



FAO SUPPORT TO THE BRUSSELS PROGRAMME OF ACTION FOR LEAST DEVELOPED COUNTRIES

SECTORAL REPORT FOR 2001-2005

I. INTRODUCTION

FAO work programme and the Brussels Programme of Action for the Least Developed Countries

1. FAO provides technical support and emergency assistance, funded from its regular programme and extra-budgetary resources, to Least Developed Countries (LDCs) and other developing countries, at their request and in partnership with bilateral donors, multilateral institutions, and other organizations of the United Nations system, the private sector and civil society. The Organization's approach to technical assistance is guided by three overall objectives: (i) ensuring access of all people at all times to sufficient, nutritionally adequate and safe food and reducing the number of undernourished by 50 percent from their level in 1990/92 by no later than 2015; (ii) contributing to sustainable agriculture and rural development (including fisheries and forestry) and socio-economic progress and well-being; (iii) conserving and improving the sustainable utilization of natural resources (including genetic resources) for food and agriculture.
2. The 123rd session of the FAO Council which met in November 2002, expressed its support for the 2001 Brussels Programme of Action (POA) for Least Developed Countries. The Council adopted the decision to mainstream the relevant sections of the Brussels POA into the overall framework of the Organization's work and called upon FAO to continue to participate in the implementation of those sections of the POA relevant to its mandate.
3. The value of FAO field projects in LDCs totalled some US\$849 million, or 31 percent of the total field programme, between 1992 and 2000. These projects met a wide range of needs, from emergency relief and agricultural rehabilitation, to practical assistance to government programmes for food security, sustainable agriculture and rural development. In the year 2000 alone, more than 700 field projects, with a total budget value of US\$423 million, were active in 46 of the 49 LDCs. In 2002, more than 680 FAO field projects, with a total budget value of US\$447 million, were either delivered or ongoing in the 49 LDC countries, covering a wide range of technical fields (agriculture, forestry and fisheries). These activities continue.
4. Nearly one-third of the average annual delivery of technical assistance has been in the crops sector (improved yields, agronomy, production practice), followed by emergency response operations (about 16 percent), support to food production (about 14 percent), natural resources and forestry policy and planning (both of these areas at slightly more than five percent). The areas of technical support provided by FAO are in line with many of the most serious constraints facing the food and agriculture sectors of these countries. Many LDCs, despite their current constraints, have the potential to utilize their land and water reserves to increase agricultural productivity in the crop, livestock, fishery and forestry sectors – the primary focus of much of FAO's non-emergency technical assistance.

5. This sectoral report summarizes FAO's key programmes and activities that are of direct relevance to the Brussels POA. Although many FAO activities contribute to various elements of the POA, four Commitments are particularly relevant to FAO's mandate and work programme. These are: building human and institutional capacities (Commitment 3); building productive capacities to make globalization work for LDCs, particularly in agriculture, agro-industries, rural development and food security (Commitment 4); enhancing the role of trade and development, notably for trade in commodities and regional trading arrangements (Commitment 5); and reducing vulnerability and protecting the environment, including vulnerability to natural shocks (Commitment 6).

The state of food insecurity and the challenges facing LDC agriculture

6. FAO monitors the progress made in reducing hunger on the basis of *inter alia* the prevalence of undernourishment. The key indicators are the number of people undernourished and the proportion of undernourished in the total population. This is also Indicator number 6 (under Goal 4) of the Brussels POA for the Decade 2001-2010, namely to make substantial progress towards halving the proportion of people suffering from hunger by 2015.

7. According to the latest FAO estimates for 2001-2003, a total of 248 million people were undernourished in 36 LDCs for which statistics were available. This amounted to 36 percent of the total population. For 1995-97, the corresponding values were 248 million and 41 percent, respectively. Thus, there was no progress made in reducing the number of people undernourished, while the prevalence rate fell by five percentage points. In terms of the number of the LDCs, the estimates show that the number of people undernourished fell in 17 of the 34 LDCs for which country-specific estimates were available, while the prevalence rate of hunger declined in 26 LDCs. Thus, the results are mixed and obviously vary considerably across the LDCs.

