

## **I.- Summary**

The Republic of Cuba submitted the First National Report on the Application of the Convention to Combat Desertification and Drought to the IV Conference of the Parties held in Bonn, Germany in October 2000. The report was made in compliance with the guidelines adopted in Decision 11/COP.1. and covered the main results obtained in the work to combat desertification and drought before and after the establishment of the Convention, up to April 2000. In fact, it constituted the baseline for the follow-up and evaluation of the Convention application in the country.

The process of preparing the National Program to Combat Desertification and Drought (NAP) concluded in 2000. It is a work document that is scientifically proven as well as an objective expression of the conditions existing at national and local levels. It has built on the capacity of the existing human resources, the system of Science, Technology and Environment, as well as the organization of all sectors of the Cuban society and the wide participation and consultancy undertaken through the aforementioned process.

The diagnosis study revealed that 76% of the agricultural lands are disturbed by some of the production-restraining factors, extreme conditions being present in 14% of them. Droughts have doubled their occurrence frequency in the last 20 years. The desertification-leading processes that have more incidence on Cuba are erosion, salinity, compaction and loss of soil fertility. The anthropic factor has unleashed these processes through deforestation, shifting land use, land overuse, poor management of water, irrigation techniques, cultivation techniques and use of inappropriate technologies, among others. The diagnosis also allowed to identify the most disturbed areas and ecosystems.

Pursuant to the results of the diagnosis, the National Strategy defined as a general objective:

“Prevent and control the causes contributing to the development of processes leading to desertification through the application of the necessary and sufficient practical measures that may likewise allow to stop and revert such processes, mitigate the effects produced by drought and contribute to sustainable development in disturbed areas in order to improve the population’s quality of life.”

The Action Plan lists 156 specific tasks designed in correspondence with local and national priorities and with sustainable development programs and plans implemented in the country. The priority is targeted to “Economic-social development in disturbed areas” as a top expression of the local occupation. Out of these tasks stand the measures to prevent natural and anthropic disasters, measures for recovery and soil rehabilitation, water-quality preservation and sustainable use of natural resources; as well as measures to improve the life quality of the population living in disturbed areas such as increase and quality of the basic health care, education, food security, drinkable water services and sewerage, and household energy.

Given the governmental responsibility implied by the Action Plan, 98% of anticipated tasks are the direct or indirect responsibility of the State Administration Bodies both at the

central and local levels, together with the pooled action of other entities and non-governmental organizations.

Following the Guideline approved at the V Conference of the Parties to the Convention, according to the doc. ICCD / CRIC(1)/INF.6 of December 14, 2001, the current report contains the evaluation of the application of the Convention in the Republic of Cuba from April 2000 to April 2002. This exercise allowed to make an internal balance of the work undertaken in each of the territories, departing from their corresponding Provincial Action Plans and the National Action Plan, whose results were compiled and included in the report. Finally, during the National Workshop held on April 2-3, 2002, information was validated and the national report containing the activity carried out was approved.

### **III.- Strategies and Priorities Set Within the Framework of the Sustainable Development Plans or Policies.**

Ten years after the Rio Summit and nine after its enforcement in Cuba, the National Environment and Development Program and the National Environmental Strategy constitute the programmatic basis for the main actions of the Cuban Government intended to give a response to the agreements made at the United Nations Conference for Environment and Development (UNCED) regarding national efforts to stop or abate damage generated by human activities in the process of social and economic development.

The application of the National Environmental Strategy, which was approved in June 1997, was undertaken through the elaboration and enforcement of Sectoral Environmental Strategies in those Bodies of the State Central Administration having significant incidence on the environment and through Territorial Environmental Strategies. As part of its implementation, strides have been made in implementing the National System of Environmental Monitoring, strengthening and refining the work of the National Watershed Council and its territorial organizing structure, with encouraging results in the purposes of rising sustainable management in watersheds as a basic unit and application framework of management actions. Likewise, the process of regulating the environmental activity comprising the State Environmental Inspection and the Environmental Impact Evaluation has been refined, with the application of new rules in that subject -- process enrichment and more decentralization towards the territories having been achieved.

