, ECOBONA introduced common terminology for vegetation types within Andean forests of Ecuador. Also in Ecuador, PROBONA worked with INEFAN in generating a policy for Bosques Protectores (protecting watersheds and producing goods), a systematization of Forestry Laws, and generated the "Norma para Aprovechamiento Forestal (2005). ECOBONA, also led a process towards producing the "Política para Uso de Ecosistemas Altoandinos" (2008), that became a model for Peru and Bolivia. In Bolivia, policy dialogue supported by PROBONA/ECOBONA, led to the inclusion of the Conservation of the Native Andean Forest as one of the priorities in the Strategic Institutional Plan of the Department for Biodiversity, Forest Resources and Environment (2006-2010)[169].

In Peru, INCOPA prioritized its policy interventions at the national level. INCOPA fostered the approval of Law 29088[170] to improve competitiveness in the potato sector. Complementarily, another Law (25047) has been approved addressing social benefits of land porters and manual transport workers, working in the potato sector[171]. INCOPA also helped create the Peruvian Native Potato Registry. The institution most strengthened by INCOPA has been DGPA and INCOPA critically facilitated the attainment of DGPA's goals within the framework of the Potato Strategic Plan.

What is the biodiversity significance of all these efforts? From a biodiversity conservation perspective, all these efforts in institutional strengthening, policies and plans are outputs or outcomes that will not necessarily reflect in better management of natural resources. In other words, they may be necessary conditions, but not sufficient conditions for effective biodiversity conservation. All too frequently plans and trainings do not reflect in improved biodiversity resource management because of conflicting interests, lack of funding, political considerations, corruption, etc.

In summary, the portfolio through its impacts on the rural poor contributed to the implementation of the PRSP or poverty alleviation action plan of each of the three Andean countries. The evaluation also highlights that the portfolio, as a whole, had influences on national policies and initiatives, or has contributed towards the strengthening of some national institutions.

6.3.4 At the Regional Level

With respect to influence on regional policies and institutions, the regional projects have achieved influences at varying levels, PROINPA has collaborated with various international initiatives in the region and is now seen as a model of institutional professionalism by many interviewed during the field work. BIOANDES also reports strategic alliances with institutes and some governments in the region[172] but with no clear indications of the impacts of those alliances at this early stage of its implementation. The

[169] Ministerio de Desarrollo Rural Agropecuario y Medio Ambiente. Plan Estratégico Institucional del Vice ministerio de Biodiversidad, Recursos Forestales y Medio Ambiente 2006-2010, p. 33

[170] An annotated summary of the Law (in Spanish) passed on September is available at: http://redepapa.org/2009/09/06/hello-world/ Site visited on March 3, 2009

[171] The Regulation of this is Law must be produced. A Commission was created in June 2008 for that purpose. See: http://www.ila.org.pe/publicaciones/docs/rm_183_2008_pcm.pdf Site visited on March 3, 2009

[172] BioAndes, INFORME DEL PROGRAMA REGIONAL BIOANDES (GESTION 2007) Por Freddy Delgado, Nov. 2007, p. 4. 24

case studies suggest that different regional initiatives have had some degree of success in influencing the regional agenda and institutional set up.

Regional programs, involving two or more countries, usually have some benefits compared to two or more national projects and also have extra costs related to the need to have a structure in charge of the regionality. FOSEFOR, though was a special type of regional initiative, being coordinated out of Quito, without a true Peruvian coordination. FOSEFOR management contacted partners and associated farmers directly. (The evaluation team detected some uneasiness with this arrangement among Peruvian informants). In the case of FOSEFOR and PROBONA-ECOBONA there were benefits arising from regionality in terms of exchanges of experiences. In FOSEFOR, the Normas de Semillas Forestales, for example, were shared among countries and all ended with such norms. Interviews suggest that the Norms developed in Bolivia were later used as a model by the other countries, emphasizing the south-south exchange in the process. In PROBONA-ECOBONA coordination went further and allowed not only for sharing of documents and experiences but actually the simultaneous coordination for a number of its activities. So, even if the forests themselves were different, the project coordinated and co-funded analogous activities in the three countries at the same time. Among activities coordinated in the three countries are analyses and maps of relevant vegetation, management of the production chains of Tara, and studies to assess the possibilities of payments for environmental services and adaptations to climate change. The project's coordination is also working on a Regional for Andean Ecosystems, based on existing efforts in Bolivia, Ecuador and Peru. Informants to the evaluation team found that regionality gave national projects a net plus and contributed to the overall success of the initiative.

One of the challenges of regional programs is that in spite of advantages frequently compensating for costs during project execution, after the donor's moneys dry-up, no party wants to take over the regional aspects of the program. In the case of ECOBONA there is a good match between its goals and the Agenda Ambiental Andina of the CAN and there is a chance that regionality may be taken over by CAN after ECOBONA funding from SDC ends. The project already signed a memorandum of understanding with the CAN Secretariat for coordination and cooperation between the two entities, although there are some challenges ahead that need to be resolved before CAN would be able to become the regional coordination centre. One of these challenges is that project activities so far exist in a fraction of the CAN countries and would need to be expanded for it to become a CAN initiative. How this expansion would occur and how it would be funded, is still unclear.

In summary, with respect to the regional dimension of some of SDC programmes, in the case of FOSEFOR and PROBONA/ECOBONA there were benefits arising from regionality in terms of exchanges of experiences, and in the case of PROBONA/ECOBONA, of the simultaneous coordination for a number of its activities as well. However, the biggest challenge resides in this sustained institutionalisation of these regional functions after project/programme end, which could have benefited from more attention and a clear plan from the start of the initiative.

7. EFFECTIVENESS

7.1 Introduction

Effectiveness is defined by the OECD/DAC as "a measure of the extent to which an aid activity attains its objectives"[173]. This section is not meant to provide an exhaustive assessment of the effectiveness of all the 13 projects covered under this portfolio. This would clearly go beyond the scope of this evaluation. Furthermore, to put it short, it is not possible to measure the effectiveness in achieving biodiversity results, for projects and programmes that, overall, often do not have clearly enunciated biodiversity results. In that context, of particular concern to this evaluation is the following question: What has been the general contribution of biodiversity-related activities to the effectiveness of the projects/programmes?

