LAND DEGRADATION FOCAL AREA STRATEGY AND STRATEGIC PROGRAMMING FOR GEF-4

I. INTRODUCTION

1. This brochure presents the Land Degradation focal area strategy and strategic programming for GEF-4 (2007 – 2010), approved by the GEF Council in September 2007.

2. At the replenishment of the GEF Trust Fund in 2006, the GEF Council requested the GEF Secretariat to review and revise as necessary the strategies for the six focal areas of the GEF, taking into account issues such as sustainable forest management and sound chemicals management.[1]

3. In December 2006, the CEO presented to the Council a plan to increase the efficiency and impact of the GEF. A central element of this reform package is to move away from the previous single project interventions towards a more programmatic focus for the GEF. The purpose is two-fold: a) to focus the limited funding resources of GEF-4 on a set of priority issues of global environmental concern; and b) to link projects together to achieve stronger impacts.

4. The strategy for Land Degradation presented here is the result of a consultative process involving external advisory groups and contributions from the GEF Council Members, Convention secretariats, GEF agencies, the Scientific and Technical Advisory Panel (STAP) and other GEF partners.[2]

5. The strategy builds on previous GEF achievements and experience within Land Degradation. The goal of this focal area is to arrest and reverse current trends in land degradation affecting not only peoples' livelihoods but also the resilience of ecosystems. This will be accomplished through policies and practices conducive to SLM that, simultaneously, generate global environmental benefits while supporting local and national, social, and economic development.

6. As a step towards a more programmatic approach, strategic programs have been developed in support of the long term objectives. These strategic programs define the GEF's focus during GEF-4. The strategic programs have been selected and defined in view of their importance, urgency and cost-effectiveness from a global environment perspective. Priorities identified by countries, as well as overall guidance from the multilateral environmental agreements and conventions have also been taken into consideration. The strategic programs provide an intermediate link between the project level and the long term objectives of the GEF within the focal areas. Three strategic programs will support the achievement of the focal area objectives and its goal: (a) sustainable agriculture and rangeland management, (b) sustainable

[1] GEF/R.4/32, Policy recommendations for the Fourth Replenishment of the GEF Trust Fund
[2] Working documents and comments received from GEF partners are accessible at the GEF website www.thegef.org under GEF policies.

forest management in production landscapes and (c) investing in innovative approaches in SLM to advance the GEF knowledge base on SLM for future investments.

7. The long term objectives and strategic programs that are redefined for every replenishment period replace the previous structure of operational programs and strategic priorities. The new structure, summarized for the Land Degradation Focal Area in the table below, balances continuity and flexibility and supports the emphasis on results.

Table 1: Long term objectives and strategic programs for Land Degradation in GEF-4

Long-term Objectives	**Strategic Programs for GEF-4**
1: To develop an enabling environment that will place Sustainable Land Management (SLM) in the mainstream of development policy and practices at the regional, national, and local levels **2:** To upscale SLM investments that generate mutual benefits for the global environment and local livelihoods	1. Supporting sustainable agriculture and rangeland management 2. Supporting sustainable forest management in production landscapes 3. Investing in innovative approaches in SLM

8. The focal area strategy is aligned with the Results Based Management (RBM) Framework for the GEF, in order to direct the strategies towards tangible global environmental benefits and to enable adequate reporting on the implementation of the strategies. Long-term expected *impacts* on the global environment are assigned to each of the objectives, and intermediate expected *outcomes* are assigned to each of the strategic programs. The projects are thus expected to support the achievement of the impacts and outcomes identified at the programmatic level.

9. Provisional indicators have been identified for each expected impact and for each expected outcome. These indicators will allow a systematic monitoring of the actual achievement of the expected impacts and outcomes. The indicators will be further developed in connection with the Results Based Management for the GEF.

10. The strategy for Land Degradation presented here seeks to guide project proponents in countries and in GEF agencies and other GEF partners in preparing and reviewing project proposals for GEF-4. The GEF Secretariat will initiate the development of long term objectives and strategic programs for GEF-5 in 2008 with a view to presenting proposed strategic programming for GEF-5 to the GEF Council at its first meeting in 2009.