The implementation of the National Strategy for Environmental Education has meant an important step forward in arising the population awareness concerning general environmental issues, in organizing and developing a wider environmental culture that goes through the introduction of the environmental dimension in economic and development activities in the country up to the different teaching and training levels officially established; all this is supported by the current legislation and the political good will of the Cuban Government and State. Since 1999, the National Study on Environmental Perception was developed, whose results were the basis for re-dimensioning the environmental education activity carried out in the last two years.

The National Strategy for Biological Diversity – one of the environmental Strategies that has a close relationship with the Program to Combat Desertification and Drought and with

which we work in the actions synergetic to both – works in order to control the use of and access to the resources of Biodiversity, taking as indicators the ones relating to forest surface (natural formations and plantations), structure and shift rate of land use, wood production and consumption of forest resources by interest regions, and number and listing of species introduced in the country.

Within the context of the Strategy for International Multilateral Collaboration for the Environment Sphere, the Struggle Against Desertification and Drought ranks as a high priority to Cuba due to its significance and implications on key issues such as food, soils, water, air, forests and watershed management. This priority is expressed through the active role played during the negotiations of the CCD at the regional and global level, the participation of the country as a member of the Regional Coordinating Committee for Latin America and the Caribbean, the maintenance of the listing of Cuban Experts to the Convention and its use by the Secretariat of the Convention, the active participation in the design and implementation of the Africa - Latin America and the Caribbean Interregional Cooperation Platform, and the support provided to the CCD initiative of analyzing the synergies existing among the main International Environment Conventions.

The reformulation and application of the Soil Conservation and Improvement Program, which is being implemented throughout the country since 2000, covers the updating of the diagnosis of this resource and the constraining factors as well as the application of measures for soil correction, conservation and improvement in the areas of production entities, counting on the pooled work of the State Administration Bodies linked to this subject, the wide network of work units in all provinces having developed more intensive and integral work in the last two years.

The National System of Science and Technological Innovation addresses the most prioritized problems in the country that call for a scientific, technological backing for their solution, those of interest to different economy branches or to the territories, according to the case at hand. This system has supported the application of the NAP on bases scientifically proven through research programs aimed at guaranteeing the harmonic development of the Cuban society and the fight against desertification and drought. The results of the Cuban science have been offered to all countries, particularly those of Latin America and the Caribbean. An example of this is the signing and establishment of many events on scientific and technical cooperation, especially in the Caribbean.

Putting into practice the recommendations of the Science and Technology Committee – a subsidiary body to the Convention – has brought about concrete results in the advances experienced in the validation of points of reference and indicators for desertification follow-up and evaluation. These have been included in the national system of environmental monitoring that is under elaboration and implementation all over the country. The rescue and appraisal of the traditional technologies and local knowledge most extended in the national territory is carried out through a wide sustainable agriculture program made up of the system of urban agriculture, integrated control of pests and diseases, soil improvement and conservation, efficient water use, forest resource good use, alternative medicine, etc.

An “Integrated System for Surveillance, Early Alert and Drought Forecast in Cuba” was implemented nationwide. This system is backed with an opportune information component through the permanent inclusion of the “Drought Status” in climate surveillance bulletins and agrometeorological bulletins as well as the issuing of special serial warnings in the occurrence of significant events that are sent to all decision-making levels and the press, as required.

Since 1998, maintaining and updating the list of independent experts has been continuous work. This list has been offered to national and international specialized institutions and has a web site.

