

The role of science and technology

The Convention to Combat Desertification has established a Committee on Science and Technology (CST)

Composed of government representatives, a **Committee on Science and Technology (CST)** provides advice to the Conference of the Parties (COP) on scientific and technological matters relevant to combating desertification and mitigating the effects of drought. By decision 13/COP.8, the operations of the CST shall be reshaped in line with the 10-year strategic plan and framework to enhance the implementation of the Convention (2008-2018). Future sessions of the CST shall be organized in a predominantly scientific and technical conference-style format, bringing on board scientific expertise from the international community to support the work of the CST.

Consistent with the provisions of the Convention, the functions of the CST are as follows

It provides advice to the COP on scientific and technological matters, and collects, analyses and reviews relevant data. In addition, it promotes cooperation in the field of

combating desertification and mitigating the effects of drought through appropriate regional, sub-regional, and national institutions, and in particular through activities in research and development, which contribute to increased knowledge of the processes that contribute to land degradation, desertification and drought as well as their impacts. It also contributes to distinguishing causal factors, both natural and human, with a view to combating desertification and achieving improved land productivity as well as the sustainable use and management of resources.

The Convention promotes international cooperation in scientific research and systematic observation

The CST serves as a liaison between the COP and the scientific community by seeking the cooperation of, and utilizing the services and information provided by, competent bodies or agencies - national, international and non-governmental. The CST keeps itself informed of the activities of the scientific advisory bodies of the other Conventions and coordinates the activities of the COP in order to avoid duplication and optimize efficiency.

In the framework of the CST activities, new technologies and know-how are being developed, transferred to affected countries, and adapted to local circumstances

Modern communications, satellite imagery, and genetic engineering are only a few examples of modern tools that can help in combating desertification. Better weather forecasts and alerts can help to maintain or increase the land's productivity while improving food security and local living conditions. So too can new plant and animal varieties that are resistant to pests, diseases, and other dryland stresses. Photovoltaic cells and wind energy may reduce the consumption of scarce fuel wood and thus deforestation. For all these reasons, the Convention commits Parties to encourage technological cooperation. It calls for the promotion and financing of the transfer, acquisition, adaptation, and development of technologies that help to combat desertification or cope with its effects. These technologies should also be environmentally sound, economically viable, and socially acceptable.

Many related international organizations and the CST have identified traditional knowledge

and know-how as very important means of combating desertification and mitigating the effects of drought

People have been coping with the degradation of land and other natural resources since the introduction of agricultural practices thousands of years ago. Many local populations have developed techniques for managing soil and water, domesticating plants and animals, and even for forecasting the weather. Examples include the terracing of steep slopes in the Andes and Himalayas and the use of irrigation systems around the world since prehistoric times. Many of these traditional technologies are still in use and have proved their effectiveness over centuries. Too often, however, changes in economic, ecological, or cultural conditions have led people to abandon techniques that could still be valuable today. The Convention states, therefore, that traditional and local technologies and know-how should be protected, promoted and used.

The COP works to draw scientific and technology researchers into a global network to support the Convention

Under the leadership of the COP, the CST has surveyed and identified existing networks, institutions, agencies, and other bodies working on issues relevant to desertification, and has established a database based on their responses. It evaluates the principal potential units in certain regions and subregions through a pilot in-



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depth survey, and then replicates it in other regions in order to recommend to the COP ways and means of facilitating and strengthening networking of the units at the local, national and other levels, with a view to promoting a global research network committed to supporting the Convention. Scientists worldwide are always encouraged to contribute with their knowledge and research results to this international effort.

Capacity building, education and training are essential to help affected developing countries in combating desertification at local level

Developing countries often suffer from a scarcity of domestic skills, expertise, libraries, and research centres. Many also need improved hydrological and meteorological services. The Convention encourages developed countries to support capacity-building efforts, which will enable developing countries to combat desertification more effectively through science and technology.

In order to improve the efficiency and effectiveness of the CST, the COP established a Group of Experts (GoE)

Until its terms of reference concluded in 2007, the GoE played an important institutional role, providing the CST with information on the current knowledge, the extent and the impact, the possible scenarios and the policy implications on various themes assigned in its work programme. Its achievements included developments of: communication strategies between the activities of the GoE, end-users and the research community; guidelines to update the world atlas of desertification; an integrative assessment methodology for poverty and land degradation; recommendations on ways to eliminate perceived gaps between biophysical, socio-economic and cultural knowledge and activities to combat desertification; methodologies for assessment of desertification; guidelines for both short-term and long-term early warning systems; and common benchmark and indicator systems for the monitoring and assessment of desertification.

Relevant parts of the Convention

Articles 8, 16, 17, 18, 24 and 25

