



Forest Landscape Restoration (FLR)

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The Low Forest Cover Countries are among the most interested in benefiting from Forest Landscape Restoration (FLR). The biological restoration processes are often complex and the resources from forests and trees are crucial for the population.

Photo: Project PADREF, Intercooperation, Mali

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Brief historical review: From Forest Restoration to Forest Landscape Restoration (FLR)

The concept of "forest restoration" is already well-known in several parts of the world. In the past, restoration initiatives were carried out primarily in densely populated environments following natural or human-induced extreme events such as natural disasters or war, and focused mainly on re-establishing forest cover to produce economic profit or restore protective functions. In many cases, restoration has been a synonym for reforestation, and reforestation a synonym for planting only few, and often introduced, species.

Restoration for ecological reasons and biodiversity conservation purposes emerged more recently. The idea of restoring forests for ecological reasons was essentially linked to the insight that protected areas, rarely covering more than five to ten per cent of the land area of a given country or region, would not be sufficient to assure their role in conserving the full range of biodiversity. Forest clearing locally impacts on biodiversity through reduced total areas of suitable habitat, change in landscape patterns, and forest fragmentation. Fragmentation induces physical effects such as edge effects, leading to changes in species composition and structure, and isolation, leading to a loss of connectivity. This in turn causes extinction of species and gene pool narrowing. Many tropical fauna require large territories for their survival. Depending on the position of forest fragments within the landscape mosaic, migration of fauna between patches can be reduced and/or entirely interrupted.

Over the past 5 to 10 years, the traditional concept of restoration has been updated by international NGOs such as The World Conservation Union (IUCN) and The World Wildlife Fund (WWF). At the turn of the millennium, WWF introduced a differentiation within its forestry activities between the three components of "protecting, managing, and restoring". This made it possible to take into account forest degradation in addition to forest loss. Conservationists involved in developing this idea first thought of ways to restore forest ecosystems, logically focusing on plantations of indigenous species. However, approaches such as "Gestion de Terroir" or systemic analysis had already confirmed that sector activities could only be appropriated and successful at the local level if they were integrated at a larger scale, as opposed to taking the commonly used "site approach". In addition to the idea of integrating forest plantations into a broader regional scale and multidisciplinary perspective, IUCN promoters Stewart Maginnis and Bill Jackson also decided to consider the management of secondary forests. On the one hand, secondary forests are increasingly important for local people, especially for the poor; on the other hand, 60% of the remaining secondary forests are fragmented or degraded. The Forest Landscape Restoration (FLR) initiative was created, and, in search of socially acceptable approaches, IUCN and WWF directly integrated the concept of human well-being in the description of FLR, which is defined as "a process that aims to regain ecological integrity and enhance human well-being in deforested or degraded forest landscapes".

"In order to succeed, Forest Landscape Restoration must take a long term vision of forest conservation. It must benefit both people and biodiversity while restoring broader forest functions and processes in the overall landscape. This means involving people rather than excluding them."

Forests for Life.
In: *Forest landscape restoration.*
www.wwf-uk.org/filelibrary/pdf/forest_landscape_rest_04.pdf

Forest landscape restoration. Five working examples from five ecoregions.
www.wwf-uk.org/filelibrary/pdf/forest_landscape_rest_04.pdf

Rehabilitation and restoration of degraded forests.
www.iucn.org/themes/ftp/publications/files/lamb_gilmour.pdf

Terminology and definitions

The term Forest Landscape Restoration (FLR), coined by the promoters of the FLR initiative, is worthy of some reflection. Depending on the view one might take, it bears a risk of misunderstanding with regard to questions such as the following: Is FLR an activity carried out in a forest landscape or does FLR comprise forest restoration activities within a landscape approach?