8. Agriculture remains the foundation of most LDC economies and underpins food security and rural development. Sluggish growth in agriculture and pronounced fluctuations in agricultural output and prices continue to be among the primary causes for the persistence of poverty and food insecurity. Increasingly marginalised in world agricultural markets, LDCs accounted for barely one percent of global agricultural exports in the late 1990s, down from five percent in the early 1970s.

9. Furthermore, many LDCs are becoming increasingly dependent on food imports – a significant change from being predominantly net food exporters in the 1960s to net food importers during the 1980s and 1990s. These economies are also challenged by an increasingly competitive external environment, due to greater integration of markets and trade liberalization. The relative inability of many of the LDCs to compete in world markets, as well as in their own domestic markets, is reflected in rising food import bills, with current projections for LDC dependence on food imports increasing at least until 2015.

10. Most LDCs do not have access to the cutting edge of available agricultural technology and private investment in agriculture is rather low. Foreign direct investment in primary agriculture and rural sectors is practically non-existent in most LDCs. This investment gap is not compensated by public investment of external assistance. In many of the countries in the highest category of undernourishment (which include most LDCs), public expenditure on agriculture does not reflect the key importance of the sector in overall income or its potential

to contribute to the alleviation of hunger and poverty. Furthermore, while commitments of annual overseas development (ODA) to LDCs increased, the share of agriculture in total declined considerably.

II. SUMMARY OF FAO WORK PROGRAMME RELATED TO THE FOUR COMMITMENTS

Commitment 3

Building Human and Institutional Capacities

11. Health, hygiene and nutrition are intricately linked, and therefore several FAO activities directed at animal disease, plant pest control and nutrition are relevant to this Commitment. To provide some examples, FAO has been implementing a programme of assistance on environmental health/vector borne disease in several LDCs, particularly in Africa. It helps set criteria and guidelines to alleviate obstacles emerging from ecological and environmental drivers responsible for disease emergence and spread. Technical support is provided in the control of major Transboundary Animal Diseases within the EMPRES-Livestock programme. Likewise, the Veterinary Public Health Programme provided technical support to LDCs. Through its Joint Division with IAEA, FAO also facilitates transfer of knowledge, equipment and technologies to LDCs in terms of *inter alia* analytical methods and procedures to strengthen institutional capacities in the enhancement of food safety through the management of pesticide/veterinary drug residues and related contaminants and in terms of insect pest monitoring, population genetics, insect rearing, sterilization and release, and environment-friendly control methods to strengthen institutional capacities in the implementation of area-wide integrated pest management programmes to suppress, contain or eradicate major pest insects.

12. In the nutritional field, FAO provided services to improve food security and nutrition in several LDCs, and formulated and implemented projects on household food security, nutrition and livelihoods in both emergency and development contexts. A particular emphasis was made on strengthening the capacities of national and local institutions, both government and NGOs. Assistance was given to training-cum-planning at district level and participatory approaches at community and local levels. Work on food quality and standards contributed to strengthening domestic food control systems to ensure the safety and quality of food produced for both the domestic and world markets. During 2001-2005, 18 national-level food safety and quality projects, including support to activities related to the Codex Alimentarius, have been implemented in several LDCs, along with nine regional projects covering countries from the West African Economic and Monetary Union (UEMOA).

13. Local capabilities, notably of farmers and rural communities, were also strengthened in the area of biodiversity and biosecurity. An example is the joint FAO/IFAD/IPGRI project, *Empowering Sahelian farmers to leverage their crop diversity assets for enhanced livelihood strategies*, that operated in Mali, Burkina Faso and Niger. The project contributed *inter alia* to improve decision-making and negotiating capacity of farmers, farmers' organisations and their communities with other relevant actors including formal plant genetic resources institutions. Other initiatives to empower local communities in the LDCs included seed

security projects which facilitated the production of high yielding varieties at community level.

14. Safeguarding health and wellbeing of farmers also requires safe pesticide use. In this area, FAO has long-standing experience in assisting countries. Guidelines have been produced for safe pesticide application equipments and for good practices in pesticide application accompanied with simple training manuals and posters. In the area of agro-industry, LDCs have been supported through capacity building in improved post-harvest techniques and infrastructure. Small-scale dairying and milk processing has been found to be an important pathway for poverty reduction. Institutional development, including the promotion of producer groups and associations, has been an important component of the development strategy. Support to rural and microfinance organizations, NGOs and policy makers in LDCs, was provided through the Rural Finance Learning Centre, a web-based portal. Training courses and workshops to build capacity and exchange key information and experiences in rural finance have been held in a number of LDCs. Finally, projects to improve marketing extension and marketing information services were also implemented.

