



# Rethinking Good Practices

In integrated land and water management at multiple scales in watersheds,  
integrating climate risks and finance mechanisms for upscaling



Synthesis of the results of the knowledge management process  
promoted by SDC in Latin America and the Caribbean,  
based on the electronic forum and the MultiNetwork Meeting  
in Estelí, Nicaragua, July 6th to 9th, 2015



Summary of the document Rethinking Good Practices In integrated land and water management at multiple scales in watersheds, integrating climate risks and finance mechanisms for upscaling. The full version is available at <http://www.aguaycambioclimatico.info/evento-multiredes-cos-ude/sintesis-tematica.htm> in Spanish

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ASOCAM ([www.asocam.org](http://www.asocam.org)) is a Service Knowledge Management for Latin America of the Intercooperation Latin America Foundation (Ecuador) and Helvetas Swiss Intercooperation.

From the valuable contributions of the participants in the electronic thematic forum and in the Multi-Networking Encounter held in Esteli, Nicaragua on July six to nine, 2015.

With the inputs from the members of the Base Group, the Advisory Group and the authors of the experiences that were analyzed.

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## Analyzed Experiences:

Special thanks for their valuable collaboration, presenting the experiences during the Encounter and allowing these to be analyzed herein, the following projects:

Experience of the Watershed Committee of the Rio Estelí, Nicaragua, the projects: Adaptation to the climate change in the Segovias in Nicaragua; PIMCHAS in Nicaragua; Aguasan in Nicaragua; Scheme of Catastrophic Micro Insurances with MICRO - Fonkoze in Haiti; the transference of the agricultural risk Project of PROFIN in Bolivia; the Risk Reduction of Disasters Project and MANAGEMENT in Bolivia; SABA Plus in Peru; the CSR Mechanism Incubator - IWS Project in Peru and the PSA scheme of JAPOE in Honduras.

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▲ A rural family watering their crops.



# MAIN MESSAGES

1. A series of **good practices** for land and water management at different scales **exist** and have proven their effectiveness in the sustainable and climate-smart development of watersheds, often with **multiple benefits** in terms of environmental protection, water resource enhancement, food security, protection from natural hazards or income generation. Projects should promote these practices that contribute simultaneously to various **sustainable development** goals (win-win opportunities, or synergies) in different sectors and for different groups. The water, energy and food security **nexus** approach can help achieving this.
2. Sustainable and climate-smart development interventions at **watershed** level require a **multi-disciplinary approach**: from agriculture, forestry, water resources, environmental science, and civil engineering to political science and economics. They should be designed and implemented following an **integrated approach** that takes into account the **interrelations** between different sectors and the possible impacts (both positive and negative) beyond their specific field of work. However, SDC country strategies do not necessarily foster an integrated approach. A process to bring thematic domains closer is needed.
3. Watershed approaches must be **inclusive**, taking into account all stakeholders. Natural resource projects should not only focus on small-scale, resource poor producers but seek ways to include those with more resources and the private sector as well. Such actors not only allow for a broader geographical and social coverage; they can also be local **catalysers for change** (e.g. showcase farmers). However, **differentiated** strategies should be designed especially for **financing** and providing **incentives** for sustainable land and water use practices, taking into account specific needs and capabilities.
4. Projects with a watershed approach have to take into account the interests of all groups involved, both public and private. This calls for **solid negotiations** between all actors, through **platforms for articulation** where each actor is given a voice. **Local governments** should be able to play a leading role in those platforms.
5. Platforms are also an opportunity for developing innovative **financing mechanisms**. In addition to the traditional financing sources (taxes, tariffs and transfers), financing can also come from compensations schemes by the private sector, as well as from crossed subsidies and public investments, especially in water infrastructure and management.
6. Embracing a watershed approach when planning and implementing **WASH systems** (water supply, sanitation and hygiene) allows for a more comprehensive perspective including issues such as protection of water sources, discharge of wastewater, and the interrelation with other water uses such as water for agriculture, energy, industry and ecosystems.
7. Projects that pursue both environmental and agricultural productivity goals should consider a **market and value-chain based approach** early on, from their inception. On the other hand, market-driven interventions should not forget a sound analysis of environment and watershed, avoiding for instance the risk of promoting a water-demanding agriculture value-chain in a context of limited water resources.
8. When rural families apply practices that make water availability, agricultural production and income **more secure** in the face of **climate risks**, they do not “just” reduce climate risks, but they also generate a set of ecological, social and economic **benefits**. Disaster risk reduction, climate change adaptation and environmental protection practices will make development outcomes **more sustainable**.
9. If **microinsurance** is promoted as a risk transfer mechanism, it needs to be integrated and closely linked to other (existing and improved) **risk management practices** of the agricultural producer. Risk transfer is **additional** to risk prevention, mitigation, response and recovery from losses. Experience suggests substantial (public) subsidies are necessary for such schemes, at least in the early phases.
10. A better, deeper and more detailed **knowledge base** about environmental, social and economic conditions and interrelations is still needed in most cases, both for the design of development interventions, as well as for the monitoring of impacts. Research and technical expertise are required for this purpose. Existing local empirical knowledge must be considered and valued. Training methods such as learning from fellow farmers and applied research have proven valuable at the beneficiary level.