The Second Expert Meeting on Harmonising Forest-related Definitions for Use by Various Stakeholders.
www.fao.org/documents/show_cdr.asp?url_file=/DOCREP/005/Y4171E/Y4171E00.HTM

The Petrópolis Challenge
www.un.org/esa/forests/pdf/session_documents/unf5/restoration.pdf

Restoring forest landscapes: Forest landscape restoration aims to re-establish ecological integrity and human well-being in the degraded forest landscapes.
www.iucn.org/themes/fgp/publications/files/restoring_forest_landscapes.pdf

- The Second Expert Meeting on Harmonising Forest-related Definitions for Use by Various Stakeholders defined forest restoration as “the process of restoring a forest to its original state before degradation (same functions, same structure, same composition)”.
- With its concept of Forest Landscape Restoration, the FLR partnership has broadened this understanding: “FLR aims to restore ecological integrity and improve the productivity and economic value of degraded land, rather than to re-establish the pristine forests of the past”.
- In this sense, FLR includes important elements of the “forest rehabilitation” concept as defined by FAO: “Forest rehabilitation is the process of restoring the capacity of a forest to provide goods and services again, where the state of the rehabilitated forest is not identical to its state before degradation.”
- According to WWF and IUCN a landscape is considered “a contiguous area, intermediate in size between an ‘ecoregion’ and a ‘site’, with a specific set of ecological, cultural and socio-economic characteristics distinct from its neighbours”.
- A forest landscape, according to Maginnis and Jackson, is considered to be a landscape that is, or once was, dominated by forests and woodlands and which continues to yield forest-related goods and services. Dealing with landscapes with a major forest component requires taking into consideration social, ecological, economic and agricultural factors that influence the forest. FLR deals with landscape at a scale that allows for trade-offs in land-use planning, while taking into account competitiveness and inter-dependencies of different land uses.

The final declaration of the Petrópolis Workshop (about it, see Global Partnership just below) emphasises “... that there is no blueprint for successful FLR and that it provides a gradual, adaptive and responsive approach that starts from the ground up and involves stakeholders. [FLR] is [...] a tool for reaching a wide and diverse range of landscape goals by developing a mosaic of complementary land uses which add up to more than the sum of the components.”

The Global Partnership

The joint strategy of WWF and IUCN entitled "Forests for Life" was one of the starting points of the initiative on FLR. This initiative set off and consolidated a global partnership of international organisations and governmental agencies. Before giving a conclusive definition of "Forest Landscape Restoration", the promoters of the Global Partnership focused on two complementary aspects: field experience and policy dialogue, including an important component of "partnership building". After several regional workshops on FLR, an international workshop held in Petrópolis, Brazil, in April 2005, was the highlight of what is now known as an organisation- and country-led initiative, treated, amongst others, in a Ministerial roundtable of the United Nations Forum on Forests 5 (UNFF 5). The FLR Workshop in Petrópolis gathered more than 100 specialists from over 40 countries, most of them foresters. It was these foresters themselves who felt a need to enter into dialogue with other sectors, broaden the scale, and work in a multidisciplinary way. At the time of the Petrópolis Workshop, the Global Partnership included several international and national research institutes, a number of important international NGOs, and government representatives of eight countries. Currently, while remaining explicitly open to newcomers, the initiative strives to build upon its previous work and tries to gather experience that might be used later at the policy level.

One of the most appealing aspects of the FLR initiative is its capacity to introduce experience with successful approaches into the international debate and thereby help bridge the gaps between the international decision-making system and local realities. Nevertheless, FLR will have to give thorough consideration to the intermediary levels between international policy-makers and villagers: the governmental and the decentralised management levels.

The FLR-related policy dialogue has already revealed some of its potential. Lobbying work is thorough and appears to be gaining an important audience. The fact that "Low Forest Cover Countries" are more strongly represented in the FLR partnership than in other forest-related international discussion forums might give the initiative particular importance and support some of the negotiations on the topic. IUCN and WWF – the main FLR promoters – appear quite eager and are very efficient in promoting the concept. Other organisations might therefore become increasingly tempted and interested to join the partnership.

The promoters of FLR are optimistic and encourage new partners to join the initiative. They plan to convene a second international implementation workshop in four years to take stock of achievements made until then by the corresponding community of practice. Livestock and pasture management, little considered so far, are crucial issues to be included in future, along with other aspects of the role of local people in natural resource management (NRM). To be successful, FLR will often have to apply appropriate tools for managing conflicts over natural resources, as conflicts are expected to arise when planning and implementing FLR-related activities.

Members of the Global Partnership are: ARC, CARE International, CBD, CIFOR, FAO, ICRAF, ITTO, IUCN, PROFOR, UNEP-WCMC, UNFF, WWF-International, The Forestry Commission of Great Britain, The Forestry Research Institute of Ghana and the Governments of El Salvador, Finland, Italy, Japan, Kenya, South Africa, Switzerland and the USA.