I. BACKGROUND

1. Land degradation damages ecosystem functions and services, thereby risking livelihoods, economies and societies. It is a global environment and development issue.[3] The purpose of the GEF focal area on Land Degradation is to foster system-wide change to control the increasing severity and extent of land degradation in order to derive global environmental benefits. Its tool is Sustainable Land Management (SLM)[4] . Investing in SLM to control and prevent land degradation in the wider landscape is an essential and cost-effective way to deliver other global environmental benefits, such as maintenance of biodiversity, mitigation of climate change, and protection of international waters.[5]

2. For the fourth replenishment of the GEF, $300 million has been allocated to this focal area. These resources cannot meet the costs of prevention, control, and reversal of land degradation in all affected areas. Therefore, the strategy is to allocate the available resources in the most cost-effective way in order to prevent and control land degradation as recommended by the Millennium Ecosystem Assessment.[6] It will not focus on rehabilitation of already-degraded lands or in the development of control technologies. The landscape approach, which embraces ecosystem principles, will be used to address processes that provide people with ecosystem goods and services at the local and up to global scales of operation. Priority will be given to areas: a) severely affected by land degradation but which have potential for the creation of and enabling environment for SLM; and b) showing promising improvements that can be spread to neighbouring areas and other communities.

3. The strategy accords with the Millennium Development Goals[7], especially poverty reduction and environmental sustainability, and with the UN Convention to Combat Desertification[8] (UNCCD) and the UN Forum on Forests[9] (UNFF).

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[3] See 'The Global Impact of Land Degradation', a study commissioned by the Scientific and Technical Advisory Panel of the GEF.

[4] SLM is defined as the use of land resources (e.g., soils, forests, rangelands, water, animals, and plants) for the production of goods to meet human needs while assuring the long-term productive potential. SLM is the foundation of sustainable agriculture and land use, and a strategic component of sustainable development and poverty alleviation. It addresses the often conflicting objectives of intensified economic and social development, while maintaining and enhancing ecological and global life support functions of land resources. Practicing SLM principles is one of the few options for land users to increase income without destroying the quality of the land as a basis of production. (Source: Adapted from World Bank *Guidelines for Impact Monitoring* http://wbln0018.worldbank.org/essd/susint.nsf/Image+Catalog/slm.pdf/$File/slm.pdf)

[5] See "Land Degradation as a Global Environmental Issue: A Synthesis of Three Studies Commissioned by the Global Environment Facility to Strengthen the Knowledge Base to Support the Land Degradation Focal Area." Scientific and Technical Advisory Panel of the GEF, 15 November 2006. GEF Council GEF/C.30/Inf8.

[6] See "Ecosystems and Human Well-being: Synthesis., Millennium Ecosystem Assessment, 2005 http://www.millenniumassessment.org/documents/document.356.aspx.pdf

[7] http://www.un.org/millenniumgoals

[8] The Convention seeks "long-term integrated strategies that focus simultaneously, in affected areas, on improved productivity of land, and the rehabilitation, conservation, and sustainable management of land and water resources, leading to improved living conditions, in particular at the community level." Article 2, Objective 2 of the UNCCD http://www.unccd.int/convention/text/convention.php?annexNo=-1

II. FOCAL AREA GOAL

4. The goal of the GEF Focal Area in Land Degradation (Desertification and Deforestation) is to arrest and reverse current trends in land degradation. This will be accomplished through policies and practices conducive to SLM that, simultaneously, generate global environmental benefits while supporting local and national, social, and economic development. Actions will contribute to national programs in the field of natural resources management, including sustainable forest management[10], adaptation to climate change and integrated chemicals management that cut across disciplines and sectors to bring mutual benefits to the global environment and local livelihoods. This will ensure sustainability, replicability, and harmony with national development goals.

[9] The UNFF has six principal functions, including the strengthening of "political commitment to the management, conservation and sustainable development of all types of forests." http://www.un.org/esa/forests/about.html

[10] Sustainable Forest Management (SFM) investments are included here under SLM – see http://www.fao.org/forestry/site/sfm/en/ for the main themes included under SFM.

III. STRATEGIC OBJECTIVES

Table 1: Land Degradation Focal Area Strategic Objectives

Strategic Objectives	Expected Impact	Impact Indicators[11]	Sources of Verification
Strategic Objective One: An enabling environment will place SLM in the main stream of development policy and practice at regional, national, and local levels **Strategic Objective Two:** Mutual benefits for the global environment and local livelihoods through catalyzing SLM investments for large-scale impact	Overall decrease in trend and/or severity of land degradation	% Increase in Net Primary Productivity (NPP)[12] and Rain-use Efficiency (RUE)	GLADA[13] and LUCC[14] mapping; CRIC reports; National GHG inventories
	Protected ecosystem functions and processes, including carbon stocks in the soil, plants, and biota, and fresh water	% Increase in carbon stocks (soil and plant biomass) and/or % availability of fresh water	Carbon facilities, remote sensing for Normalized Difference Vegetation Index (NDVI)
	A decrease in the vulnerability of local populations to the impacts of climate change	% decrease in mortality rates consequent upon crop failures and livestock deaths	National surveys and statistics
	Improved livelihoods of rural (usually resource-poor) land users	% decrease in number of rural households below the poverty line	National economic statistics; development reports
	Diversified funding sources for SLM	% increase in diversity of funding sources (e.g., private sector, CDM)	National economic statistics; development reports

5. The two Strategic Objectives of the land degradation focal area seek to build a policy and institutional environment conducive to prevention and control of land degradation and effective actions on the ground. Objective-level indicators identify the expected fundamental impacts and benefits intended.