What has proved challenging in this portfolio is the balance between poverty alleviation, the overall objective of SDC's initiatives in the Andean region, and the conservation of biodiversity.. Poverty alleviation continues to be the first priority for SDC intervention in Latin America for 2002-2010. Stemming from this overall goal, lies the Sustainable Management of Natural Resources as depicted by this diagram from the 2002-2010 *La Cooperación al Desarrollo de Suiza en America Latina: Estrategia de COSUDE a Mediano plazo* (p. 9):

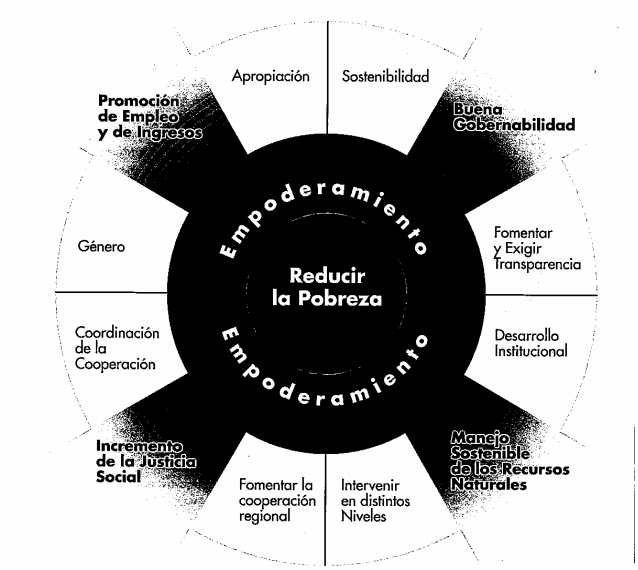

Diagram 2: SDC Approach to Poverty Alleviation

This is a critical factor to take into account because while projects/programmes may very well have attempted to make contributions to the management of biodiversity, they may have coupled this with other activities that may not always have been fully aligned to the conservation of biodiversity in view of their higher ranked poverty alleviation results.

[173] OECD, DAC Criteria for Evaluating Development Assistance, 2000

7.2 The contribution of biodiversity-related activities to the effectiveness of the projects/programmes

On the whole, the biodiversity-related activities of approximately half of the portfolio may have contributed positively to the effectiveness of the projects/programmes, when considering the overall objective of poverty alleviation. BIOANDES, AGRUCO, PROBONA/ECOBONA, seem to all demonstrate improved effectiveness through their biodiversity-related activities. From the beginning, their overall objectives clearly combined poverty reduction with the conservation of natural resources. In such cases, no conflict arises, and in fact, the attainment of both types of results is self-reinforcing.

PEEFORM demonstrated a combination of goals balancing environmental education through which an improvement in the quality of life of the rural population of the Andes region of Peru to foster sustainable management of natural resources was desired. However, it is not clear in its design as to whether biodiversity was to be explicitly taken into consideration[174]. BIOANDES is still a relatively new initiative in the region and so more time will also be required in order to determine the contribution of biodiversity-related activities to effectiveness. However, BIOANDES` design is "to strengthen the sustainable management of biodiversity in the Andean region of Bolivia, Peru and Ecuador. Its overall goal is to contribute to the conservation and the economic, sociocultural and political valuation of biodiversity with life strategies and dialogue of knowledge as bases"[175]. Time will inform SDC if these intentions actually materialize in the field.

Examples such as INCOPA and FORTIPAPA seem to demonstrate a possibly reduced effectiveness due to their biodiversity-related activities. These projects/programmes on the whole promoted the use of native potato varieties, along with seed preservation and genetic research[176]. They generally hope to reduce poverty through improved use of varieties of potatoes and improved access to markets for small scale potato farmers[177]. However, they appear to have been affected by the lack of a sufficient market for native potatoes compared to the preference for the more traditional variety. In the case of FORTIPAPA, it was noted that farmers were not motivated to plant smaller potatoes because the market is not great enough[178]. The market for native varieties of potatoes is still rather small[179]. As a result, the effectiveness of poverty reduction in for example, INCOPA was most likely hindered. Had the projects/programmes restricted themselves to varieties in higher demand and not necessarily on a reflection of native diversity, for example white or yellow potatoes, it seems highly probable that farmers would have benefitted more from a financial perspective[180].

SEPA and FOSEFOR also seem to have displayed a reduced effectiveness caused by their biodiversity related activities. SEPA promoted the improvement of potato seed quality and farmer's access to them. However, some of the varieties promoted were in fact not native species, although very near to native species, but because farmers prefer to plant species in higher demand by the market such as the Huaycha[181], interest in planting various varieties is still limited[182]. Similarly, the restriction of FOSEFOR to native forest

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[174] PEEFORM, Plan Operativo 1998-1999, p. 6
[175] http://agruco.org/bioandes/web/content/view/15/30/
[176] PROINPA, Informe Compendio 2005-2006, p. 35
[177] FORTIPAPA, Evaluación Externa Final Fase IV, 2005, p. 20
[178] Informe de Fase IV Proyecto FORTIPAPA (2002-2006), p. 36
[179] See Case Study Peru, Annex H
[180] See Case Study Peru, Annex H
[181] Although Bolivia is home to more than 230 potato varieties, the Huaycha is among the 14 varieties that are most consumed. Source: http://research.cip.cgiar.org/confluence/display/redlatinpapa/semilla_bolivia
[182] SEPA, Informe Anual 2002, p. 10

seeds, instead of fast growing species such as eucalyptus or pines with higher market demand, likely led to a reduced effectiveness in terms of improved incomes of the farmers[183]. EL CÓNDOR seems to show conflicting evidences. On the one hand, its aim was the simultaneous process of social and economic development of the beneficiary population and the conservation of forests, on a territory considered a buffer zone of the El Cóndor Mountain range". On the other, in practice it is unclear from the evidence reviewed that forests and biodiversity were not removed to establish means to improve people's livelihoods. Activities such as, for example, the establishment of silvo-pastoral systems (co-management of cattle and trees)[184] using exotic species at the expense of the original Amazonian forests, do not support the claim of an overall positive impact on native BD.

The case studies also further reflect similar findings. The mission to Bolivia generally found that all three projects/programmes supported a biodiversity dimension that positively affected their effectiveness in attaining results for poverty alleviation. FOSEFOR, PROBONA/ECOBONA and AGRUCO were deemed effective in fostering biodiversity conservation and the team found that these three projects/programmes interacted positively in the areas in which they overlapped. The actions of PROBONA and ECOBONA have promoted the development of community norms and have supported conservation actions at the community and municipal level[185]. This has resulted in the protection and appropriation of small forests by communities. AGRUCO however, has worked mainly at the community level but has also worked in training at national and regional levels. It has achieved the creation of an alternative approach in agriculture in an important agriculture school in Bolivia. Overall they were deemed to be responsive to the needs of beneficiaries, thus changing with time to better accommodate them and improving effectiveness.

In Ecuador, the mission differentiated between the sole goal of FOSEFOR, poverty alleviation, and the dual aim of PROBONA/ECOBONA to combine poverty reduction and protect the Andean forests around which the targeted populations are located. Due to these differing goals, biodiversity activities shaped the effectiveness of these projects/programmes differently. FOSEFOR generally tried to promote native seed species as well as exotic species. Because the limited market for native seed species was not adequately taken into account, this most probably resulted in less effective poverty reduction since farmers would not have been able to adequately increase their incomes and gain sufficient benefits from only that market[186]. PROBONA/ECOBONA, on the other hand, maintained poverty reduction and conservation as their core goals. Indeed, the programme was promoted through the collaboration of two organisations, The World Conservation Union (IUCN) and Intercooperation, and ended up being financed out of the Global thematic section of SDC, thus explaining its dual nature and the focus on its biodiversity-related activities such as the introduction of alternative, more sustainable livelihoods. These activities were found to be of great importance in contributing to the effectiveness of the programme.