15. Illiteracy is a strong correlate of poverty and hunger and is mainly a rural phenomenon which hinders rural development and food security, threatens productivity and health, and limits opportunities to improve livelihoods and to promote gender equity, since illiteracy is particularly high among rural girls and women. Accordingly, FAO and UNESCO launched the Education for Rural People (ERP) partnership programme during the World Summit on Sustainable Development in Johannesburg in September 2002.

16. The key activities of the ERP programme which is led by FAO are, at the national level, to provide technical support to countries willing to address the basic educational needs of the rural people by formulating specific strategies as part of National Education for All and Rural Development plans, and at the international level, to advocate and mobilize partnerships for ERP by concentrating on strategic global, regional and international events, and encouraging the same within countries.

17. Other programmes aimed at building human resource capability at local levels included the Communication for Development Systems using communication methods and tools allowing people to participate in policy formulation, project implementation, and ensuring the sharing of knowledge and information according to the characteristics of vulnerable groups. The System also allows farmers and institutions to recuperate and share local knowledge. A series of projects are implemented and operational in support of this programme in several LDCs. One feature of many FAO programmes and projects in the area of human resource strengthening is the multi-stakeholder approach. For example, a project focussed on the CEMAC members involves all the major national stakeholders from research, extension, women's agricultural organization representatives, NGOs involved in extension and so on.

18. Identification and location of food insecure and vulnerable segments of the population, and establishing the causes of their food insecurity and vulnerability, is the key information required for programmes that aim at addressing hunger and poverty. In this area, FAO has implemented several programmes. One key feature of such programmes has been to build capacity at the national and local levels to undertake such work, thus ensuring that the programme is sustainable. One comprehensive project, strengthening of national Food Insecurity and Vulnerability Information and Mapping Systems (FIVIMS), and of the analysis

of food security, is being implemented in several LDCs, notably Afghanistan, Angola, Bangladesh, Cambodia, Eritrea, Lao PDR, Malawi, Mauritania, Mozambique, Somalia, Sudan and Yemen. The Asia-FIVIMS homepage offers food insecurity data of all eastern and southern Asian countries, among which many with LDC-status. A similar activity has been providing support to mainstreaming food security into policy reductions strategies and other poverty-related policy initiatives. Activities were started in 2005 in Angola, Bhutan, Malawi, Mozambique and Tanzania. This activity emphasises the importance of involving all stakeholders in policy design, and focuses on the decentralised implementation of the strategies and policies, where applicable. Likewise, field work was initiated on national and regional early warning systems in West, Southern and the Greater Horn of Africa regions which could be the basis for making recommendations on how best to enhance early warning capabilities for greater food security in Africa.

19. Several FAO programmes provide assistance to LDCs in strengthening capacities of the public and private sectors at local, national and regional levels to improve the access of rural people to information, to facilitate their participation in the policy process and dialogue and to implement institutional and decentralisation reforms to achieve food security objectives. Thus, for example, several projects were implemented to assist farmers' organisations by strengthening their capacity in food security analysis, policy formulation and negotiations.

20. The Development Law Service of FAO provides legal advisory services to members in a number of areas. For example, institutional and human capacities to conduct agricultural trade negotiations were strengthened at the Ministries of Agriculture in Sudan and Tanzania. Technical assistance is also being provided to the African Union towards the establishment of a common market for basic foodstuffs. Assistance has been provided to many LDCs on legislation and institutions related to food, plants, animals, aquaculture and land resources.

Commitment 4

Building productive capacities to make globalization work for LDCs

21. The LDCs are increasingly marginalised in world agricultural markets, with barely one percent of the global agricultural exports in the late 1990s compared with five percent in the early 1970s. Many of them are highly dependent on the export of one to two commodities only. Furthermore, many LDCs are becoming increasingly dependent on food imports – a significant change from being predominantly net food exporters in the 1960s to net food importers during the 1980s and 1990s. These economies are also challenged by an increasingly competitive external environment, due to greater integration of markets and trade liberalization. The relative inability of many of the LDCs to compete in world markets, as well as in their own domestic markets, is reflected in rising food import bills, with current projections for LDC dependence on food imports increasing until at least 2015. Thus, for globalization to work for them, agriculture has to grow and be diversified, as well as be competitive. This requires considerable strengthening of supply-side capacities, as well as improvements in qualities and value-addition.