IV. STRATEGIC FOCUS IN GEF-4

In GEF-3, interventions in the Land Degradation focal area focused on targeted capacity development and the implementation of innovative and indigenous sustainable land management practices. These priorities resulted in a diverse portfolio of proposals experimenting, for example, with programmatic partnership approaches or market-based financing mechanisms (e.g. payment for environmental services). Apart from their technical soundness, proposals were

[11] The listed indictors will be further developed during the implementation of the Medium Size Project (MSP) "Ensuring Impacts from SLM – Development of a Global Indicator System."

[12] Net primary productivity (NPP) is chosen as a proxy for ecosystem function. It directly reflects productivity improvements from SLM investments and its baseline is well-established by 30 years of compatible measurements by satellite remote sensing.

[13] Global Land Degradation Assessment for Drylands; part of the GEF-funded, FAO-UNEP LADA project - http://lada.virtualcentre.org/pagedisplay/display.asp

[14] Land Use and Land Cover Change project http://www.geo.ucl.ac.be/LUCC/lucc.html

evaluated against their fit with the priorities outlined in National Action Programs (NAPs), Regional Action Programs (RAPs), and Sub-Regional Action Programs (SRAPs) when appropriate. An analysis of the GEF-3 portfolio resulted in the recommendation for GEF-4 to narrow the scope of interventions, in particular using the results of the Millennium Ecosystem Assessment, and the Desertification Synthesis.

6. The GEF-4 priority areas will address the three major direct drivers for terrestrial ecosystem degradation identified by the Millennium Ecosystem Assessment: land use change, natural resources consumption, and climate change. All project proposals will incorporate the effect of climate change as an integral part of measures for SLM.

Strategic Objective One: To Develop an Enabling Environment That Will Place Sustainable Land Management in the Mainstream of Development Policy and Practices at Regional, National, and Local Levels

7. Natural resource management issues involving land use are currently dealt with piecemeal. Sectoral policies and regulatory frameworks are not harmonised, so there is no clarity in over-arching goals and no secure financing for SLM. Land degradation is widespread and severe in countries where environmental issues are not in the main stream of development policy and practice, and which lack sufficient institutional capacity. The issues of poverty and disease affecting well-being are not only the result of human-induced land degradation, they are also the drivers for further degradation. Policy reform is a priority.

8. This Strategic Objective addresses the enabling environment for landscape approaches that include ecosystem principles to the management of natural resources and seeks to build institutional capacity for integrated management in the wider landscape. Both are prerequisites for effective interventions to prevent and control land degradation.

9. The scope of the Strategic Objective is to promote policy reform and build SLM competence and capacity in countries where the drivers of land degradation are potent, and the people most affected are poor and vulnerable.

10. Expected outcomes include:

(a) SLM is fully supported by policy, regulatory and planning frameworks (e.g., institutional policies and programs, land tenure and water rights, and other incentives)

(b) Institutions have the capacity to support SLM at local, sub-national, and national levels. Regional and transboundary institutions have the capacity to address and promote the management of transboundary resources (e.g., training, educational, monitoring, and research capacities are enhanced and extended to encompass ecosystem and other integrated approaches)

(c) Access to sustainable financing for SLM is facilitated (e.g., viable financing plans through national sector budgets, payments for environmental services, and access to small credit schemes)

11. Countries are prioritized according to need, identified through analysis of the drivers and impacts of land degradation – such as existing kinds and patterns of degradation, land use, poverty and well-being, and vulnerability to climate change (see map annex for geographical setting of key indicators). A pre-condition is the existence of institutions with national and regional mandates in land resources management, including provision of services such as training and research. GEF investment seeks to enable these institutions to fulfil their mandates by placing SLM and SFM in the main stream of public policy and by capacity building.

Strategic Objective Two: To Upscale Sustainable Land Management Investments that Generate Mutual Benefits for the Global Environment and Local Livelihoods

12. This Strategic Objective prioritises those areas where investment in SLM will be most cost-effective in terms of mutual benefits for the global environment and local livelihoods. The most cost-effective investment is in replicating proven initiatives that are ready to be taken up widely and where tangible benefits to local livelihoods will ensure that the initiatives are sustainable. This is in accord with guidance from the relevant Convention[15] and other forums, as well as with current scientific understanding of benefits achievable through integrated approaches. Synergies with other focal area objectives are also encouraged, including: adaptation to climate change, biodiversity conservation in production landscapes, and reductions in pollution and sedimentation of international water bodies.