# EXECUTIVE SUMMARY

Rethinking good practices in integrated land and water management at multiple scales in watersheds, integrating climate risks and finance mechanisms for upscaling. Synthesis of the results of the knowledge management process promoted by SDC in Latin America and the Caribbean, based on the electronic forum and the MultiNetwork Meeting in Estelí, Nicaragua, July 6th to 9th, 2015

This document summarizes the **conclusions** of the exchange and collective reflection between rural development professionals linked to the Swiss Agency for Development and Cooperation **SDC** in **Latin America and the Caribbean**. These professionals, working in different subject areas, such as access to water, agriculture, rural income, natural resources, climate change and disaster risk have come together to **identify good practices and strengthen the interrelationships** that link these issues, based on specific projects in a concrete setting: the Estelí area in **Nicaragua**. This publication seeks to present a **current state of art** based on this analysis of the actions of a selection of projects in the region with SDC involvement and provide recommendations that emerged from this learning process.

The purpose of investment by agencies such as SDC is the **reduction of poverty** in a context of sustainable development. For a family or a rural municipality, development reality is multifaceted and interrelated, in which each decision implies tradeoffs. The **reason** for focusing on the **relationships** between SDC's work areas is to avoid developing a **silos vision** of rural reality, due a sector-wise organization. The hypothesis is that a greater awareness of the interrelationship between, for example, forest and water, and income and risks, and climate and drinking water, will help **greater effectiveness and sustainability** in cooperation investments.

In the MultiNetwork Meeting **48 professionals** participated, from 31 institutions and **9 countries** (Nicaragua, Bolivia, Honduras, Switzerland, Haiti, Peru, Colombia, Cuba and Mexico). Participants analyzed 11 projects experiences, according to three themes of reflection:

1. Modalities for the **management and transfer of climate risk** and adaptation to climate change at multiple scales.
2. **Financing and incentive** schemes for integrated natural resources management.
3. Water **governance** from a local perspective.

At **local level** in a watershed, where different actors make decisions each in its own range and according to their competence, **water can be a linchpin**. The project experiences analyzed therefore roughly follow a logic of **levels of water management in the territory**, from the rural family-plot level, at the level of drinking water and sanitation systems, to the watershed level.

In the theme of **water governance in basins**, clarity of roles and responsibilities is a key issue. Development projects do not always consider clearly the level of **organizations for collective management of territories**, as an entry point for coordination and organization of the work. **Local governments** have a key role in land management, in service provision and in risk management, in direct relation with communities. The division of tasks between

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▲ Collecting data in a river intake work, Moyobamba, Perú.

local governments and national sector entities and their sub-national representatives is important. In a **watershed, platforms for articulation** between communities as territorial organizations and other stakeholders are needed to give them voice and make relationships and impacts between water users visible, and to identify, agree and regulate changes in water and land use decisions and monitor their effectiveness. More than a legal framework, these platforms require **mobilization and investment** to achieve representative participation. Finally, the need was emphasized for **knowledge and local information** on uses and dynamics in water, soil and vegetation cover in a specific territory, to be able to plan and manage these resources solidly. At the same time, more progress is needed in **monitoring and generating evidence** on the level of **effectiveness** of the various practices promoted, making explicit their multiple environmental, social and economic objectives.