Project experiences

Regarding stakeholders and beneficiaries of possible FLR programmes, some questions will have to be answered before embarking on any concrete activities. Who exactly is asking for FLR? Who will be involved in its implementation? Who will benefit from it? Who will finance it, and who will pursue it in the long run?

A series of experiences with projects involving elements of FLR implementation were presented at the Petrópolis Workshop. Two of them, each from a different continent, are briefly described in the boxes below.

Investing in people and nature. Introduction to the demonstration portfolio
www.unep-wcmc.org/forest/restoration/globalpartnership/docs/portfolio.pdf

Tanzania, Shinyanga:

Since 1985 agropastoralists in northern Tanzania have restored 250,000 ha of degraded land

The Shinyanga case illustrates the importance of working with local people. In the past, the state imposed its own solutions, which often failed. The Shinyanga project has involved local people in the entire process of landscape restoration. It has built on local institutions rather than creating new ones. Villages have been encouraged to pass their own by-laws to protect communal ngitilis (enclosures of acacia-miombo woodlands), and traditional village guards monitor activities in the ngitilis. Local involvement has been critical to the success of the project. Landscape restoration has also strongly benefited from the Tanzanian government's push towards decentralisation, which involved the allocation of clear land rights to local communities. Greater security of land tenure has engendered a sense of ownership and responsibility among the Sukuma agropastoralists, whose large herds of cattle now co-exist in a healthier environment.

Investing in people and nature. Introduction to the demonstration portfolio
www.unep-wcmc.org/forest/restoration/globalpartnership/docs/portfolio.pdf

Nepal, Mid Hills

From degradation to restoration – an assessment of the enabling conditions for community forestry

Forest degradation in the past was essentially the outcome of non-consultative policy-making, inappropriate policies and institutional arrangements, and a controlling legal framework. Lessons learnt during 25 years of community forestry in Nepal show that the trend of forest degradation can be reversed by involving local communities and using appropriate policy and legal frameworks with legitimate decentralized institutional arrangements developed over time through inclusive consultative processes. The considerable collective effort to establish good forest governance systems at the local level was able to substantially reduce forest degradation and even improve both forest conditions and the interface between forest and agriculture, leading to effective Forest Landscape Restoration. This brought about positive changes in the productive capacity of forests, an increased availability of timber and non-timber forest products, improvement of agricultural productivity, and supplementary income to local communities.

www.intercooperation.ch/offers/download/flr-nepal-community-forestry.pdf/view

Crucial issues of FLR implementation

The examples described above and a series of other case studies presented during the Petrópolis Workshop illustrate the diversity of conditions in which FLR has occurred, the variety of approaches and methods used, as well as the broad range of different instruments applied. In spite of all this diversity, three main conclusions can be drawn with regard to the implementation of FLR programmes:

- Experience from projects, particularly in community forestry in Asia, show that in most cases it is essential that local communities are placed in the centre of attention, i.e. considered as the main actors and involved in decision-making processes.
- Important issues to consider when implementing FLR will most probably be: land tenure, incentives, access to resources and to management rights, natural vs. exotic species, and appropriate monitoring and evaluation instruments. Enabling conditions are always strongly policy-related. Sometimes they may have to be simple set-ups which strongly facilitate decision-making and implementation processes.
- Economic push and pull mechanisms are needed to launch a policy dialogue, involving both government representatives and the poorest. Participants at the Petrópolis Workshop were optimistic with regard to new markets and possibilities of involving the private sector.

Site selection for FLR: some criteria

Along with ecological criteria such as biodiversity richness and the extent of fragmentation and degradation, Lamb and Gilmour recommend selecting FLR target zones according to topographic criteria. They regard the following landscape types as particularly appropriate for FLR: riparian and steep areas, saline or water-logged areas, mining sites, habitats of particular species, buffer zones around protected areas, corridors between protected areas and forest fragments, buffer strips within and around plantations, and over-logged or secondary regrowth forests and other degraded areas (e.g. abandoned agricultural lands, sites with infertile soils).