13. The scope encompasses actions of mutual benefit to the global environment and local people through adoption of best practices for the control and prevention of land degradation, and the measurable improvement in the delivery of ecosystem goods and services.

14. Expected outcomes include:

(a) Systematic large-scale application and dissemination of sustainable, community-based farming and forest management systems

(b) Communities benefit from applying and disseminating SLM practices

(c) Sustainable financing achieved for integrated approaches to SLM

15. An enabling environment for SLM at the local and/or national level is a prerequisite. Key institutions and policies should be in place, or in hand, to handle integrated approaches to land resources management. Also, positive results of past or ongoing demonstrations and pilot testing

[15] UNCCD Bonn Declaration: This emphasizes the role of projects combating land degradation as "important instruments to promote sustainable development with a clear focus on the reduction of poverty and on the long-term protection of ecosystems in affected countries." http://www.unccd.int/cop/officialdocs/cop4/pdf/3add9(b)eng.pdf

of sustainable, community-based agriculture, grazing, and/or forestry management systems should be presented.

V. PRIORITY TOPICS AND AGRO-ECOLOGICAL ZONES IN THE FOCAL AREA

16. GEF investment in the focal area will comprise: a) projects and programs aimed at critical agro-ecological zones; and b) innovative approaches to SLM that will inform the GEF about priorities beyond GEF-4. The indicative list of kinds of interventions emphasizes links between focal areas that will deliver global environmental benefits in the context of sustainable development.

17. High-priority agro-ecological zones include:

(a) *Arid to semi-arid*: cropland and rangeland issues, mixed land-uses, rainwater harvesting, small-scale irrigation, pastoral systems, traditional and local knowledge (cross-cuts with sustainable use and protection of dryland biodiversity, sustainable use of groundwater waters, and vulnerability to climate change and variability

(b) *Semi-arid, dry sub-humid to temperate*: mixed forest, rangeland and cropping, including subsistence agriculture, use of wood and non-wood resources, interactions with wildlife (cross-cuts with sustainable use and protection of biodiversity; sustainable forest management, and vulnerability to climate change and variability

(c) *Mountains and upland watersheds*: including natural resources management to protect water sources and habitats, mountain communities (cross-cuts with protection of international water bodies, sustainable use, and protection of biodiversity; sustainable forest management; and vulnerability to climate change and variability)

(d) *Humid forest margins*: the forest/woodland mosaic in the wider landscape including crop and livestock production, protection of forest-margin biodiversity, management of highly-weathered acid soils and peat (cross-cuts with sustainable use and protection of biodiversity; sustainable forest management; and vulnerability to climate change and variability)

(e) *Sub-humid to sub-tropical*: rainfed agricultural zones, including issues of soil fertility, protection from soil erosion, sustainable use of groundwater (cross-cuts with climate change, biodiversity, and aspects of international waters)

18. In order to avoid wasteful overlap in mandates and make use of the comparative advantages of organizations and/or other GEF focal areas, the following types of interventions will not be accorded priority for financing in the GEF Land Degradation focal area:

(a) Development, testing, and validation of SLM and land degradation control technologies.
Reason: Consultative Group on International Agricultural Research (CGIAR) system has a comparative advantage in these types of activities. Strong collaboration will be sought.

(b) Assessment unrelated to uptake and use in achieving wider impact.
Reason: Agencies such as United Nations Environment Programme (UNEP) or the Food and Agriculture Organization (FAO) have a comparative advantage in undertaking such assessments within their work plans.

(c) Forest plantation and protection of closed forests.
Reason: Protection and management of closed forests will be addressed through the GEF focal area Biodiversity.

(d) Agroforestry and forest management if not managed in the wider landscape.
Reason: Agroforestry and forest management are areas of comparative advantage for the CGIAR, specifically the World Agroforestry Centre (ICRAF) and Center for International Forestry Research (CIFOR), and for FAO.

(e) Coastal zone restoration and management.
Reason: This thematic area will be addressed through the GEF focal areas Biodiversity and International Waters.

(f) Disaster and pollution management, including dealing with mine spills.
Reason: GEF Agencies such as the World Bank, United Nations Development Programme (UNDP), or International Fund for Agricultural Development (IFAD) have listed these activities within their work plans. Other non-GEF organizations have oriented their mandates to respond quickly to disasters. GEF-eligible activities related to pollution will be financed primarily through the GEF focal area International Waters.