[183] See Peru and Ecuador Case Studies, Annexes G, H
[184] EL CÓNDOR, Evaluación del Proyecto, 2006, p. 13, p. 10
[185] Instituto Socio Ambiental, ISA – Bolivia, Evaluación de Impactos, V Fase, Programa de Bosques Nativos y Agro ecosistemas Andinos – PROBONA, La Paz, 2006
[186] See Ecuador Case Study, Annex G

In Peru, the limiting factor of biodiversity-related activities in FOSEFOR was similar to those in Ecuador. A comparable difficulty with INCOPA was also noted because this project did not restrict itself to white and yellow potatoes, in higher demand by the market. Therefore, although this latter project did incorporate native Andean coloured potatoes, this incorporation may have reduced its effectiveness in alleviating poverty. This represented, so to speak, a trade-off in effectiveness from that limited perspective[187].

In summary: documentary review and case study analysis tend to demonstrate that in the case of projects/programmes that do not have biodiversity or integrated and sustainable resource management as their central objective, the inclusion of the biodiversity results might be done to some extent at the expense of the central poverty alleviation related outcomes. In this context, when linking the two themes, it is paramount to work with the right assumptions regarding the market for biodiversity related goods. That being said, it must be noted that within the framework of striving for sustainable change, and poverty alleviation in the longer term, the inclusion of the biodiversity dimension becomes a prerequisite.

[187] See Peru Case Study, Annex H

8. SUSTAINABILITY

The OECD/DAC defines sustainability as "the continuation of benefits from a development intervention after major development assistance has been completed [or as] the probability of continued long-term benefits. The resilience to risk of the net benefit flows over time".[188] Sustainability has many dimensions and is often affected by factors that are highly contextual. This section is not meant to be exhaustive in its analysis of all the dimensions of sustainability. This would clearly go beyond the scope of this evaluation. The report herein highlights some of the sustainability potentials and main treats to sustainability identified through this evaluation process, with a view to draw lessons of usefulness for SDC in its future biodiversity related programming. From a detailed analysis of the case studies, a number of factors affecting sustainability of the portfolio can be distilled, namely in terms of Institutional choices, Capacity development approach, Intervention strategy; Integrated approach; Main concerns of the local population; Assumptions about the market; Political commitment and policy dialogue; Awareness of the stakeholder; and, Ecological sustainability and planning/management concerns. Those are discussed in Chapter 8.2 below.

8.1 Overall assessment of sustainability in the portfolio

Overall, the review of the documentation on the portfolio and the field work of the evaluation team provides for a mixed picture on sustainability of the results achieved. This is not surprising as sustainability is too often the poor child of development interventions.

That being said, one of the strengths of SDC's approach has been its long term approach in working in a number of its interventions (namely AGRUCO, FOSEFOR, PROINPA, and SIBTA)[189] and also, overall in terms of maintaining the geographical zones it has been working in. This has allowed for a strong and maintained focus on organisational capacity strengthening, a prerequisite to sustainability, and to sustained policy dialogue at different levels (in particular the Municipal and National level).

As will be seen in the discussion that follows in this section, some of the institutions supported seem fairly solid. They are now in a position to sustain their efforts with knowledge development, capacity development of third parties, including with local communities and market actors (e.g. Universidad de San Simon and the Forestry School in Cochabamba; PROINPA). In all cases, the biggest challenge has been in terms of financial sustainability after projects/programmes end, either in terms of institutional financing (e.g. AGRECOL, PAPA ANDINA, PROINPA, SEPA, SIBTA)[190], and/or maintained access to quality markets for the products promoted or for technological development (e.g. FORTIPAPA, EL CÓNDOR, SIBTA)[191]. Some have fared better than others in diversifying their sources of funding, thanks in part to SDC funding to ensure a transition/sustainability phase (e.g. AGRUCO, FOSEFOR, and PROINPA)[192]. Other

[188] Development Assistance Committee. *Glossary of Key Terms in Evaluation and Result-based Management*. Evaluation and Aid Effectiveness Series. Paris, p. 36

[189] AGRUCO, Plan Rector 2006-2010, p. 12-17; Evolution from RASEFOR to FOSEFOR : Red Andina de Semillas Forestales (RASEFOR). Informe de la primera fase. Julio 1995 a Junio de 1998. Quito 1998, p. 3, Propositon de Credit. No. 7F-02148.06 Phase 6 01.01.04 – 31.12.05, p. 2; PROINPA, Misión de Orientación Estratégica, 2005, p. 46

[190] SEPA, Proposition de credit Phase 15 (5/2005-04/2009), p. 3; SIBTA, SIBTA Impact on the Grantee Sector Sept. 2004, p. 9-10.; PROINPA, Changing paradigms for organizing R & D: agricultural research and the creation of the PROINPA Foundation in Bolivia, Gandarillas et al., year?, p. 12

[191] EL CÓNDOR, Evaluación del Proyecto <el Cóndor> (2006 By?) p. 13; SIBTA, Sistema Boliviano de Tecnología Agropecuaria. Plan Plurianual. 2001-2005. 2001 Por Min. De Agricultura, Ganadería y Des. Rural et al., p. 57

[192] This is based on interviews in the field and a general review of project documentation

factors, such as the fast changing political context (in countries like Bolivia and Ecuador, for instance), are also posing challenges to sustainability.

Broad changes in national policy orientation, and in the public civil service capacity, may in some cases pose important risk to the perceived legitimacy, and therefore the political, social and institutional sustainability of institutions that SDC has supported over long periods (e.g. PROINPA and the germplasm banks or FOSEFOR in Ecuador).

In some cases (such as in the cases of PROBONA/ECOBONA), the lack of meso and regional level institutional anchors to continue the leadership work beyond project/programme funding, and outside of the executing agency structure, is of concern.[193] Fortunately, as we will discuss further below, the portfolio, overtime, has seen a move away from outside execution of its activities, trying instead to use intermediary agencies as facilitators in a process of indigenous capacity development, working through local institutions.

To conclude, on ecological sustainability, some of the measures supported through the portfolio may have potential sustained positive impacts. As discussed in Chapter 6, there is some evidence of such positive impacts from the evaluation team field work and of their potential continuation, even though they are not in any way systematically measured or monitored by SDC interventions or the partner organisations SDC is working with. However, the small scale of those impacts is in many cases a limiting factor in ensuring sustainability at the ecosystem level.

Ex-situ conservation efforts (through the various gene banks and germplasms banks established through projects/programmes such as FOSEFOR, PROINPA), working through the strong structures developed, show good potential for sustainability, but cannot of course be equated to ecological sustainability and rather to institutional sustainability. Furthermore, this sustainability will be dependent on continued work by the local SDC partners in the areas, and therefore, on their continued institutional and financial viability to carry on their effort beyond SDC support. At this level, as mentioned above, there are a number of positive experiences, but also some concerns.

8.2 Some main factors that have affected sustainability

Building on the analysis and concrete experiences provided in the case studies, a number of factors affecting sustainability of the portfolio can be distilled from both positive and less positive experiences reviewed.

8.2.1 Institutional sustainability and institutional anchor

Through some of its projects/programmes, SDC has shown its capacity to have a long term approach that has allowed it to nurture institutional sustainability at various levels of interventions. This has started from the beginning, with identifying the right institutional partner to support.