22. Several FAO divisions have programmes aimed at building productive capacities which contribute to strengthening the supply-side capability of agriculture and making the sector competitive in trade. Technical support provided is in line with many of the most

serious constraints facing the food and agriculture sectors of the LDCs. It is fully acknowledged that many LDCs, despite their current constraints, have the potential to utilize their land and water reserves to increase productivity in the agricultural (crop), livestock, fishery and forestry sectors – the primary focus of much of FAO’s non-emergency technical assistance.

23. One of the primary efforts of FAO aimed at achieving the World Food Summit goals is the Special Programme for Food Security (SPFS), launched in 1994. The programme seeks to cut hunger and malnutrition by helping small farmers to increase yields of staple food crops and diversify their farming systems. The SPFS began by introducing small-scale projects that focused mainly on demonstrating to farmers in pilot sites the benefits of simple, low-cost changes in technologies in the areas of water control, crop intensification and diversification, and on identifying constraints to the wider adoption of these technologies. Subsequently, the geographic coverage of SPFS activities has been expanded and their scope gradually broadened. During 2001-05, this programme expanded rapidly, with the number of participating countries rising from 15 in 1995, to 62 in 2000 and 105 in 2005. The amount of programme funds also increased from US\$3.5 million to over US\$800 million, more than half of which has been committed by developing countries. In 2005, the programme was operational in 43 of the 50 LDCs and was formulated, or being formulated in the remaining seven LDCs.

24. Since 2002, FAO has embarked upon a programme of up-scaling to National and Regional Programmes of Food Security Programmes (NPFS and RPFS) that cover the full range of actions needed to realize the WFS and MDG target of halving hunger by 2015. From the outset it was foreseen that national SPFS would move from pilot projects to an expansion phase, based on lessons learned. Today, the NPFS offer a broad overall framework for achieving 2015 targets, typically including components for productivity improvement, market performance, sustainable rural livelihoods, nutrition and food safety, and capacity-building for small farmers, rural communities, extension workers and local government officers. Over 40 countries, of which 21 are LDCs, have expressed interest in developing and implementing NPFS and others are expected to follow. Amongst these, expanded SPFS or NPFS have already become operational in 3 LDCs and 8 non-LDCs, and formulation has been completed or is underway in most of the rest. FAO has also assisted 20 Regional Economic Integration Organizations to formulate Regional Programmes for Food Security (RPFS); of these, three are already operational. These regional programmes constitute a concerted effort to raise food security in the member countries in the context of the regional economic grouping through, among others, trade facilitation and harmonisation of national agricultural policies.

25. Also important in the context of building productive capacity, the formulation in 2003 of the Comprehensive Africa Agriculture Development Programme (CAADP) on which FAO collaborated with the Secretariat of the New Partnership for Africa’s development (NEPAD) was a substantive outcome in view of the innovative approaches for the revival of African agriculture. This programme covers all the LDCs in Africa. It has been cast to deliberately focus on investment into three mutually reinforcing pillars that make the earliest difference to African agriculture: i) extending the area under sustainable land management and reliable water control systems; ii) improving rural infrastructure and trade-related capacities for improved market access; and iii) increasing food supply and reducing hunger. It also includes a long-term pillar on agricultural research, technological dissemination and adoption.

26. Complying with technical standards for food and agricultural products that are set by states and demanded by consumers is essential for realizing exports. The role of technical standards in global trade became further prominent after 1995 with the coming into force of the Uruguay Round Agreements on Sanitary and Phytosanitary Measures (SPS) and Technical Barriers to Trade (TBT). Governments are placing increasing priority on strengthening their ability to deal effectively with food quality and safety issues. Accordingly, FAO has also stepped up its programme in these areas, including in fisheries products. FAO has also encouraged the adoption of good agricultural practices throughout the food chain.