(g) Wetlands restoration and management, except relevant to integrated land use planning.
Reason: This thematic area will be addressed through the GEF focal areas biodiversity and international waters.

(h) Large-scale irrigated agriculture except relevant to integrated land use planning.
Reason: This thematic area will be addressed through the GEF focal area International Waters if competition for water resources and related conflicts are an issue. Because of the limited allocation for the GEF focal area Land Degradation, activities related to direct investments in large-scale irrigated agriculture will not be financed by the GEF.

VI. PROPOSED STRATEGIC PROGRAMS FOR GEF FINANCING

20. Because financing in GEF-4 is limited, the Strategy for the Focal Area in Land Degradation indicates only three Strategic Programs. These Strategic Programs are:

(a) Supporting sustainable agriculture and rangeland management

(b) Supporting sustainable forest management in production landscapes

(c) Investing in innovative approaches in SLM

Strategic Program 1: Supporting Sustainable Agriculture and Rangeland Management

21. This program will include three elements:

(a) *Dryland management in areas of intense competition for land resources:* This program element will focus on arid to semi-arid eco-zones with critically endangered ecosystems where herders, agriculturists, and other resource users face increasing competition for land resources. In these regions, the greatest constraint is low primary productivity, leading to either over-exploitation or to under-utilization and abandonment. The enabling environment for activities in SLM varies by country, with institutions often having difficulties with handling cross-sectoral issues in an integrated way. These zones have critically-endangered and degraded ecosystems that will require targeted up-scaling of SLM investments. Regional priorities for this program element are Northern Africa and the Sahel of Africa, drylands of Asia (including Iran and Mongolia), and the Middle East.

(b) *Management of Semi-Arid to Sub-Humid Mixed Land Uses in Areas Prone to Severe Soil Erosion and Loss of Soil Fertility:* This program element will focus on the protection of biodiverse grasslands, *savannah*, and *cerrado*-type ecosystems that support large numbers of resource-poor smallholder farmers. Key issues in these areas are the high fragmentation of land use and ownership of the landscape due to high population density. The enabling environment for activities in SLM is often weak, but varies widely from country to country. Some countries have the necessary institutional and professional capacity to handle cross-sectoral activities that engage between landscape elements such as water, soil, grassland, wildlife, and woodlands, but many other countries do not. Regional priorities for this program element are semi-humid Africa (Sahelo-Sudanian and Sudanian zones), plus wooded grasslands of Central and South America.

(c) *Sustainable Management of Mountain Ecosystems:* This program element will focus on the protection of mountain ecosystems and landscapes that are socioeconomically and environmentally significant. Issues include protection of water sources, prevention of soil erosion, integrated land and watershed management, and the stabilization of cropping, pastoral, and forest systems.

Issues related to biodiversity, adaptation to climate change, and protection of international water bodies should be addressed in an integrated way. Regional priorities are the hillsides and uplands of East and North-East Africa, the Andes, the Caucasus, and the Hindu Kush-Himalaya.

Strategic Program 2: Supporting Sustainable Forest Management in Production Landscapes

22. This program will support landscape approaches to the management of woodlands, humid forest margins, and reducing forest fragmentation. During GEF-4, support will be provided to: a) strengthening the national enabling policy and institutional environment for managing forest and woodland resources in the wider production landscape; b) defining strategies to avoid the degradation of woodlands, forest margins, and further forest fragmentation mainly caused by expanding cropland and grazing activities, and unsustainable harvesting of fuel wood; and c) replicating successful practices for SFM in the wider landscape to restore the integrity of forest ecosystems. Priority is given to *savanna/cerrado*, *miombo* ecosystems, forest fragments, and humid forest margins. In this program, issues may also arise related to climate change and biodiversity in forest and woodland ecosystems. Regional priorities are: the margins and buffer zones of the Congo and Amazon Basins; South-East Asia; Central American dry and montane forests; and the South American *Chaco*.

Strategic Program 3: Investing in New and Innovative Approaches in Sustainable Land Management

23. This program will focus on creating new scientific and technical knowledge on emerging issues in order to facilitate future strategy discussions for GEF-5 and to enhance GEF operations in the Land Degradation focal area. The following main themes have been identified:

(a) Evaluation of types of incentive systems or tax regimes to recover and reinvest land resource rents and to promote SLM

(b) Assessing and evaluating emerging evidence of the links between security of tenure and sustainable land and natural resource management

(c) Management of LULUCF as a means to protect carbon stocks and avoid CO_2 emissions (jointly among focal areas for Biodiversity/Climate Change/Land Degradation)

(d) Development of Sustainability Criteria and Voluntary Certification Standards for Sustainable Biomass Production (jointly among focal areas for Biodiversity/Climate Change/Land Degradation).