The information supporting the NAP through exchange and dissemination is considered one of the aspects of the advance, both at national level and with the international community. The implementation of the DESELAC project, supported by the Regional Coordinating Unit for Latin America and the Caribbean and the Regional UNEP, has constituted an opening of possibilities for disseminating immediate, updated information generated by the process of applying the Action Program. There is a web site located at the environment portal of Cuba ([www.medioambiente.cu](http://www.medioambiente.cu)) with the first issue of the Serial “Environmental Information” that includes articles located in Internet and generated in the country, and CDs with relevant information on desertification and drought have been delivered to all provinces. The “Study on Information Needs” is currently in progress, taking as a case the experts in desertification and drought included in the National Roster and the National Group to Combat Desertification and Drought. All this will generate a specialized service aimed at those users.

#### **IV.- Institutional Measures Adopted to Implement the Convention.**

The National Coordinating Body (OCN), named National Group to Combat Desertification and Drought, has gone through a stage of consolidating and refining the work on checking, following up and evaluating NAP implementation. The provincial groups have the goal of evaluating the progress made by the respective Provincial Action Plans and supplying information and working in coordination with the National Body. The OCN hosted the World Day to Combat Desertification and Drought and has set and developed close links with other coordinating commissions and bodies. The OCN does not own financial resources but is aided by the resources and means available at all institutions composing it.

#### **V.- Participation Process to Support the Action Program Preparation and Implementation.**

The process of preparing and putting the Action Plan into operation is characterized by wide participation of disturbed communities, technicians and scientists from all entities involved at local and national levels as well as decision makers at all levels. Work carried out by women in all stages of NAP development has been very important.

#### **VI.- Consultation Process to Support the Preparation and Implementation of the National Action Program and the Partnership Agreements with Parties and Other Interested Entities.**

The National Program to Combat Desertification and Drought is being implemented basically with financial support from the Cuban State. Additionally, FAO, IFAD, the United Nations Development Program (UNDP) and the United Nations Environment Program (UNEP) have provided continuous support to the realization of national and international activities by co-financing the projects “National Action Program to Combat Desertification and Drought. Plan for Good Use and Integrated Management of Natural Resources in the Cauto River Basin”, amounting to \$US 159,000.00; and the project DESELAC with \$US 2,500.00 financing.

In the negotiation phase is a partnership agreement with the German Federal Republic in order to implement the project “National Strategy to Combat Desertification and Drought” and the continuation of the project in the Cauto River Basin with support from the Global Mechanism to capture co-financing. Activities such as the CCD-funded National Workshop on Synergies and the Venezuela-funded Multinational Workshop on Saline Soils have contributed to strengthen the South-South synergy and cooperation relations. Other agreements on information exchange, technical advising and bilateral cooperation have been made with Venezuela, Colombia and Haiti.

Twenty-one projects have been submitted to international Agencies and different bodies and Organizations to promote financing shared by the Cuban Government and 5 actions proposed by Cuba within the context of the Cooperation Platform between Africa and Latin America and the Caribbean. Ninety percent of them all lack international funding.

**VII.- Measures Taken or Planned within the Framework of the National Action Programs, Particularly Those Intended for Improving the Economic Setting, Preserving Natural Resources, Enhancing Institutional Organization, Improving Know-How on Desertification and Watching and Determining the Effects of Drought.**

Pursuant to the Program for Soil Improvement and Conservation, a number of actions for soil prevention, improvement and conservation were taken in production units, through which around 600,000 hectares benefited at a cost of approximately 14 million pesos. These measures, both temporary and permanent as well as of soil conditioning, have been accompanied by drainage measures, the application of over 3 million tons of mineral and organic amendments, the incorporation of green fertilizers, and the monitoring of the quality of irrigation water.

Hydraulic and hydro-energetic works aimed at fulfilling the Program for Drainage and water supply to the areas intensively dry and strongly disturbed by desertification processes were implemented. These works guarantee the supply of drinkable water to 28 rural communities of over 300 inhabitants each, thus benefiting 21,698 residents. Among other measures taken to mitigate drought effects, we can mention the establishment of the surveillance system comprising periodic monitoring of the levels of fountains, dams and water tables, and the requirements to decree drought alert and alarm phases as well as contingency plans, as required.