27. In 2003, FAO along with WHO, OIE, WTO and the World Bank established a *Standards and Trade Development Facility* (STDF) to coordinate capacity building efforts of these organizations in the areas of food safety, plant and animal health and to provide a funding mechanism for countries and stakeholders to enable them to meet the WTO SPS standards. This facility has, *inter alia*, provided assistance to low income countries in developing food standards within a framework of risk analysis, with pilot applications in selected Asian and Pacific countries. Similarly, in February 2003, FAO and WHO launched a *Project and Trust Fund for Enhanced Participation in Codex* to increase the participation of developing countries and countries in transition in the vital work of the Codex Alimentarius Commission. The Fund provides financial support to increase their ability to participate in the establishment of global food safety and quality standards, as well as to improve their capacity to implement those standards in their own countries. Participants from 91 countries have been selected to participate in Codex meetings in 2005 with help of the Codex Trust Fund. A programme is also being implemented for improving the quality and safety of fresh fruits and vegetables, with a focus on the application of good practices to prevent hazards at appropriate points in the fresh fruits and vegetables chain.

28. Similar approaches and programmes have been pursued in enhancing capacities of national and regional plant protection and animal health systems with the objective of reducing insecticide use and losses to insect pests and to overcome phytosanitary and animal health barriers to international trade in agricultural commodities. Many LDCs have ratified the revised International Plant Protection Convention (IPPC) and have participated in the Commission on Phytosanitary Measures. Likewise, projects on harmonization of seed rules and regulations were implemented at country and subregional levels, e.g. subregional activities in West and Southern Africa. These programmes are often implemented in cooperation with stakeholders, including regional groups like UEMOA, ECOWAS and SADC.

29. FAO continued its work on the SARD initiative (SARD-I), which aims at building the capacities, reducing the vulnerability and increasing the self-reliance of rural communities, organizations and networks to improve access to resources, promote good practices for SARD and foster fairer conditions of employment in agriculture. The Farming Systems Evolution for SARD, which aims to enhance local capacities to plan, implement and evaluate SARD, is now operational in Mali. Three national and three regional workshops on SARD, involving many LDCs, were organized. FAO also has a substantial work programme on agricultural research and extension and has implemented several projects in the LDCs to strengthen agricultural research. These projects aim at improving production systems by enhancing the productivity of horticultural crops, animal production, integrate agro-forestry and moisture conservation and utilization techniques.

30. Assistance to LDCs in the formulation, implementation and monitoring of rural and agricultural development strategies and programmes, with a special focus on sustainable use of natural resources, diversification and competitiveness improvement, is another major programme of FAO, implemented by various technical divisions. In this area, many LDCs have been assisted in the formulation of policies and Master Plans, agricultural sector reviews, and programmes to increase public support to agriculture. Other activities included national and regional workshops aimed at exchanging experience on policy issues, development of capacity-building materials, and technical assistance projects.

31. Statistics are essential for planning and informed policy formulation. FAO has a large programme on statistics. One important element of this programme is capacity building in the generation, processing and use of statistics. During 2001-05, FAO continued to support LDCs to strengthen their food and agricultural statistics, notably the collection, processing and analysis of food consumption data from household budget surveys. In addition, LDCs have been supported in their planning and policy making progress through the provision of updated reports on food security statistics and indicators.

Commitment 5 **Enhancing the role of trade in development**

32. FAO's trade-related work intensified during 2001-05 period, in response to greatly increased demand from Members for information, analysis and technical assistance as the WTO Doha Ministerial Conference launched a new round in 2001, while agricultural negotiations had already commenced by 2001. At the same time, FAO also intensified its trade-assistance programme in several areas that, although not being negotiated in this Round, were critical for expanding trade, namely sanitary and phytosanitary measures, other non-tariff barriers to trade, and aspects of fisheries, forestry and intellectual property rights.