In Ecuador and Peru, for instance, the emphasis of the PROBONA/ECOBONA programme is, especially now, on strengthening governments (local, municipal/provincial, national), with the expectation that strengthened institutions will continue to carry on project-type activities and replicate results. In Ecuador, rather than assuming that after the project/programme ends farmers and communities would maintain achievements (sustainable use techniques, management plans, compensations for reducing pressures

[193] Based on interviews and discussions in the field with programme stakeholders

on forests, etc.) ECOBONA decided to target not only farmers but governments immediately above them. According to ECOBONA managers it is with sustainability in mind that the programme initially selected municipalities and local governments that had already expressed an interest in ecosystem management and proceeded to strengthen them. That is, these governments already shared the goals of SDC and therefore there is a higher chance that they would continue with the same goals after SDC funding ends. This approach is a remarkable departure from the FOSEFOR approach in which the programme aimed at a so far non-existing demand for seeds.

Indeed, in Peru, field work has highlighted that in the case of ECOBONA, the programme's political incidence appears to have been effective at least in Pacobamba in gaining support and environmental citizenry to stop and, eventually revert, the high rate of degradation of the local forests. By targeting the highest level of authority in the sensitisation activities in Pacobamba, the programme managed to bring in the Mayor as a committed partner. The effectiveness of this strategy has been facilitated by the fact that the Mayor was already seriously interested in the sound management of the environment and natural resources.

That being said, the case study from Bolivia, while commending Inter-cooperation for its good work as the executing agency for the PROBONA/ECOBONA programme, also point out to the fact that it is important to further build institutional sustainability at the national level. The permanent role of promoting and following up the conservation and sustainable use of Andean forests should be assumed by a permanent Bolivian entity, be that governmental or nongovernmental.

8.2.2 Capacity development or capacity building

Departing from its previous approach based on the use of external executing agencies, SDC has also shown its ability to "develop" the capacity of already existing organisations, rather than try to create and "build" institutional set up of its own.

In Bolivia, AGRUCO is part of the University of Cochabamba and the main personnel belong to the University and are paid by it. Thus a large portion of what has to be assured for AGRUCO is part of the university budget and the permanence of the personnel is protected by regulations about freedom of speech in the universities, tenure and the autonomy of Bolivian universities. The fact that AGRUCO has been able to obtain funds from different sources including SDC for more than 20 years makes it a very valuable asset for the University. One has to remember that funding is scarce in Bolivia and that often universities are not very proficient at obtaining funds. Another main source of funding for AGRUCO at the time of the mission was The Netherlands Cooperation, through its Compass programme, building on the approached developed with SDC support over the past 20 years.

In Bolivia, Ecuador, and Peru for instance, FOSEFOR decided to work with existing centres and these are largely still active. They existed before the programme and continue existing now (although commercializing mostly fast growing exotic species in Ecuador and Peru). Quito municipality has such a seed bank, strengthened by the programme and still active. Four years after programme completion, linkages between seed producers, seed centres are maintained. Seed centres also provide technical assistance to seed buyers. One important feature of the programme in terms of sustainability was that reportedly seed quality was enhanced and has been maintained after the programme, despite the low demand for seeds.

In Peru, in the case of INCOPA, the intermediate associates and local communities are strengthened and are also very likely to continue in what seems to be a win-win

arrangement. Significantly, for every dollar brought in by SDC, INCOPA has leveraged three and they are still on the search for additional funding. Presently, New Zealand has interest in supporting a follow up phase of the project.

8.2.3 Intervention Strategy

SDC has also approached a number of its interventions in the biodiversity-related portfolio, on the basis of linking up and working directly with local communities and their institutions. This has proven a source of great legitimacy, and of political and social sustainability for its work with the three Andean countries. Furthermore, it has ensured that capacity is left on the ground to perpetuate benefits for local beneficiaries. That being said, this perceived dispersion though micro-level support and initiatives has been an intense source of discussion with other donors, within the framework of discussions on harmonisation and the Paris Declaration.[194]

In Bolivia, the examples of AGRUCO and PROBONA/ECOBONA are telling in that respect. Both programmes are built on momentum for municipal and national policy development, working with local communities. In the case of AGRUCO, the Institute has shown a great capacity to communicate with local populations, environmental NGOs, local authorities and indigenous rights support groups. It has been very consistent in its approach and has been able to modify it as lessons were learned. Their emphasis on local populations and the extent to which they have developed a theoretical framework on the issue of traditional knowledge is particularly important in today's Bolivian context. At present the Bolivian government is knowledgeable of AGRUCO, its contribution and way of thinking. It has included AGRUCO into institutions that it has been regularly consulting for the drafting of the new constitution In the case of PROBONA/ECOBONA, this has started with the concerns of local communities in the development of communal level norms and experiences in management, eventually leading to a leadership role in that respect for the municipality of Independencia, and the recognition of the Andean native forest in new National Plans as mentioned before.

In Ecuador, the two ECOBONA strengthened local governments (Napo and Loja) have seen their improved capacities reflected in disproportionately higher annual budgets. The two representatives mentioned that for Napo it increased from USD 30,000/year to USD 235,000/year, and for Loja from USD 70,000/year to USD 600,000/year plus additional funds now obtained from international assistance they get from projects they prepare themselves. In addition, the original request of these local governments to be trained in project preparation is also proving successful.

Similarly, in Peru, INCOPA has worked on developing the capacity of local institutional partners as have local NGO’s, including ADERS and Fomento de la Vida (FOVIDA). The latter have increased significantly their capacity for project formulation and management. Still in Peru, ECOBONA has strengthened the capacity of local organisations; through the promotion of collaborative actions between local actors (some form of local twinning arrangements). For instance, such close collaboration took place between the Municipality of Pacobamba and the community members in Pacobamba town and its neighbour Ccerabamba. On the basis of this experience, ECOBONA staff with the assistance of local consultants are now preparing follow up proposals and looking for funding sources to replicate the experience (e.g., Italian-Peruvian Debt Swap Fund (ITTO)).

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[194] In response to these concerns from other donors and the central governments of the countries, SDC management has highlighted to the evaluation team the reform of the programme in the Andean region over the past year toward a more focused set of intervention areas and activities, and the efforts to scale up impact to the national level through, for instance, the Biocultura programme now under negotiation in Bolivia

8.2.4 Integrated approach

As the biodiversity-related portfolio matured, so did SDC's approaches at the local level. In the first phases of work under AGRUCO in Bolivia on the one end, and FOSEFOR in the three countries, on the other, the approach revolved very much around preserving and promoting certain seeds, species and tackling some management issues around those. The later phases of AGRUCO and PROBONA started to focus on particular systems, such as the conservation of the native Andean forests. Now the demand is to manage Andean ecosystems and watersheds, with all their environmental, social and cultural dimensions. This approach is the focus of the latest intervention strategies promoted by ECOBONA and BIOANDES, and will also be at the centre of BIOCULTURA. With this change of focus is the realisation, through experience, that sustainability in resource management, and in particular biodiversity management, requires a more integrated approach.

8.2.5 Concerns of the local population

Successful development interventions must address main concerns of the beneficiary populations. For instance, in all three countries, under PROBONA/ECOBONA and AGRUCO in Bolivia, when depicting the reasons for biodiversity management and the adoption of norms for the management of the native forest by the local communities, one of the main ones coming out is water management. This, of course, also constitutes one more good reason to support in the future an integrated watershed management approach in biodiversity-related projects. This need will likely further be exasperated by climate change and food security concerns.