A high priority aspect within the Program to Combat Desertification and Drought is forestation and reforestation, given its effect on desertification prevention, disturbed land recovery and water protection. The experience gathered by the Integral Forest Farms – there are 798 that encompass 91,000 hectares, with a strong economic and social component -- has spread all over the territory. The Cuban forest coverage is now of 21.94%, with a 0.64% of increment in the last two years thanks to the intensive work on reforestation and cooperative surveillance and protection among several entities of the country in order to protect the forest heritage.

The polluting load, as a degrading factor, had a reduction of 44,000 tons of Oxygen Biochemical Demand (DBO) in the 2000-2001 period, resulting from economic good use of wastes and systematic work on environmental protection. In addition to contributing to minimizing the degrading action of pollution on water and soils, such an action reduces the use of surface water and groundwater in the irrigation of plantations, increases agricultural yields and contributes to mitigating drought effects.

As part of territorial demarcation in disturbed areas, an “Analysis and Cartography of the Vulnerability to Food Insecurity in Cuba” was conducted, with special emphasis on the five eastern provinces of Cuba, which have been affected in the last years by intensive and persistent drought processes. Drawing upon a group of physical, social and economic indicators of the aforementioned provinces, this analysis allowed to identify 33 municipalities as Very Vulnerable, 11 as Vulnerable and 10 as Little Vulnerable, the analysis constituting a highly valuable tool due to its practical and methodological usefulness. The outcomes of this study resulted in the Governmental decision to prioritize investments for development in these provinces, which coincides with the territory of three of the eight nationally prioritized watersheds and with the areas most disturbed by the desertification and drought process, according to the NAP.

At the legislative level, a series of laws, decrees, resolutions and provisions that contribute to ordering and institutionalizing the environment system in Cuba and applying the National Program to Combat Desertification and Drought were enacted.

### **VIII.- Credit Appropriations by National Budgets to Support the Application of the Convention and the Volume of Financial Aid and Technical Cooperation Received and Needed, Determination of Needs and Setting of Priorities.**

The Plan of the National Economy continues standing for the clearest expression of the implementation of the national budget and economic planning in Cuba for the development programs in the country. Within the annual investment plans of different ministries and territories there has been an implementation and consolidation of the inclusion of environmental investments, which have averaged 10.8% of the total of annual investments for the 1998-2001 period. Special emphasis has been put on the systematic increase of investments targeting soil improvement, conservation and recovery, though these investments are still insufficient when taking into account the magnitude of the issue that constitutes the main environmental problem in the country.

The National Environment Fund aimed at totally or partially financing projects or environment protection activities is in operation, 35 projects having been financed during 2000 and 2001; all of them are aimed at soil conservation, forest development and hydraulic resources, with total expenses of 39,900 pesos and US \$1,023. Financial difficulties have not enabled to cover the contracted amount of 431,063 pesos and US \$11,371.

#### **IX.- Review of the Baseline and the Indicators Used to Measure Progress and Evaluation.**

During the NAP preparation process, some parameters and indicators were outlined. From the technical standpoint, they are used in Cuba to assess the progress made in the measures applied. They are closely linked to the environmental impact indicators that have been elaborated to measure and assess the environment status in the country and within the National System of Environmental Monitoring (SNMA) that is under preparation as a tool for decision making. The progress made on this subject is slow since it requires refining and implementing the corresponding infrastructure.