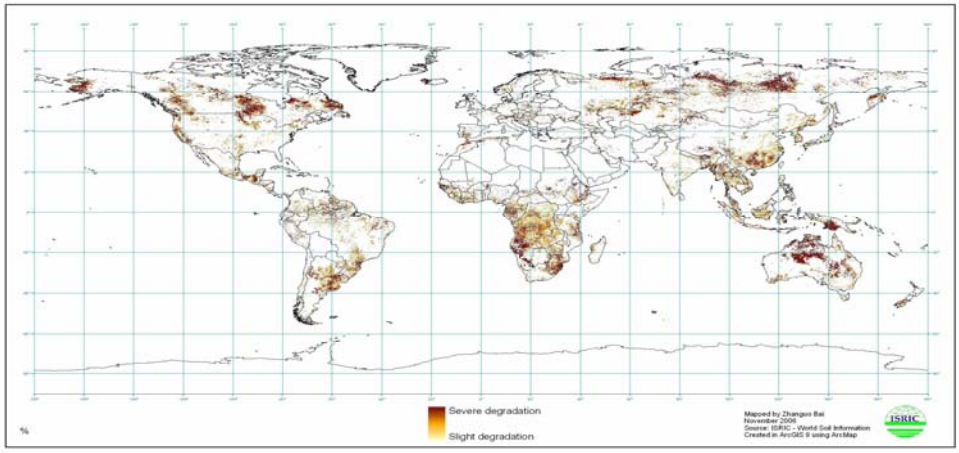
Table 2: Summary of Strategic Programs for GEF-4

Strategic Program	**Expected Program Outcome** **(For expected impact, see Table 1)**	**Program Outcome Indicators** **(For impact indicators, see Table 1)**
1. Supporting sustainable agriculture and rangeland management	In intervention areas, an enabling environment for sustainable, rain-fed crop production and rangeland management is created and natural resources (e.g., dryland forests, water, and energy) are managed in an integrated way	In partner countries: • Each partner country has a new harmonised policy for each major land use type (e.g., agriculture, livestock) and/or has adopted a national land use policy • % of extension programs offered by key institutions reflects ecosystem principles and concepts • % increase in joint activities between specialized institutions • % increase in allocation of resources to sectoral ministries dealing with natural resources • Net and *per caput* access of rural land users to rural credit facilities and/or revolving funds • % increase in areas where SLM best practices are applied
2. Supporting sustainable forest management in production landscapes	Forest resources in humid forest margins, forest fragments, and woodland resources in semi-arid and sub-humid ecosystems are managed sustainably as part of the wider landscape	In partner countries: • Each partner country adopts a new harmonised policy for SFM and/or a national land use policy is adopted • % of extension programs offered by key institutions reflects ecosystem principles and concepts in wider landscape management, including forest and woodland resources • % increase in allocation of resources to sector ministries dealing with forest and woodland resources • % increase in net and *per caput* access of forest and woodland-dependant land users to rural credit facilities and/or revolving funds • % increase in areas where SFM best practices are applied
3. Investing in new and innovative approaches in sustainable land management	Enhance scientific and technical knowledge of emerging issues, facilitating the strategy discussions for GEF-5 and enhancing GEF operations in this focal area	• Newly created scientific and technical knowledge supports strategy discussions for GEF-5 • % of designs of projects to be financed in GEF-5 reflect new scientific and technical knowledge • New knowledge assists % of GEF-4 financed projects in preparation and implementation

Annex 3 Attachment 1: Maps Relevant for Decision-making on Allocation of GEF-4 Funds Under the Land Degradation Focal Area