In Ecuador and Peru land tenure issues in project/programme areas are of the highest importance to the local populations. However, neither FOSEFOR nor PROBONA/ECOBONA alone, with their limited resources, can solve land tenure disputes. This is certainly a reason for non-sustainability since it will likely prevent long-term commitments by farmers on sustainable resource management.

8.2.6 Assumptions about the market

In production and livelihood related initiatives, it is critical to make adequate and detailed assessments of the market conditions and their projected evolution. Indeed, such conditions can be a critical factor in the enabling environment for the long term sustainability of biodiversity related projects/programmes.

In Ecuador and Peru, FOSEFOR was based on the assumption that forest stands of small farmers would be maintained because of the additional income they would gain from selling quality seeds. Critical for the sustainability of FOSEFOR was the vigour of markets for native seeds in Ecuador. In practice, however, sales and gains coming from quality native seeds proved to be marginal and sporadic. Currently, planting in Ecuador is infrequently done with native species. One of the private sector project/programme partners is now afforesting Ecuadorian Páramos with at least 85% exotic species.

In Ecuador, under PROBONA/ECOBONA, alternative livelihood activities supported by the programme may also seem sustainable as they respond to proven market needs. Shade coffee and cocoa, honey, fish, medicinal plants all have true markets that do not need to be established by the programme. Reforestation under PROBONA/ECOBONA was done using a known productive species such as Tara, which also has a market (its pods are used to produce tannins). That being said, in the long term sustainability also depends on prices of products and demand that may vary significantly between years. Prospects, however, are promising.

In Peru, through INCOPA the evaluation has revealed that highland farmers as well as consumers in Lima enjoy improved livelihoods due to the success of the production chains.

8.2.7 Political commitment and policy dialogue

As already mentioned, the enabling environment is critical to the success, but also to the sustainability of biodiversity-related initiatives. An important element in this enabling environment is, of course, the high level political commitment to advancing the agenda, and the policy and institutional set up at the national level through which that political commitment is translated. In the Andean context, in the SDC portfolio, the fast changing nature of this enabling environment has sometimes proven a challenge to the sustainability of SDC interventions. The new constitutions approved in Bolivia and Ecuador, with their significant environmental and social implications, will certainly establish major changes in the enabling environments of these two countries. Within that context, and beyond the project/programme level, it is important that a policy dialogue with SDC at that level be significant as well as continuous.

In Bolivia for instance, as the mission in the field was ending, a Government cabinet shuffle was announced, with at the time unknown consequences for the future process of policy dialogue on biodiversity management related issues.

In Ecuador, INEFAN, the institution that triggered and championed the FOSEFOR programme in the country was later absorbed by the Ministry for the Environment and this ministry does not at present, have an interest in plantation programmes. A similar conclusion can be reached for PROBONA/ECOBONA in that country. Governments seem happy with PROBONA/ECOBONA results, but not to the extent of funding their replication in any near future.

In Peru, INCOPA goals are consistent with current and most probably with future policies at national, provincial and local levels. However, there are some concerns. There is still a gap in terms of leadership if the project were to end tomorrow because Peru does not have a government institution that could manage such a potato programme. (In Ecuador and Bolivia there are such institutions). In Peru it is CIP that now plays that role, but CIP is an international centre, not an institution of the Peruvian Government. INIA would have to be the natural follow up leader, but for the moment it is not in a position to play that role.

8.2.8 Awareness of the stakeholders

To ensure long term capacity development and changes in behaviour vis-à-vis biodiversity management, adequate awareness raising of local actors is crucial and must be given due attention, both in terms of resources, but also in terms of channels and messages used to ensure optimal effect.

In Peru, focus groups with the community of Cuyas Cuchayo in Ayabaca (Piura) where FOSEFOR was active and ECOBONA now works, revealed lack of awareness and understanding about environmental matters on the part of beneficiaries. That community was initially not interested in the programme and they became interested only when they were informed about linkages between forest cover and water supply, which, as previously mentioned, is a typical driver for local population engagement in all sites visited. In spite of it, local communities in Ayabaca, continue to prefer capacity building only for production projects rather than combined with forest conservation projects. They expressed to the evaluation team their intention to use the forest and keep it for cattle ranching and wood, as needed.

On the other hand, in an effort to increase sustainability in Apurimac (Peru), ECOBONA has also supported environmental education and awareness activities with school students. These activities were customised to respond to the local needs and reality, and dealt with apiculture, forest fires, environmental protection (e.g., headwaters protection), and even the Grand Marathon, covering a wide section of the Inca Trail, highly publicised and also attended in its first edition (the second edition is scheduled for September 2009)[195].

Another strategy tested in Peru under ECOBONA, is the incipient efforts in place in Pacobamba to link a divinity by the name of Rumi-Cruz, a Quechua-Spanish word meaning stone cross, with the local native forests. The idea is to promote Rumi-Cruz as the protector of the Chinchay Forest in an effort to vest the forest with a sacred aura to increase the sense of respect and esteem for it. Rumi Cruz is an example of religious syncretism between the pre-Hispanic and the Spanish cultures. To a Western observer, this would be puzzling or very hard to understand. However, this symbolism is typical of the ancestral Andean tradition, where high mountains are regarded as gods. Actually, the Quechua name for the highest mountains in the Andes is Apu (divinity). If all these very innovative efforts will eventually contribute to project/programme sustainability, remains unknown.

8.2.9 Ecological sustainability and planning/ and management concerns

Although the use of biodiversity components is an important dimension from an environmental perspective and is integrated in various dimensions of the projects/ programmes, it does not in itself guarantee ecological sustainability, which integrates the broader array of environmental and ecosystem management factors. Due attention must thus be taken to ensure that those aspects of sustainability are adequately planned for, but also monitored.

In Peru for instance, INCOPA's design did not consider the problem of farmers passing from a subsistence economy to a market economy, and this may have severe impacts if the project were to be replicated at a massive scale in the upper Peruvian highlands not only in ecological terms, but also from a socio-economic point of view. Moreover, as the income of farmers increases, it may well be that their ambitions also increase and some of the traditional conservation-oriented practices are lost. Of special concern in the INCOPA project are soil and genetic erosion. If this were true here, as has been the case in other parts of the world, there is a possibility that there will be genetic erosion and that the effort will not be ecologically sustainable. In this case the social and financial sustainability of the production chains would be in jeopardy. There are also some concerns over FOSEFOR. In addition to the small and sporadic demand for native seeds, the sites themselves may be threatened. In Piura, for instance, only four hectares of the Cuyas forest are fenced to protect it from cattle ranching. The rest is used by livestock at least part of the year. Had projects/programmes been designed with proper potato and ecological baselines, associated with good monitoring systems, it would be possible to detect sources of non-sustainability, eventually leading to corrective management decisions. The alarm systems and social arrangements capable of correcting deviations from sustainability should have been established at the design phase, but that has not been the case.

[195] Information in this paragraph comes from the three Focus Groups in Apurimac and the interaction with Project staff

In Ecuador, vegetables, cocoa and coffee plantations under the programme are internationally certified through Rainforest Alliance, BCS-OCA and Bird Friendly. Certification of shade coffee and cocoa do support the ecological sustainability of these ventures. That is, although not all activities supported by the PROBONA/ECOBONA can be assured to be ecologically or biodiversity sustainable, at least some of them are certified by credible seals.