33. During 1999-2001, FAO implemented an "Umbrella" Programme on trade-related capacity building, with a focus on strengthening the participation of developing and transition countries in multilateral trade negotiations through a deeper understanding of those WTO Agreements that affect agricultural trade, as well as fisheries and forestry, notably the Agreement on Agriculture, the SPS and TBT Agreements and the TRIPS Agreement. Fourteen sub-regional workshops were organized under the programme covering all the LDCs. Substantive resource materials were prepared and disseminated in five languages. Similar capacity-building activities were continued during 2002-05 period also. During 2004 and 2005, eight regional workshops were organized on technical issues related to the ongoing WTO agricultural negotiations, with the participation of all LDCs from the regions where these workshops were held. In addition, FAO organized many Round Tables in Geneva on negotiations-related issues where LDCs negotiators based in Geneva participated. Country-level trade assistance programmes were also implemented in several LDCs. Yet another mode of delivering trade-related assistance to LDCs has been through programmes focussed on regional trade bodies. Many LDCs that are members of the African, Caribbean and Pacific Group of States (ACP) were also assisted through a training-cum-workshop programme on issues regarding multilateral and bilateral trade negotiations.

34. Capacity building to strengthen food safety and food control programmes in LDCs has been a major feature of FAO programmes since the implementation of the Uruguay Round Agreement, in particular. These programmes aim at *inter alia* food safety and trade facilitation. The programme has covered: policy advice on specific issues; institutional

development and/or strengthening; review and updating of food legislation; harmonization of food regulations and standards with Codex and other international regulatory instruments; training of technical and managerial staff in different food safety related disciplines; and studies and applied research on specific food related subjects. Capacity building has also included the organization of national and regional workshops and seminars on food safety related matters and the development and dissemination of manuals, guidelines, training materials and other tools needed to support food control and food safety development programmes.

35. Other major activities undertaken during this period with the objective of enhancing the role of trade in development include programmes to facilitate trade in livestock and livestock products in LDCs through activities on major transboundary animal diseases, e.g. foot and mouth disease (FMD)-free status of Swaziland, initiatives to involve the private sector in quality assurance/quality control of veterinary drugs, in particular trypanocides to assist LDCs in meeting SPS, and support to LDCs in the area of harmonization of quality-assured procedures and guidelines. The LDCs were provided support, in collaboration with WHO, to effectively participate in meetings of standard-setting bodies like the Codex and the International Plant Protection Convention (IPPC). As already mentioned, an FAO/WHO Trust Fund for Enhanced Participation in Codex was established in 2003 and continues to be operational.

36. Other trade-related activities included training workshops for detecting GMO seeds in commercial seed and trade. In this regard, the FAO flagship publication *The State of Food and Agriculture (SOFA)* 2004 on “agricultural biotechnology meeting the needs of the poor” was an important work.

Commitment 6 **Reducing vulnerability and protecting the environment**

37. Emergencies arise from both natural causes and human-induced reasons. Rural populations in the developing world are often the most vulnerable survivors. With most communities dependent on agriculture and related enterprises for their food security and livelihoods, FAO’s expertise in farming, livestock, fisheries and forestry is highly relevant in emergency response and rehabilitation efforts. By restoring rural livelihoods and helping vulnerable people look after their own nutritional needs, FAO helps create the conditions for a quick and lasting recovery.

38. Over the past years, the number of developing countries, including the LDCs, facing food crises due to natural disasters, inclement weather, a deteriorating environment, or civil strife, has increased slightly. Many of these crises cannot be prevented, but their impact on people can be lowered by a reduction of people's vulnerability to such external shocks.

39. FAO responds to requests for emergency assistance in the agricultural, livestock and fisheries sectors from LDCs affected by exceptional natural or human-induced calamities. Assistance is provided to establish disaster preparedness, post-emergency measures, formulation and implementation of relief and rehabilitation programmes – all of which are designed to speed the return to sustainable agricultural development. Efforts are made to lower vulnerability itself through measures such as diversification of agricultural production systems, introduction of drought and pest resistant varieties, improvements in information

systems and markets, and promotion of greater and more competitive access of commodities from these countries to world markets.