IUCN and WWF suggested adding the following criteria for selecting sites with a high potential for restoration:

Social criteria:

- Institutional compatibility with existing arrangements
- Social stability
- Local support, especially "champions"

Economic criteria:

- The amount of transaction costs
- The increase or decrease of government revenues
- Protecting existing and planned infrastructure

Rehabilitation and restoration of degraded forests.

www.iucn.org/themes/ncp/publications/files/lamb_gilmour.pdf

More detailed selection tools are being developed in several countries, for example in Madagascar. Geographical vegetation analysis with regard to conservation aspects and other spatial criteria are applied. Social, economic and political information is superimposed with biological models to support decision-making processes. Other computer-based tools are used for making more complex operational decisions, e.g. on where to reforest. Further recent examples include the development of computer models to explore trade-offs in forest restoration negotiation at the University of Queensland (Australia), as well as the development of a web-based interface as a planning tool by Chinese researchers, based on the theory and method of restoration ecology.

Links and similarities to existing approaches

There are several approaches similar to FLR, e.g. the Ecosystem Approach, the Sustainable Livelihoods Approach (SLA), "Gestion de Terroir", and others. Throughout the entire range of these various approaches, local participation, bottom-up mechanisms, multidisciplinary and holistic approaches, more pragmatic approaches (such as taking into account negotiation processes and iterative decision-making), and finally scaling-up of success stories have proved to be some of the most important processes leading to greater success in rural development and conservation.

The more important of the approaches resembling FLR are described below, including a brief overview on similarities. Finally, specific features of FLR are discussed that may be linked to them.

People-centred approaches. A brief literature review and comparison of types.
<ftp://ftp.fao.org/docrep/fao/006/ad682e/ad682e00.pdf>

- **Farming Systems, "Gestion de Terroir"**: participatory and holistic approaches
In the 1970s, researchers tried to overcome discrepancies between results from research stations and field reality by using the emerging method of farming systems analyses. Influenced by systemic methods coming from the technical sciences, this method provided an opportunity to include social, human and financial elements in the investigations along with NRM-issues, and to model the findings. In Sahelian West Africa, "terroir" is defined as a socially and geographically defined space within which communities' resources and associated rights are located in order to satisfy their needs. Although they now no longer form part of the development mainstream, it was the "terroir" and farming systems approaches who first introduced multidisciplinary and community-driven development into the rural development methodology.
- **Sustainable Livelihoods Approach**: people-centred approach
Developed in the UK in the late 1990s, the SLA places people and their existing strengths and weaknesses in the centre of attention. Practical experience with this approach is currently still limited, but the analyses of development problems are broad enough for the "real" complexity of the situation to be addressed. Weaknesses found in this approach include failures to deal with markets and economy, as well as with politics and rights.

- **Ecosystem Approach:** an attempt to improve integration of social processes and trade-offs

The Ecosystem Approach is the primary framework for action under the UN Convention on Biological Diversity. It comprises a series of principles that have been clustered into a logical sequence of steps to facilitate implementation: discussion, planning, and first actions. The idea of the first step resembles the “terroir” approach and consists of identifying the main stakeholders and their relationship with a given ecosystem area. Subsequent steps incorporate specific economic issues, as well as spatial (between ecosystems) and time-related concerns (adaptive management).

The ecosystem approach. Five steps to implementation.

- **Integrated Natural Resource Management (INRM):** multi-scale approach and decision-making processes as central elements

Coming from scientific circles, the INRM “package” is tailored to research and management activities. It combines several elements: 1. an objective: “improved adaptive capacity”; 2. approaches to implementation (learning, action research and negotiation); 3. key principles and crucial tools (e.g. simulation modelling and a decision support system). Ultimately, little distinction is made between management and research, as considerable attention is directed at helping the farmers to achieve skills and acquire technologies that will enable them to better control their own destiny. While clear articulation of existing problems, plausible solutions, and potential tangible benefits must still be the basis of all research involvement, defining a set of key processes and components can contribute to achieving sustainable production. The steps described as parts of adaptive management cycles resemble those given in the ecosystem approach: 1. definition of a subsystem, 2. reflection and negotiation, 3. action, and 4. evaluation, readjustment and adaptation.

Integrated natural resource management – Linking productivity, the environment and development.