Indeed, another sustainability concern refers to the basic assumption of PROBONA that there would be an exchange of reduced pressure on forests for alternative livelihoods (Ecological Trade-off). The programme is providing them with alternative livelihoods and hopes they will reduce pressures on forests. But unless there is an explicit and enforceable agreement, as the programme ends farmers may go back to old practices. Another concern is that the programme works with only a small fraction of the people involved in ecosystem degradation and with a fraction of the threats. What will happen with forest cover and biodiversity in the future if nobody continues with the remaining people and threats?

In summary: The evaluation provides for a mixed picture on sustainability of the results achieved. One of the strength of SDC's approach has been its long term approach and broadly maintaining the same working areas. This has allowed for a strong and maintained focus on organisational capacity strengthening, a prerequisite to sustainability, and to sustained policy dialogue at different levels (in particular the Municipal and National level). In all cases, the biggest challenge has been in terms of financial sustainability after projects/programmes end, either in terms of institutional financing, and/or maintained access to quality markets for the products or technological development promoted. Other factors, such as the fast changing political context, are also posing challenges to sustainability. On ecological sustainability, some of the measures supported through the portfolio have the potential to provide sustained positive impacts. Unfortunately the projects/programmes were not designed to test if their interventions were ecologically sustainable. The small scale of project/programme impacts is in many cases a limiting factor in ensuring sustainability at the ecosystem level.

9. CONCLUSIONS

The analysis provided in this evaluation, leads the evaluation team to the following conclusions with respect to SDC's Contribution Towards Biodiversity in the Andean Region.

Biodiversity appears not to have been taken as a central consideration in the design of most projects/programmes. Biodiversity was variously used but not considered a variable susceptible to change under human pressure. The sustainability of biodiversity uses was assumed but not tested. Projects/Programmes, however, generally demonstrated their support of the CBD by promoting activities that may be linked to the conservation of biodiversity as a transversal issue, the sustainable use of its components, and especially the equitable sharing of benefits, knowledge exchange, education and awareness, and the promotion of systemic norms and laws to protect biodiversity, to name but a few.

Overall, projects/programmes did appear to be relevant to the needs and demands of beneficiaries, primarily because their main focus was poverty alleviation through improved access to markets, offering more lucrative alternative activities to those endangering the Andean forests, and the increased appreciation and use of traditional knowledge which was a key element of design for some of the projects/programmes. Generally the portfolio targeted regions of extreme poverty in all three countries and was aligned with various international, regional and national policy frameworks. The overall goals of the projects/programmes in principle, respected the aims of the UN Millennium Goals and the Regional Andean Biodiversity Strategy. Additionally, the initiatives were also relevant vis-à-vis the National Biodiversity Strategies of all three countries as well as other specific country initiatives. With respect to the emerging priorities of the SDC, most projects/programmes do show relevance to Climate Change (adaptation/mitigation) and Food Security concerns. In fact, to the extent that they promote conservation of biological variability and integrity, there is potential for the further integration of the two priorities into future planning.

In regard to impacts, there is some evidence that only a few projects/programmes in the portfolio have activities and outputs that may lead to the conservation of biodiversity in the three countries, one of the CBD objectives. For instance, in terms of ex-situ conservation, one notes the significant germplasm banks set up for both potato and native tree species, which together, have allowed the cataloguing and preservation of hundreds of species of plants. In terms of in-situ conservation, some SDC projects/programmes (namely AGRUCO, FOSEFOR and PROBONA/ECOBONA) produced an impressive list of outputs and outcomes that can lead to impacts on biodiversity and the equitable sharing of genetic resources, but do not in themselves guarantee that biodiversity or the environment will be better managed and benefits arising from the use of genetic resources equitably shared. However, in most cases, there is limited clear and definitive evidence that activities and outputs have actually led to sustainable use of *native biodiversity*. A number of projects/programmes also support transfer of technologies, education and increasing awareness, all of them important criteria for the implementation of the CBD.

Evidences support the view that in most cases, projects/programmes did lead to impacts on local beneficiaries. Almost all projects/programmes reported varying impacts in terms of improved livelihoods (in the form of improved income) in the areas where they worked on the ground, albeit generally not quantified. This was confirmed through the case studies.

With respect to access to, and sustainable use of resources, a majority of SDC biodiversity -related interventions reported efforts and some noted impacts in terms of either maintaining or improving that access and the sustainable use of resources, even though the sustainability of these changes could not be proven or documented.

Generally, few of the projects/programmes had noticeable or adequately reported impacts on gender equity. The review of evidence also points to positive impacts on participation and institutional strengthening at the community level for at least half of the portfolio, mostly through the strengthening of farmers' and producers' organisations.

Overall, it can be said that the portfolio, through its impacts on the rural poor contributed, in their scoped way, to the implementation of the PRSP or poverty alleviation action plan of each of the three Andean countries. The evaluation also highlights that the portfolio, as a whole, had influences on national policies and initiatives, or has contributed towards the strengthening of some national institutions.

With respect to the regional dimension of some of SDC programmes, it is clear that in the case of FOSEFOR and PROBONA/ECOBONA there were benefits arising from regionality in terms of exchanges of experiences, and in the case of PROBONA/ECOBONA, of the simultaneous coordination for a number of its activities as well.

Local beneficiaries point out to some limited positive environmental impacts of economic activities in a number of cases, although those are not quantified, nor adequately monitored. Those are deduced mostly from the types of activities being supported by the projects/programmes rather than from the actual monitoring of those impacts.

Documentary review and case study analysis tend to demonstrate that in the case of projects/programmes that do not have biodiversity or integrated and sustainable resource management as their central objective, the inclusion of the biodiversity aspects might be done to some extent at the expense of the central poverty alleviation related outcomes. Generally this was a result of insufficient income being generated from markets for native biodiversity. In this context, when linking the two themes, it is paramount to work with the right assumptions regarding the market for biodiversity related goods. That being said, it must be noted that within the framework of striving for sustainable change, and poverty alleviation in the longer term, the inclusion of the biodiversity dimension becomes a prerequisite.

Finally, the evaluation provides for a mixed picture on the sustainability of the results achieved. One of the strength of SDC's approach has been its long term approach working in roughly the same areas. This has allowed for a strong and maintained focus on organisational capacity strengthening, a prerequisite to sustainability, and to sustained policy dialogue at different levels (in particular the Municipal and National level). In all cases, the biggest challenge has been in terms of financial sustainability after projects/programmes end, either in terms of institutional financing, and/or maintained access to quality markets for the products or technological development promoted. Other factors, such as the fast changing political context, are also posing challenges to sustainability. On ecological sustainability, some of the measures supported through the portfolio may have the potential to provide sustained positive impacts. However, projects/programmes were not designed to check ecological sustainability and the scale of those impacts is in many cases a limiting factor in ensuring sustainability at the ecosystem level. From a detailed analysis of the case studies, a number of factors affecting sustainability of the portfolio can be distilled, namely the importance of: Planning for institutional sustainability and finding the right institutional anchor; Promoting capacity development rather than capacity building; Building from the ground up; Taking a more

integrated approach; Starting from the main concerns of the local population; Making the right assumptions about the market; Ensuring political commitment and policy dialogue beyond project/programme end; Ensuring adequate awareness of the stakeholder; and, Adequately addressing and monitoring ecological sustainability through sound planning and management.