40. Responses to emergency and natural shocks are diverse. One form of response is to make timely delivery of material assets such as seeds and fertilizers, fishing equipment, livestock and farm tools. In complex emergencies, when rural communities have suffered from armed conflicts as well as natural disasters such as drought, or diseases such as AIDS, more sophisticated types of assistance are offered. These programmes focus not just on providing material assets but on building the knowledge and skills of vulnerable people so that they are better able to cope with future shocks. The goal is to increase people's self-reliance and lay the foundations for agricultural recovery. Strengthening diversity is another way to reduce vulnerability. FAO, building on existing diversity, encourages diversity of resources across crops and livestock, accompanied by rehabilitation of rangelands, improved access to credit and improved veterinary services. This holistic approach fosters greater diversity, increased resilience and improved food security. Supporting local institutions becomes essential in a protracted crisis when government and market institutions often collapse, leaving communities to fend for themselves. Traditional support networks and communities become important, for example, many FAO projects in such circumstances promote local seed markets. Finally, building on local knowledge becomes essential in many cases when, during a crisis, farmers have to fall back to enterprises that do not require externally supplied inputs. This requires strengthening local knowledge and practices.

41. Given the wide range and large number of initiatives and projects promoted and implemented in the LDCs during 2001-05, only a few examples are given here to illustrate the above approaches. Thus, for example, FAO contributed to reducing the vulnerability of population groups with high dependence on livestock through programmes on Transboundary Animal Diseases. Also promoted was the adoption by African tsetse-affected countries of an Area-wide Integrated Pest Management (AW-IPM) approach. Many guidelines and standard operating procedures have been developed and disseminated in the LDCs in order to utilize natural resources and to protect the environment. FAO developed best soil-water-nutrient management practices to reduce the vulnerability of farm land to soil and water degradation and nutrient depletion. Assistance to LDCs is provided on transfer of knowledge, equipment and technologies related to best soil and water management practices. In several LDCs, national assessments of the state of conservation (*in situ*, on-farm and *ex situ*) were made in the context of the use of plant genetic resources for food and agriculture. FAO has assisted several LDCs on conservation and management of crop-associated biodiversity for sustainable agriculture. Through National Programmes for Food Security (NPFS) these and other concrete activities related to more efficient and sustainable use of land water resources and diversification of production patterns are integrated in a comprehensive approach, to support small farmers in increasing the stability and productivity of their farming systems.

42. FAO implemented during 2001-05 more than 500 emergency seed relief projects in LDCs that provide seed to vulnerable rural families after emergencies. Seed security assessment methodologies are being developed to improve both the response to emergency situations and the short- and long-term rehabilitation of seed systems. Several activities have been implemented in West, Southern and the Greater Horn of Africa, aimed at enhancing the capacity and performance of national and regional early warning systems. A number of projects and activities were initiated recently on the following topics: *rapid assessment tools*; *policy guidance* on pro-poor incentive measures; *analytical studies* on relationships between seed systems, agricultural markets, agricultural biodiversity management and food security;

awareness creation on links between poverty alleviation and natural resource management; *methodological work* to deepen understanding of livelihood and vulnerability. FAO carried out methodological work to deepen the understanding of why some livelihood groups are more vulnerable than others, and what policy options exist to reduce this vulnerability. Applied work was undertaken in several LDCs to identify the livelihoods most vulnerable to food insecurity. Some significant activities were initiated in the SIDS on *inter alia* vulnerability and sustainability issues.

43. In addition, FAO was one of the agencies contributing to the Millennium Ecosystem Assessment. This global assessment focused on how environmental changes and the degradation of ecosystem services impact on different aspects of human well-being. It therefore provided conceptual as well as empirical evidence on how environmental degradation can harm the poorest of the poor who in many cases directly depend on natural resource use. But the assessment also discussed costs and benefits of differing development pathways for developed and developing countries and their environmental and socio-economic implications in the future.

44. FAO developed “hotspots analysis”, a methodology aimed at identifying creeping environmental problems before they become irreversible. Hotspots analysis has an early warning function with a relatively long lead time (five to 10 years). The International Bioenergy Platform was launched to assist developing countries to realize benefits of bioenergy production and use. A new coordinated interdepartmental initiative was launched, both at normative and field levels, to support the UNCCD, including assessment of desertification (LADA), policies and practices at the regional level (e.g. Acacia project, Fouta Djallon project). FAO also undertook policies and community driven approaches to promote integrated natural resources management to enhance food security and to reduce vulnerability to famine and climatic shocks. An example of a project includes community-based integrated natural resources management project in Ethiopia for improving ecosystem integrity and rural livelihood. FAO is also looking at ways to improve technical support to UNFCCC in the field of adaptation to the impact of climate change in LDCs.