

Promoting best practices in sustainable land management

Protecting land is vital to achieving food security and reducing poverty. This is the insight on which the global WOCAT network was built two decades ago. WOCAT's early focus on soil and water conservation has expanded into a tried and tested facility for decision support in all aspects of sustainable land management for every kind of land manager. There is a special focus on providing sustainable benefits for the rural poor, both efficiently and cost-effectively.

Sharing and enhancing knowledge on sustainable land management (SLM) improves land and livelihoods. In pursuing this vision, WOCAT, the World Overview of Conservation Approaches and Technologies (www.wocat.net), has become a global network committed to the task of identifying, documenting, making available and disseminating best practices in SLM.

SLM entails the maintaining of healthy natural land resources (soil, water, vegetation and animals), productive functions (food security), ecological functions (water, nutrient, and carbon cycles) and biodiversity. Neglecting these elements results in land degradation, which is a threat to the environment as well as to livelihoods, especially in regions where the majority of people directly depend on agricultural production. More than two billion people are already affected by desertification, land degradation and drought. Studies show that, under the latest scenarios for climate change, the situation is likely to worsen due to unsustainable use of soil and water.

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There is, therefore, a pressing need to improve food security, promote climate change mitigation and adaptation, and reduce the risk of disasters. In all these fields, SLM plays a key role and must be given urgent attention.

The main objective of sustainable land management is to make human

coexistence compatible with nature in the long term, helping to secure provisioning, regulating, cultural and supporting ecosystem services. Among these services, soil plays a key role: healthy and fertile soil is the foundation of land productivity. So investing in appropriate SLM practices is crucial. Failure to do so results in reduced soil

Using WOCAT knowledge products for decision support

WOCAT produces various knowledge products, such as global, regional and national overview books and inventories of practices and guidelines. These products are available on the WOCAT website under "knowledge base" (www.wocat.net/en/knowledge-base.html).

Key publications on SLM technologies, approaches and principles are:

- *Where the land is greener – case studies and analysis of soil and water conservation initiatives worldwide* (2007) and *Desire for Greener Land – Options for Sustainable Land Management in Drylands* (2012). Both books contain an analysis of SLM technologies and approaches, policy recommendations, and detailed SLM case studies.
- *SLM in Practice – Guidelines and Best Practices for Sub-Saharan Africa* (2011) is a TerrAfrica Partnership Publication which was prepared by WOCAT and coordinated by FAO. The book sets out and illustrates the principles for best SLM practices such as increased productivity, improved livelihoods, and improved ecosystems. In addition, principles for scaling up SLM are listed, such as creating an enabling environment and ensuring local participation combined with regional planning, capacity building and training.
- The latest publication is *Water Harvesting – Guidelines to Best Practices* (2013). These guidelines introduce the concepts behind water harvesting and propose a harmonised classification system, followed by an assessment of suitability, adoption and scaling up of practices.

Apart from providing a wide range of options to land users and SLM projects, WOCAT has developed decision support tools for setting priority areas for upscaling SLM and the selection of SLM practices which are best suited for specific human and environmental conditions. These tools use the wealth of documented experiences and allow decision-makers and local communities to set their own criteria for the evaluation.

fertility, undermining the production of what is sometimes known as the four “f”s: food, fodder, fuel and fibre.

■ Building on knowledge from the field

The overall goal of the WOCAT network is to unite efforts in knowledge management and decision support for scaling up SLM. Its ultimate target group are all land users and the public, who are to be reached via SLM specialist intermediaries at various levels. At the field level, such intermediaries include technical staff and extension workers; at the national level, they may be decision-makers and researchers; and at the regional or global levels they include programme planners and donors. Specifically, WOCAT works to reach its goal by:

- Building up an effective global network of SLM specialists and creating new partnerships and synergies;
- Developing standardised tools and methods for knowledge management and decision support at local, national and global levels;
- Building up a global database on SLM, synthesising experiences, and disseminating targeted information through different media;
- Enhancing the capacity and knowledge base of a range of actors and stakeholders (research, training and education) needed to promote SLM adoption at different scales.

WOCAT knowledge products offer a range of options that can form part of an overall SLM adoption strategy for practitioners in the field, and help decision-makers and donors to better understand and implement their choices. The SLM technologies and approaches are flexible and can be adjusted to the local context while being embedded into institutional frameworks. An important ingredient in the network’s success is a joint commitment on the part of all the institutions, projects and actors involved in SLM to building up a harmonised

Farmers explain their SLM methods

The farmer Momakhol Alikhonova lives in a rural mountain area in Tajikistan where, previously, people cooked using firewood. Today all the trees around the village have been cut down and the people depend heavily on cow dung as a source of energy used in inefficient stoves. The result was a lack of cow dung on the fields, and a decrease in soil fertility. Energy-efficient stoves were then introduced, requiring only one quarter of the amount of cow dung. The remaining cow dung is now applied to fields as manure, doubling the yield and improving soil conditions.



knowledge system and developing user-friendly applications. Effective SLM can only be achieved if local organisations and communities are at the centre of SLM efforts. WOCAT achieves this by enabling local stakeholders to participate meaningfully in resource management processes and by documenting and sharing their experiences.

■ Documenting SLM technologies and approaches

The most-used WOCAT tools and methods are WOCAT case study documentation questionnaires. Filled in by stakeholders (usually the specialist intermediaries mentioned above), these questionnaires allow WOCAT to document and evaluate locally-proven SLM practices that lead to greater productivity and protect the environment. Each case study deals with a specific SLM approach and one or more technologies, and can cover any area from as little as one farmer’s field to entire catchments or districts. All this information feeds into the WOCAT SLM Technology and SLM Approach database. Over the last 15 years, the global database has

grown to about 470 technologies and 240 approaches. They are taken from all continents with a lot of case studies from Africa and Asia in particular.

Until recently, the SLM practices gathered in the WOCAT database were presented in an attractive standardised soft- and hard-copy format. In the past year, WOCAT has made an important addition by producing videos of land users showing how SLM works, what problems it solves, how challenges can be overcome, and what benefits can be achieved locally, regionally and globally. In the videos, farmers from, for example, Tajikistan describe and demonstrate their sustainable land use methods. One farmer, Iskandar Mirzoev, reports on his knowledge of grafting apple trees, a technique that guarantees him an income in years with a poor harvest from some tree species. In another, Momakhol Alikhonova talks about her experience with energy-efficient ovens and how she uses them to minimise soil degradation (see Box). The videos have met with great interest among the local population, stimulating animated discussion of the practices shown.