In the second theme, focusing on how to operationalize the **consideration of climate risks** in projects related to agricultural production, water and sanitation and natural resources, risks that increase in a context of climate change, it was found that at the farm level in the field, rural families do apply a number of **practices** that make water availability, agricultural production and income, more secure against climate risks. More than "just" reducing climate risks, these practices **generate a set of ecological, social and economic benefits** and are therefore of interest to families. Some practices, such as agroforestry, improved stoves and reservoirs to harvest rainwater, generate **multiple benefits** from different development goals at the same

time. To promote the adoption of these best practices, projects must work through relevant approaches and strategies known in rural development. But perhaps one can only confirm a practice or project to **consider DRR and CCA criteria**, if during design of the intervention, information on the impact of climate change at local level and the risks involved was taken into account, when the actors are aware of these risks and motivated to adjust their actions and when the consideration of climate (and other) risks is institutionalized and anchored in norms, policies and budgets.

In water and sanitation **systems**, disaster risks have become visible and can be accounted for as **damage to infrastructure**, and as a logical consequence, **adjustments** can be identified **in criteria** for planning, design, construction, operation, maintenance and monitoring of water systems. The **system of public investment** is a pathway through which investment rules can demand the application of these criteria, based on the strong argument for the public sector of **avoided costs**. However, equally important is to demonstrate the role in risk management of the **watershed's ecosystem** through the provision of ecosystem services such as regulation. It is precisely at local level in **watersheds** that experiences show some **gaps** in the understanding of its importance in climate risk management, for example through an appropriate combination of investments in physical infrastructure with "green investments", a recognition of the economic value water, and indicators to measure change. The responsibility of implementing risk reduction and climate change adaptation falls especially on the shoulders of sub-national governments, requiring methodology and access to resources.

In the theme of **financing and incentives for natural resources management in watersheds**, the analysis of the costs of best practices, the sources of funding and incentive mechanisms for watershed conservation, was **challenging**. In Estelí, Nicaragua, most investment comes from international cooperation sources, the national government with in kind contributions from the communities, while no investment from the private business sector has been seen yet, although the sector shows interest in contributing to ensure water use.

Although several economic instruments for natural resource conservation exist, projects apply only two instruments of the menu: the so-called **environmental compensation** and **payment (or compensation) for environmental services**. Concerns raised in the application of these instruments are the need for **differentiated compensation strategies** with different types of farmers, and the **sustainability** post-incentive and post-contribution of cooperation funding. In general, conclusions are that solutions (i.e. finance mechanisms) should not overshadow objectives (i.e. conservation of natural resources), that the public sector should have leadership in the coordination of investments and that it is necessary to monitor the effectiveness of the instruments and schemes.

In sum, the need to **design** rural development projects from **systemic vision in a specific territory**, is reiterated. That means working from a **multi-level, multi-stakeholder** (family-plot, water use systems, and watershed management and national sector scales) and **multi-use** approach. In a watershed, this implies ensuring that projects in land use and water consider

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▲ Sprinkler irrigation.

interrelationships and effects on other water uses and users, following the principles of integrated water management. Thematically, it implies that agro-productive and natural resource projects should take into account and procure market linkages that allow for more and safer rural incomes, **promoting local economic development**.

Applying a systemic approach in natural resources management initiatives, agricultural production and water governance in a basin, demands an **improved information and knowledge base** of environmental and social processes and their interaction in the intervention areas. This information base is not only necessary for planning and design of a project; but also for monitoring change that can be attributed to projects. It requires a construction from **local knowledge** with support from **science**.