- **Forest Landscape Restoration (FLR):** conservation and sustainable use of natural products and services (forest functions) embedded in processes of local development and international policy

FLR promoters want to build upon achievements made with other approaches (see above) and suggest that an adequate combination of existing tools be used. In this sense, FLR represents a kind of analysis framework. At its origins, FLR is seemingly rather conservation-oriented. However, the landscape level provides an opportunity to link conservation to development issues. It is still difficult to predict whether FLR will be able to overcome the common failures of past approaches. FLR addresses at least three of them: the issue of scaling-up, based on the intention of tackling the transition from site-level to landscape-level findings; the issue of micro-macro policy linkages, given that FLR is already a policy-dialogue process and, at the same time, gathers field experience; and finally, the idea of pragmatism in restoration activities which demands that functions be restored and insists on awareness of the fact that complete restoration as well as the use of original species is often not realistic.

Table 1: Comparison of FLR and similar approaches according to main criteria

	Farming Systems	Sustainable Livelihoods Approach	Ecosystem Approach	INRM	FLR
Origin	Development	Development	Conservation	Research	Conservation
Goal	Participatory development	Poverty reduction	Biodiversity conservation and sustainable development	Sustainable development and productivity improvement	Biodiversity conservation in mosaic landscapes
Particular components	Participation and holistic consideration of systems	Livelihoods	Process-oriented conservation	Process-orientation and relation between science and policy	Forestry and process-orientation; relation between field expertise and policy-level
Level of intervention	Local	Local	On- and off-site impacts considered	Scaling-up fully integrated	Scaling-up integrated, focus on site-landscape interactions
Past or current main users	French speaking Africa (past)	English speaking developers	CBD-related project managers	Researchers, project managers, farmers	Foresters
Status of implementation	Past	Current effective start	Slow start	Recent start	Valorisation of experiences, recent start of FLR-driven projects

The way forward

The great advantage of FLR is its Global Partnership's capacity to bring experience from successful projects into international debates and to help bridge gaps between the international decision-making system and local field realities. FLR is neither a bottom-up nor a top-down approach and is considered to work in both directions. Nevertheless, its promoters will have to give careful consideration to the intermediate levels between international policy-makers and villagers, i.e. the governmental and decentralised management levels. A relative advantage of FLR as compared to entirely "holistic" approaches might be that it attempts to overcome the problem of the "starting point" in rural development by having chosen as its entry point an issue that is vital to potential improvement of livelihoods: the restoration of lost or degraded forest functions. However, only time will show in which contexts FLR can be successfully used alone and under which circumstances it will be used rather as a secondary component of integrated development planning.

The attempt to cover a very broad range of forest-related activities under the FLR concept might imply a certain risk of dilution and a loss in clarity. Decision-makers and development workers may wonder whether FLR can really contribute something new or whether it is a concoction of previously known and tested ideas, methodologies, instruments and approaches rebottled and sold under the new brand name of "FLR".

It will be crucial for FLR initiatives to include the private sector and market mechanisms. The latter are currently much debated, especially the emerging mechanisms of environmental services valuation. However, even if it seems increasingly evident that valuating these services could enhance livelihoods and that forestry needs to take into account this multifunctionality, it is still difficult to anticipate the future spatial coverage of this type of new economic incentives.

FLR will probably also have to address the issues of public rights over forest resources and their administration (policy and governance issues), as well as access to resources (decentralisation / devolution, role of local elites, conflict resolution). The role of the public forestry sector, in particular, needs to be analysed both in relation to law enforcement and with a view to the identification of technical solutions, even if technologies are currently perceived as less crucial to successful change than policies.

In the long run, FLR has the potential to become a sound and promising concept, provided that it develops clear focal points and offers explicit approaches and tools that can be adapted to diverse circumstances and frame conditions. This will enable stakeholders at different levels to properly understand FLR, contribute to its implementation, and participate actively in trade-offs to be obtained. As stated in the final conclusions of the Petrópolis Workshop: "Experience has shown that successful landscape restoration starts from the ground up, with the people who live in the landscape and stakeholders directly affected by the management of the landscape. There is no blueprint for successful forest landscape restoration, since each situation will develop from local circumstances."

Recommended reading

The following list features a documented and targeted selection of print documents and internet sites of relevance to "Forest Landscape Restoration (FLR)". For easier reading they have been listed by title in alphabetic order and characterized according to four rubrics.