10. LESSONS LEARNED

From this evaluation, a number of key lessons learned can be drawn which would benefit future biodiversity related programming by SDC. Namely:

1. Project/programmes aimed at alleviating poverty via promoting alternative livelihoods can be in opposition to biodiversity conservation if native flora and fauna is impacted by the new options or if its uses are non-sustainable. On the other hand, conservation can also limit the scope of poverty alleviation programmes by limiting access to the native biota. To ensure harmony, the right assumptions about markets must be verified and not just assumed.
2. If SDC wants to include potential biodiversity impacts within its poverty-alleviation portfolio, it should include concerns for biodiversity components already in project/programme design. Biodiversity concerns should not be raised after project/programme completion or when projects/programmes are ending. Thus, at the design stage, SDC should support identification of threats to biodiversity arising from people's livelihoods, identify the target populations threatening biodiversity components. As part of remedial measures it should help develop biodiversity outcomes in terms of reduced threats and attitude changes. As part of these efforts it should support the development of appropriate monitoring and evaluation systems with indicators that are able to eventually show the desired changes.
3. When aiming to conserve some biodiversity components, there may be unintended effects of these alternative livelihoods on other components of biodiversity. For example, when exotic honey bees are brought to Andean forests to protect forest cover.
4. Of extreme importance when striving for impacts on biodiversity conservation is the systematic documentation of the number of within-species varieties (e.g. potatoes) or species targeted or conserved, and the number and area of areas under effective protection. Claims of *sustainable* native biodiversity use must be supported with definitive evidence. Projects/programmes need to be designed with appropriate baselines, indicators and monitoring systems to detect changes in the biophysical environment as well as before-after changes in the behaviour of institutions and people towards biodiversity.
5. Environmental and biodiversity sustainability has to be demonstrated, it cannot just be assumed because a project/programme has an environment component or because traditionally people in that area have been traditionally conservation-oriented. Experience shows that changing from a subsistence to a market economy can have profound changes in the way people behave towards resources. A good monitoring and evaluation plan with good indicators may provide evidences of this dimension of sustainability.
6. A possibly easier, less costly and more efficient way to measure changes in biodiversity as a result of a project/programme's intervention is to measure the reduction/increase of threats against biodiversity in the region instead of measuring the number of taxa in a specific area (Examples of threats include: deforestation rates, number and extension of fires, number and area of mining activities. Examples of biodiversity assessments are linked to censuses of species and abundances of birds, mammals, vines, and pollinators).

7. If SDC is interested in maintaining biodiversity conservation as a component in its projects/programmes, consideration should be given as to how this is presented to beneficiaries in order to heighten interest and potentially their own level of commitment. For example, it has been mentioned quite a few times in the case studies that communities seemed more concerned and interested in preserving water resources than biodiversity conservation. If the link between these two aspects can be presented to communities (e.g. by preserving natural Andean forests, this will help in maintaining vital water resources needed for crops), more interest in biodiversity conservation might be instilled in the local beneficiaries.
8. The strengthening of capacities of pre-existing institutions and organisations at all levels could help improve biodiversity conservation in a given country. Within Biodiversity Strategies and Action Plans indications of the institutions requiring capacity strengthening can usually be found and due attention should be taken to develop such capacities as part of a broader plan to ensure sustainable management of biodiversity (recognizing that this is a necessary but not a sufficient condition for biodiversity conservation).
9. It should not be assumed that by approving new laws and policies, strengthening of biodiversity-related institutions, and the generation of participatory management plans, biodiversity conservation will necessarily follow. Many other factors, such as political considerations, corruption and conflicts of interests must be taken into account. In general, conservation will need that the most important threats to biodiversity and a significant fraction of the threatening population are addressed.
10. Conservation and sustainable uses of biodiversity requires commitments and it is therefore important that all beneficiaries and institutions know if there is a *quid pro quo* in the assistance they are receiving. If rural development projects/programmes have as one of their aims reducing threats to biodiversity and not only reducing poverty, all stakeholders should know and agree with all measures and conditions (Ecological Trade-off). Projects/programmes are unlikely to be successful if important mechanisms or conditions are kept out of the negotiations with farmers or institutions. In general, all participants should know and fully agree to the whole package, including compensating resources and activities as well as the possible obligations entailed.
11. When designing large regional projects/programmes such as BIOANDES and ECOBONA it is important to already keep in mind regional coordination upon completion of donor funding. It can be challenging to find a party to assume the responsibilities of regional coordination. Parties are usually more interested in funding national rather than regional components of projects/programmes.
12. The goals of the CBD are conservation, sustainable uses of biodiversity components, and equitable sharing of benefits emerging from uses of genetic resources (now meant to be biodiversity resources). Therefore, rural poverty alleviation projects/programmes using (consumptive or non-consumptive uses of) components of native biodiversity are good candidates to make contributions to the implementation of the CBD in developing country Parties. SDC may therefore want to examine such future projects/programmes outside its current biodiversity portfolio and decide if they want to include biodiversity contributions to their project/programme designs in order to improve their potential to contribute to the implementation of the CBD. Special care should be taken though that biodiversity-promoting activities are not done at the expense of other biodiversity (for example, forest clearing to plant a commercially attractive native species), or even worse, eliminating native biodiversity to introduce high value exotics (for example, forest clearing to plant eucalypts or introduce livestock).

13. In order for gender to be adequately addressed, not only must it be integrated into project/programmes planning from inception, it also must be incorporated to the monitoring and evaluation (M&E) systems in place. A gender perspective must also take into consideration and be sensitive to traditional Andean roles. During interventions, social dynamics should be taken into account in order to obtain specific data in regards to gender-specific needs and actions. It should also be taken into consideration that the limited scope of some projects/programmes and those that are relatively new, will not necessarily be able to foster changes or impacts on gender roles in the region.
14. SDC projects/programmes are relatively small and if the goal is to have biodiversity impacts in larger areas, they must be designed to address the most important threats and the most influential populations. Achieving this goal would be more likely if the small-scale demonstrations funded by SDC could be designed to be later replicated with other funds and other local or international donors. Long-term programmes, as opposed to two to three year projects, help meet the most important stakeholders in a region and establish trust for future collaboration. They also allow sufficient time to develop the required awareness and capacity to help ensure longer term sustainability of results achieved.
15. Also, in long term programmes, progressive additions can be implemented and tested to verify the overall impact on the desired goal. The eventual sustainability of project/programme outcomes is not something that just happens. It has to be incorporated into the design of initiatives. In this context, the strategy to work with already committed institutions and to mainstream its goals into municipal and provincial governments provides reasonable assurances of sustainability. The sustainability of projects/programmes fostering new products in support of native biodiversity is also highly dependent on sufficient markets. Therefore adequate assessment of market conditions and their projected evolution should be made before embarking in a project/programme that will require selling of a product (for example: are there already existing markets for the intended products of the initiative or will new ones need to be created?).Developing capacities of existing organisations as opposed to building capacities from zero can lead to more sustainability at lower costs; Sustainable resource management, and in particular biodiversity management, requires an integrated approach that incorporates social and cultural diversity and preservation.
16. The political context in the Andean region will be fast-changing in the coming years with Ecuador and Bolivia having approved new constitutions and this can greatly impact on the sustainability of SDC's projects/programmes. Therefore a policy dialogue with SDC at all levels must be significant as well as continuous.
17. To ensure long term capacity development and changes in behaviour vis-à-vis biodiversity management, adequate awareness-raising of local actors is crucial and must be given due attention, both in terms of resources, but also in terms of channels and messages used to ensure optimal impact.
18. Although biodiversity is an important dimension from an environmental perspective its management does not in itself guarantee ecological sustainability. Ecological sustainability includes other variables, such as pollution control, soil conservation and water management.
19. Biodiversity preservation and its sustainable management can be, in the Andean context, an important component of an integrated approach to both tackling climate change channels (mitigation as well as adaptation), and food security concerns.