1. Global Land Degradation 1981-2003 (ISRIC Working Document, February 2007)

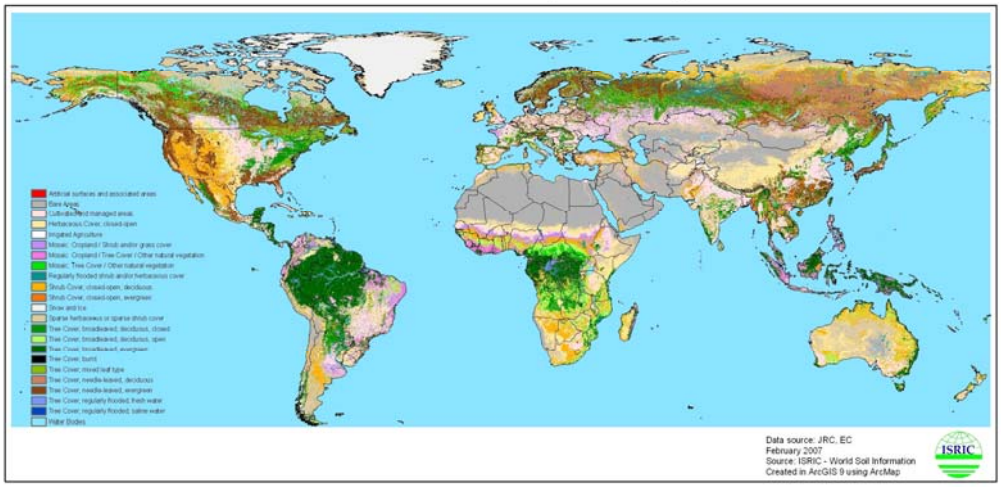
The map combines trend of biomass production and trend of rain-use efficiency, both over the 23-year period, at a definition of 8km. The map shows areas where trends of both the biomass and rain-use efficiency are negative. For irrigated areas, only biomass trend is considered. Urban areas are excluded. The map highlights areas where land degradation has taken place over the reference period, as opposed to the total historical legacy of degradation. The map may be used to identify areas where GEF intervention is needed and may also be used to prioritize proposed project interventions.



2. Global Land Cover 2000 (EU Joint Research Centre, 2000)

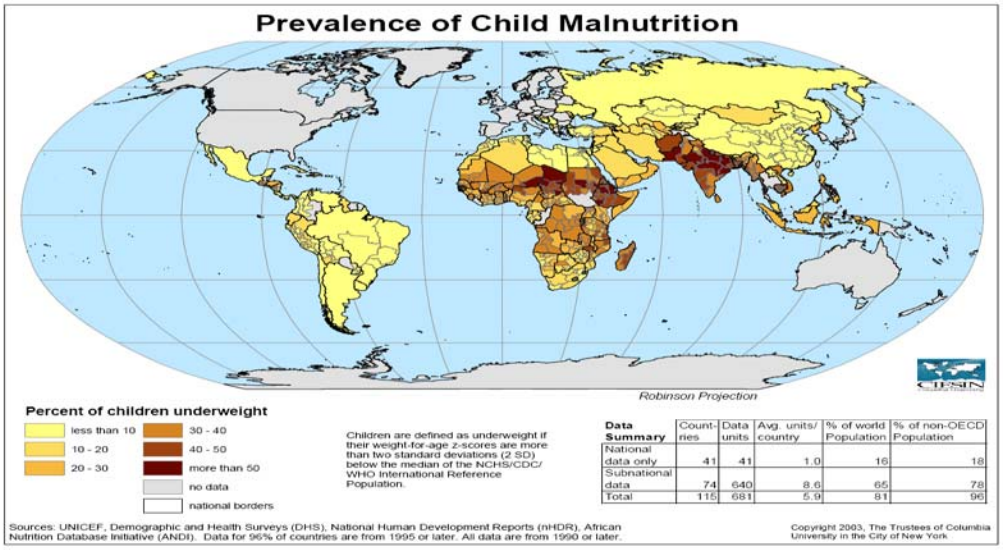
The map presents an assessment of land cover in the year 2000. The map shows land cover categories at a definition of 1km, mapped by interpretation of satellite imagery. The map may be used for comparison with the global land degradation map – to assess which land cover categories are most affected by land degradation. By extension, we may also judge which are most at risk. Land cover categories are used as proxies for land use types and ecosystems.

Global land cover (GLC 2000)



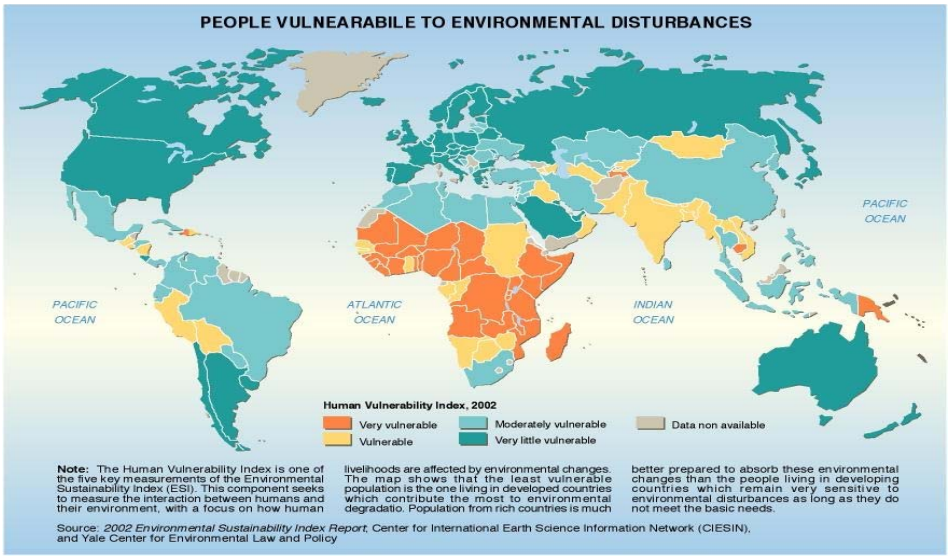
3. Poverty: Prevalence of Child Malnutrition (Columbia University, 2003)