Overview and general context



Policies and strategies



Methods and instruments



Case studies

Many documents are available online and can be downloaded (accessed on 5 July 2005). The others are part of InfoResources' documentation. For more information on this issue and the publications, please contact us by e-mail at: info@inforesources.ch

G. Shepherd



The ecosystem approach. Five steps to implementation. Ecosystem management series No. 3. IUCN

2004, 30 p.

The ecosystem approach can be defined as a strategy for integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. The author refers to 12 starting principles, which are then organised in five steps for implementation. Each step is illustrated by a case study and related to the corresponding basic principles. Identification of the stakeholders and a clear definition of the ecosystem area including its structure and function are prerequisites to any implementation. The booklet provides useful guidance on how to apply the ecosystem approach when planning field activities.

IUCN, PROFOR, World Bank




Ecosystem approaches and sustainable forest management: A discussion paper for the UNFF Secretariat

2004, 14 p. www.iucn.org/info_and_news/press/UNFF%204_final_SFM_EsA.pdf

This paper tries to establish a parallel between sustainable forest management (SFM), a concept promoted by foresters which covers various approaches to forest management that have very broad social, economical and environmental goals, and the ecosystem approach, a concept for managing entire ecological units in an integrated and holistic way.

There is indeed a general trend towards better integration of social concerns in natural resource management, and with regard to forests more integrated and holistic management systems are needed. SFM and the ecosystem approach are evolving in response to these new trends. The paper features a table explaining the differences between the two approaches, and continues the debate on the relation between them with the aim of improving the organisation of sustainable forest conservation and management.

WWF International**Forest landscape restoration. Five working examples from five ecoregions** **2002, 24 p. www.wwf-uk.org/filelibrary/pdf/forest_landscape_rest_04.pdf**

Restoration of natural forests on the Bulgarian Danube islands, an important habitat for many bird species; balancing the needs of the panda and those of local communities in China; and working with landowners, scientists and local authorities to ensure the survival of the New Caledonian tropical dry forest are some examples of Forest Landscape Restoration (FLR) at an ecoregion scale. The key is to identify appropriate interventions that will result in a sustainable landscape providing increased benefits to more people, while promoting biodiversity.

Edmund Barrow... et al.**Forest landscape restoration: Building assets for people and nature, experience from East Africa** **2002, IUCN, 29 p. www.iucn.org/themes/fcp/publications/files/flr_east_africa.pdf**


Case studies presented at the International Expert Meeting on Forest Landscape Restoration in 2002 in Costa Rica form the basis of this publication. In East Africa, the key terms of ecological integrity and human well-being, related to livelihood security and forest conservation, represent the main issues to be promoted through FLR. The publication also contains an FLR timeline of the past ten years and a summary for decision-makers.

Forest Restoration Information Service (FRIS) **www.unep-wcmc.org/forest/restoration**

On its website, the Forest Restoration Information Service (FRIS) provides definitions of concepts related to Forest Restoration, describes them, and presents projects and case studies, as well as maps and datasets. Furthermore, it offers examples of decision support tools for Forest Restoration. The site is a joint project of a range of NGOs, DFID, and the UNEP-World Conservation Monitoring Centre (WCMC).

Jeffrey Sayer, Stewart Maginnis (eds)**Forests in landscapes: Ecosystem approaches to sustainability**  **Announced September 2005, Earthscan, 248 p.**

Forests should be managed as a part of the broader social-ecological systems in which they exist. This book, planned for publication in September 2005, will take forest management forward using ecosystem approaches. Through examples of best practices, the participating authors will examine key issues with regard to institutional structures: forest ownership, legal frameworks, governmental structures and institutions, joint / community management, subsidies for ecosystem approaches, and criteria and indicators for codifying forest practices at all levels. The concluding chapter will make recommendations on how policy-makers and foresters can move forward using ecological approaches to sustainable forest management.

PROFOR**Incentivos económicos para el manejo forestal sostenible (MFS) y la restauración del paisaje** **Marzo 2004, 8 p. www.profor.info/pdf/PESFinalSpanish.pdf**

In January 2004, a 3-day workshop in Bogotá gathered government authorities, international organisations and NGOs to exchange experience regarding the promotion of sustainable management and restoration of forests in Columbia and elsewhere in Latin America. One of the major concerns is that in tropical areas, plantations compete with natural forests, reducing the value of the latter and increasing the slide towards their use for agriculture. In this sense, FLR is interested in restoring forest functions with a view to generating goods and services to which a money value could be assigned and for which there is a societal need.