11. RECOMMENDATIONS

1. The issue and areas of focus of SDC programming in the Andean region offer a great opportunity to further mainstream biodiversity concerns in development cooperation. However, for this to be effective, biodiversity objectives and strategies must be clearly stated and articulated right from the project design stage, along the poverty alleviation objectives, and clearly linked to reinforcing components and activities.
2. Furthermore, in future SDC programming, biodiversity-related components, of projects and programmes must be designed with appropriate baselines, indicators and monitoring and evaluation systems to detect changes in the biophysical environment as well as before-after changes in behavior of institutions and people towards biodiversity, especially behaviors linked to threats to biodiversity. Given the challenges of measuring changes in biodiversity itself, measuring reductions/increases of threats against biodiversity in the targeted regions can be very cost-effective. In addition, these contrasts may provide evidences of the ecological and social sustainability of the results.
3. To lead to durable impacts on biodiversity and sustainable resource management, resources and activities must target all key actors involved. Key participants should share the goals and approaches of the intervention. Within this framework, if livelihood benefits are to be linked to changes towards more sustainable resource management, local populations should be fully aware and share the biodiversity significance of the trade-offs involved.
4. To enhance its prospect for longer term and broader impacts on biodiversity conservation, SDC should build on the approach it has developed over the years in the region and continue to strengthen the capacity of pre-existing institutions, building on the successful partnerships it has developed with local institutions, in particular at the micro and meso levels.
5. This also links up to the strategy to emphasize in scaling up impacts and aligning to the Paris Declaration in the years to come. This should be done keeping in mind the niche and value added of SDC established approaches and partnerships in biodiversity conservation. Typically, SDC has grounded its work at the micro and meso level, working through local structures and actors. This strength must not be lost in the scaling up and harmonization process. Harmonization could focus on micro and meso level for instance, and use that entry point as a way to continue to influence the broader national processes, and develop more explicit strategies to ensure replication of the successful pilots it supported, with the support of other development partners. Such a strategy emphasizes building on sustainable, longer term, capacity development processes.
6. In the same vein, given that conservation interventions must address the most important threats to biodiversity, a significant fraction of the population putting pressure on biodiversity must be addressed. Should SDC not have the sufficient resources to ensure that, it should at least ensure that in their design, its pilot interventions are linked to broader programs of action financed by other partners, be they national or international.
7. For projects and programmes that intend to work through markets, adequate assessments of market conditions and their projected changes must be made to help ensure broader and more sustainable impacts.
8. SDC should continue to promote an integrated approach in its programming at two levels: In terms of dimensions of sustainability tackled: Cultural, social, institutional, political and ecological, but also in terms of areas of interventions. Indeed, the evolution of the portfolio has shown the value added of focusing on ecosystems. From this perspective, and given the manifest interest in maintaining downstream waters supplies, working with watersheds may be a win-win approach to biodiversity management and poverty alleviation.

9. Furthermore, working with watersheds offers a potential for SDC to pay due attention in its future programming with regards to: a) building strong linkages between its biodiversity portfolio and food security concerns; and, b) further strengthening the linkages - which are many - with climate change adaptation and mitigation challenges in the Andean region.
10. To conclude, in order to ensure broader, longer term sustained impacts of biodiversity conservation efforts at the regional level, due attention must be paid *right at the design stage* of regional projects to the follow-up institutional and financial sustainability of regional management, coordination and information exchange functions.

Recent SDC Evaluations

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EVALUATION 2008/1	SDC HUMANITARIAN AID IN ANGOLA 1995–2006
EVALUATION 2007/2	DECENTRALISATION IN SDC'S BILATERAL COOPERATION Relevance, Effectiveness, Sustainability and Comparative Advantage
EVALUATION 2007/1	SDC'S PERFORMANCE TOWARDS EMPOWERMENT OF STAKEHOLDERS FROM THE RECIPIENTS' PERSPECTIVE
EVALUATION 2006/1	EVALUACIÓN INDEPENDIENTE DEL PROGRAMA REGIONAL DE AMÉRICA CENTRAL 1999–2005
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EVALUATION 2005/1	AUFGABENTEILUNG ZENTRALE – KOBÜ
EVALUATION 2004/4	SDC'S INTERACTION WITH THE SWISS NGO'S (for internal use only)
EVALUATION 2004/3	QUALITY ASSESSMENT OF SDC'S EXTERNAL EVALUATION REPORTS (not published)
EVALUATION JR 2004/2	SWISS-SOUTH AFRICAN DEVELOPMENT COOPERATION PROGRAMME 2000–2003 Joint Review
EVALUATION 2004/1	SDC'S HUMAN RIGHTS AND RULE OF LAW GUIDANCE DOCUMENTS INFLUENCE, EFFECTIVENESS AND RELEVANCE WITHIN SDC
EVALUATION EE 2003/6	SDC – COUNTER TRAFFICKING PROGRAMME MOLDOVA
EVALUATION EE 2003/5	SDC – HUMANITARIAN AID IN ANGOLA
EVALUATION EE 2003/4	12 JAHRE OSTZUSAMMENARBEIT BAND 1 DIE TRANSITION UND IHR SCHATTEN BAND 2 BILANZ DER ÖFFENTLICHEN SCHWEIZERISCHEN ZUSAMMENARBEIT MIT OSTEUROPA UND DER GUS 1990–2002
EVALUATION 2003/3	PROGRAMME DE LA COOPERATION SUISSE AU NIGER 1997–2002
EVALUATION 2003/2	SDC'S INTERACTION WITH THE UNITED NATIONS DEVELOPMENT PROGRAMME (UNDP)
EVALUATION 2003/1	SDC'S BILATERAL ENGAGEMENT IN THE POVERTY REDUCTION STRATEGY PAPER (PRSP) PROCESS
EVALUATION 2002/1	EIN JAHRZEHNT CINFO 1990–2001

DEZA
Sektion Controlling
Freiburgstrasse 130
CH-3003 Bern
Telefon +41 (0) 31 325 36 03
Fax +41 (0) 31 324 16 92
E-Mail info@deza.admin.ch
www.deza.admin.ch

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Photos: Jean-Louis Gonterre, Thomas Egli