The map presents the prevalence of child malnutrition as an indicator for poverty. Children are defined as underweight if their weight-for-age z-scores are more than two standard deviations (2 SD) below the median of the NCHS/CDC/ WHO International Reference Population. The map may be used to prioritize proposed project interventions and to identify areas where land degradation and poverty are closely linked – and, therefore, must be addressed simultaneously.



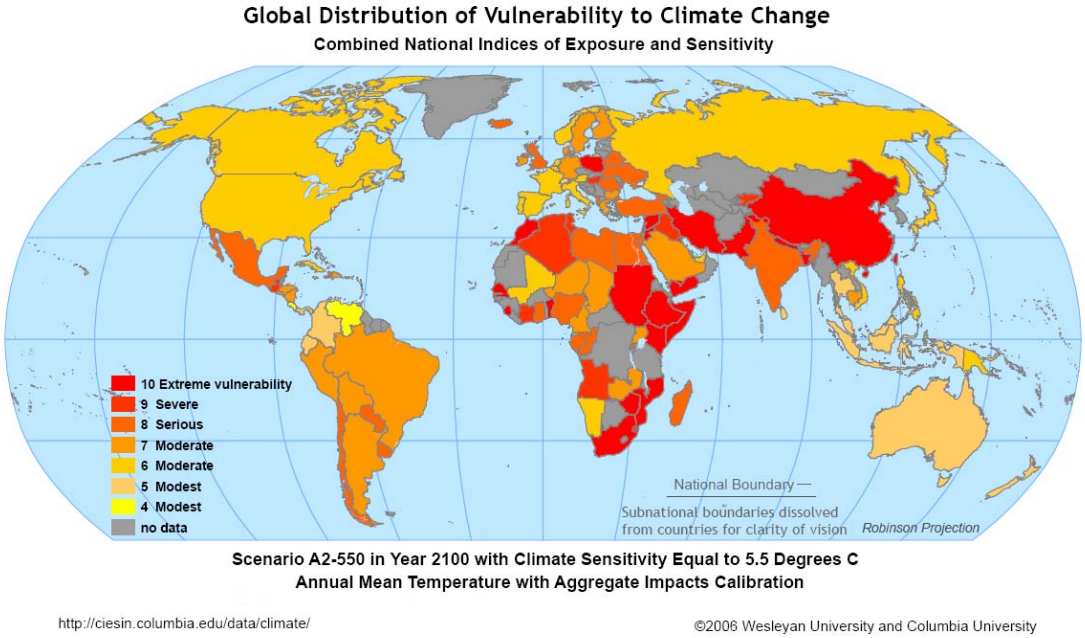
4. Global Distribution of Vulnerability to Environmental Disturbances (CIESIN and Yale Center for Environmental Law and Policy)

The map presents the different grades of vulnerability of people to environmental disturbances. The Human Vulnerability Index is one of the five key measurements of the Environmental Sustainability Index. This component seeks to measure the interaction between humans and their environment, with a focus on how human livelihoods are affected by environmental changes. The map may be used to identify areas in which people are very sensitive to environmental changes and least prepared to absorb them. The map may be used to prioritize actions in proposed interventions on SLM for reducing the vulnerability of rural people to environmental disturbances such as land degradation.



5. Global Distribution of Vulnerability to Climate Change (Wesleyan University and Columbia University, 2006)

The map presents the vulnerability index to climate change, which combines both national indices of exposure and sensibility. These indexes are related to the variation of the annual mean temperature in 2100 equal to 3.3°C, calculated under the A2-550 ppm emission scenario (optimistic) and with climate sensitivity equal to 5.5°C (high value). The potential impacts of such a variation have been aggregated in the indexes. The vulnerability spectrum ranges from modest to extremely vulnerable. The map may be used to identify areas that may be at future risk of land degradation due to impact of climate change. A comparison with the actual global land degradation map could help us identify specifically those areas which are not at risk today, but which might be significantly affected by land degradation in the near future, so that preventive actions are undertaken.



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