B.M. Campbell, J.A. Sayer

Integrated natural resource management – Linking productivity, the environment and development

2003, CAB International and CIFOR, 320 p.

While the approaches of the development sector have evolved, the natural resources (NR) research community has only recently begun to concentrate on the basic orientations of research in the field of NR. This book shows clearly how modern research has evolved, concentrating increasingly on social and political factors to complement technical aspects in a clear and pragmatic manner. A recommended read for researchers who would like their results to influence socio-political processes.

WWF



Integrating forest protection, management and restoration at a landscape scale

2003, WWF Forests for Life Programme, 20 p. www.equilibriumconsultants.com/publications/docs/pmrandthelandscapeapproach.pdf

This document constitutes a very useful synthesis of how to integrate the various aspects of protected areas, good forest management and FLR in a coherent approach at the landscape level. This integrated approach considers the main question emerging during the transition from site-based to regional conservation: "What is better for biodiversity: few large areas under strict protection surrounded by generally incompatible land-uses or smaller protected areas embedded in a sea of supportive land uses?" The answer varies from case to case. Many useful figures illustrate the various phases of this integrated approach.

Global Partnership on Forest Landscape Restoration



Investing in people and nature. Introduction to the demonstration portfolio

2005, 16 p. www.unep-wcmc.org/forest/restoration/globalpartnership/docs/portfolio.pdf

The Global Partnership on Forest Landscape Restoration is led by WWF, IUCN, and the Forestry Commission of Great Britain. FLR seeks to strengthen the relationship between rural development, forestry, and other natural resource management and conservation approaches. The approach tries to involve the different forest stakeholders by using the right blend of approaches at the right scale, with a view to delivering the forest goods and services that people and societies need. The paper presents different examples of FLR (Shinyanga in Tanzania, Sabah in Malaysia, Popenguine in Senegal, Middle Hills in Nepal, Kielder Forest in the United Kingdom, and Chiapas in Mexico).

Andrew F. Bennett



Linkages in the landscape: The role of corridors and connectivity in wildlife conservation

1999, IUCN, 254 p.

In the mid 1990s, the wildlife ecologist Andrew Bennett was asked by IUCN to review available knowledge on the theme of corridors, the connectivity of landscapes, and nature conservation. Even though the book is relatively old and often describes experiences made in developed countries, it contributes substantially to the given subject by providing theoretical a basis for FLR and describing the practical measures that were being implemented a little less than a decade ago.

CIFOR**Managing landscape mosaics for sustainable livelihoods****2004, 8 p. www.cifor.cgiar.org/publications/pdf_files/research/livelihood/managing.pdf**

This paper, prepared by CIFOR, covers two sub-themes: enhancing conservation and development outcomes. How can a win-win situation be achieved between conservation and development? The authors suggest to do so by promoting the concept of payment for environmental services PES and by combining livelihood approaches and landscape analysis.

For both sub-themes, the publication presents major projects in 2005, expected results, partners and users, and milestones for 2005.

**D. Clearly... et al.****People-centred approaches. A brief literature review and comparison of types****2003, FAO – Livelihoods support programme. LSP Working paper 5, 74 p. <ftp://ftp.fao.org/docrep/fao/006/AD682E/AD682E00.pdf>**

The document of the Livelihood Support Programme provides the results of a comparative study of different approaches used in varying situations worldwide. The study bases on existing literature and is addressed to people whose objective is poverty reduction. Starting with the "gestion de terroir" approach, predominantly used in francophone Africa, it moves on to consider the farming systems approach, which is applied in a number of socio-cultural contexts; it then looks at livelihood systems and finally considers different orientations which have emerged in Latin America, such as integrated rural development and land legislation. The included bibliography of electronic documents available on the web is of particular interest as well.

**The Petrópolis Challenge****2005, 4 p., Petrópolis Workshop, Brazil. www.un.org/esa/forests/pdf/session_documents/unff5/restoration.pdf**

As an output of the international workshop in Petrópolis, this document calls on the international community to restore forest landscapes to the benefit of people and nature, and to contribute to reversing trends of forest loss and degradation. The Petrópolis Challenge was presented to the United Nations Forum on Forests (UNFF5) in New York in May 2005.