#### **Conclusions.**

1. The Revolutionary Government of the Republic of Cuba, despite the difficulties it faces as a developing, blockaded small island state, continues according high priority to the fight against desertification and the phenomenon of drought.
2. The application of the National Program to Combat Desertification and Drought is an answer to this priority and the fulfillment of the international commitments made during the Summit on Sustainable Development and particularly the United Nations Convention to Combat Desertification and Drought, by virtue of which, the political good will of the Cuban State and Government of moving the anticipated actions forward is confirmed, counting with the wide and aware participation of the whole society and, particularly, of the residents in disturbed areas.
3. The continuation of the enforcing actions of the National Action Program (NAP), as a suitable work tool to advance the actions to combat desertification and mitigate drought effects, has shown its capacity for linking and joining the efforts of all the institutions in the country that directly or indirectly relate to this phenomenon. This synergic action towards the innermost institutional infrastructure has also been manifest in the subjects of the different environmental conventions to which Cuba is a contracting party, with the intention of obtaining more integral, efficacious and efficient results.
4. The NAP has been gradually refined and adjusted to the Plans and Programs that are established and working in the national territory, which has propitiated the setting into operation of the NAP, taking advantage of all the possibilities installed, the existing scientific and technical capacity, and the mechanisms created so far.
5. Citizen awareness raising on desertification and drought is a most important, permanently working objective, where the insertion of the environmental dimension in the dynamics of social development is consubstantial to the cultural evolution of society. Going on demonstrating that desertification is an aggression to the economy, the environment, society as a whole, human welfare and human quality of life is part

- of the battle fought through education, training and information dissemination, introduced through the mass media, formal and non-formal education as well as the priority it has been accorded within the National System of Scientific Research and Technological Innovation.
6. The NAP application at the watershed level has shown the wide possibilities of action integration at that level.
  7. Deepening the application of the true and effective synergy among environmental conventions should be accorded an important and singular space in order to obtain more use of the limited resources we have as well as more practical and integral results. This picture should be all-encompassing, it must comprise the institutional, thematic, functional, ecosystem frameworks in an integral, coherent, harmonic way and must characterize the overall application of the national environment-management tools, so as to consequently refine and apply them.
  8. The trained human resources of Cuba are at the disposal of the South-South cooperation; however, diverse ways allowing to make this cooperation wider and more effective in the field of training in desertification and drought must be explored. Likewise, we must intensify the preparation of replicators of the experience gained in the field of sustainable agriculture.
  9. The fundamental ways of NAP financing, through the Plan of National Economy, the National Environment Fund and the International Collaboration, have made evident the crucial need of multiplying the efforts to identify and promote more resources so as to combat desertification and drought. The resources mobilized to date are still insufficient if compared to the huge needs increasing daily due to the cost and extension of actions. This system continues being the main difficulty in the NAP application.

#### **Actions for Future Work.**

1. Strengthen the OCN work and intensify its incidence in its relations with other national and local commissions, bodies and institutions.
2. Widen the participation of the mass media, the teaching and scientific institutions and the NGOs in the awareness raising work with those stakeholders involved in the fight against desertification and drought. Likewise, widen and continue seeking solutions allowing for access to, extension, facilitation and effectiveness of the information on this subject.
3. Hold the National Workshop on desertification parameters and indicators as a way to move the decisions taken by the Science and Technology Committee in the country.
4. Promote a Donor Round Table in order to explore new ways to raise funds for the application of the 14 projects included in the National Action Plan, the 5 projects that resulted from the workshop on synergies and the 2 projects that stemmed from the workshop on saline soils. Likewise, potentiate the pre-project activities implemented within the context of collaboration with the German Federal Republic and the actions anticipated with the Global Mechanism of the Convention for the Cauto River Basin.
5. Promote the creation of the Regional Center for Training in Desertification and Drought, pursuant to the agreements made at the trinational Workshop on saline soils within the context of the Interregional Cooperation Platform.



6. Continue the actions undertaken for effective application of environmental synergies and promote the continuity of workshops allowing to assess those actions.
7. Continue the support to the application of the Convention in Latin America and the Caribbean as well as in other geographic areas that request it; the actions anticipated within the context of the Africa - Latin America and the Caribbean Interregional Cooperation Platform, the work of the Regional Coordinating Unit for Latin America and the Caribbean, the work of the Revising Committee for the Convention Implementation (CRIC) and the Regional Coordinating Committee.