**David Lamb and Don Gilmour****Rehabilitation and restoration of degraded forests****2003, IUCN, 110 p. www.iucn.org/themes/fcp/publications/files/lamb_gilmour.pdf**

Written by an Australian researcher and the former Head of the IUCN forest conservation programme, this book focuses on FLR, an emerging topic in international policy dialogue. To date, it is the best reference for persons who aim to better understand the initiative's theoretical basis, and particularly the distinction between site and landscape. For interested practitioners, it can serve as a guide for integrating the issue of restoration in reflections on rural land planning.

**Dominic Blay... et al.****Rehabilitation of degraded lands in sub-Saharan Africa: Lessons learned from selected case studies****2004, IUFRO, 101 p. www.etfrn.org/etfrn/workshop/degradedlands/**

The major requirements for a project for restoration of degraded lands are: simple and low cost methods, a sound understanding of local knowledge and practices, and that local communities perceive the project as a means for promoting income generation. Even if the technologies for rehabilitation of degraded land, such as tree plantations, agroforestry, and soil and water conservation are known, a project cannot achieve its objectives unless activities are undertaken also at the levels of policy, management, research and training.



S. Maginnis and W. Jackson



Restoring forest landscapes: Forest landscape restoration aims to re-establish ecological integrity and human well-being in the degraded forest landscapes

2005, 6 p., IUCN www.iucn.org/themes/fcp/publications/files/restoring_forest_landscapes.pdf

When forests are regarded purely in terms of conservation or production, the vital role they play in people's livelihoods goes unconsidered. IUCN, the WWF, other international agencies and various governments have promoted the FLR approach in order to meet the challenge of restoring goods and services and ecological processes in modified and degraded landscapes. These landscapes are estimated to cover about 830 millions ha of tropical and sub-tropical forests, and reliable estimates indicate that approximately 500 million people depend on them to sustain their livelihoods. Forest degradation and deforestation have serious adverse effects on agricultural production, supply of firewood and timber, biological diversity, downstream water regimes, erosion, and other processes. A comprehensive approach to restoration, covering both the quality and the quantity of tree cover, enhancing ecological conditions and bringing tangible benefits to local people is therefore needed.

FAO



Second expert meeting on harmonizing forest-related definitions for use by various stakeholders

2002. www.fao.org/documents/show_cdr.asp?url_file=/DOCREP/005/Y4171E/Y4171E00.HTM

The objectives of the meeting were to recommend options for harmonizing forest-related definitions, make proposals for the implementation of these options, and agree upon future agenda. A common understanding of core terms used in different international processes and instruments will reduce errors in communication and the use of terms. Harmonisation can improve comparability, compatibility, linkages and hierarchies between terms, along with documenting differences.

IUCN, Intercooperation, CIFOR



Tropical forest landscape restoration resource kit

2004, CD-ROM

This CD-ROM contains the outcomes of six workshops held by ITTO to present the guidelines for restoration, management and rehabilitation of degraded and secondary forests. The guidelines are intended to fill a knowledge gap in degraded forest restoration and land rehabilitation and meant to be of use in policy- and decision-making, for the national forestry programme, and for establishing action plans.

InfoResources Focus provides a general overview of pertinent and topical subjects to guide one through the information jungle. Each issue focuses on a current theme relative to forests, agriculture, natural resources and the environment, in the context of international development cooperation.

Each theme is viewed from several angles:

- Policies and strategies
- Implementation and practical experiences

The first section of InfoResources Focus proposes a brief introduction to each subject, highlights specific problems, compares theoretical approaches and opinions, and reports past experiences.

The second section presents a selective and commented choice of documents, books, CD ROMs and Internet sites. The range of documents presented reaches from basic introductions, through instruments, methods and case studies, to conceptual texts.

The following back issues of InfoResources Focus can be ordered from the address given on page 2 or downloaded from : www.inforesources.ch.

Focus No 1/03: Integrated Water Resources Management (IWRM)

Focus No 1/04: Global Agriculture: How much liberalisation is needed?

Focus No 2/04: Climate change and forest based livelihoods

Focus No 3/04: Compensation for Ecosystems Services (CES)

Focus No 1/05: Rural Development through Public-Private Partnerships (PPPs)?