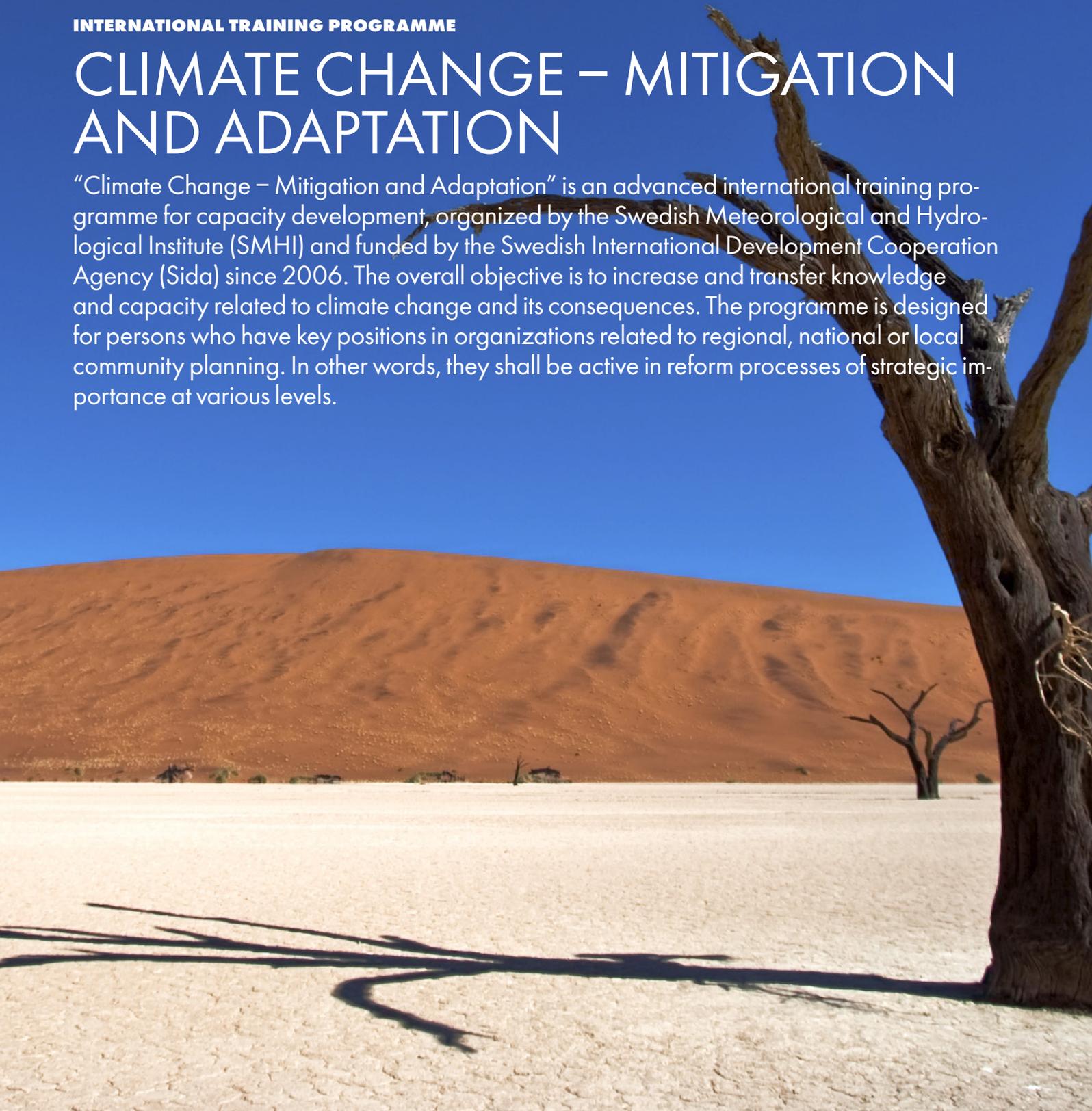


INTERNATIONAL TRAINING PROGRAMME

CLIMATE CHANGE – MITIGATION AND ADAPTATION

“Climate Change – Mitigation and Adaptation” is an advanced international training programme for capacity development, organized by the Swedish Meteorological and Hydrological Institute (SMHI) and funded by the Swedish International Development Cooperation Agency (Sida) since 2006. The overall objective is to increase and transfer knowledge and capacity related to climate change and its consequences. The programme is designed for persons who have key positions in organizations related to regional, national or local community planning. In other words, they shall be active in reform processes of strategic importance at various levels.





Adaptation is a main focus of the ITP programme. Women farmers making erosion proof ridges to slow down rainwater.

The programme aims at providing methods for identification of vulnerable sectors in the society. Mitigation and adaptation to future climate conditions and development of action plans are other important aspects. In the long-term perspective, the programmes shall contribute to institutional strengthening and capacity development in the co-operating countries.

ITP CLIMATE CHANGE – A SUCCESS STORY

Until now, more than 500 participants worldwide have undergone the training. An evaluation after the just completed programme shows that as many as 95 % responded that it had been beneficial to a large or very large extent. Most respondents said that they are still using the knowledge and tools they received during the programme. Experiences from the programme have been very positive in general and it is obvious that this type of training programme fulfils a need for many organizations.

The training programme is mainly based on lectures, exercises and field visits. Much of the time, however, is dedicated to group exercises, which helps to bring participants of different nationalities and backgrounds closer together and encourages networking long after the training programme has ended. An essential aspect of the programme is that it provides a forum for discussions and exchange of experience between participants, lecturers and specialists.

The majority of participants who answered the survey after the programme have joined an existing network. A number of new climate change networks have also been started by ITP alumni.

Many of the participants believe that their participation in the programme has led to an increased awareness among the public and decision-makers. Over 80 % answered that the programme had led to greater influence to a large or a very large extent. A single participant cannot change anything unless the rest of the community understands the importance of the problem and therefore this is an important step towards real change.

CHANGE PROJECTS

During previous programmes, we have witnessed a great variety of individual project works. The majority of the studies have been oriented towards water resources, agriculture and education and communication.

BURKINA FASO

One example from West Africa discusses the climate impact on surface water resources in the Niger watershed in Burkina Faso. The project report highlights the climate related water stresses that affect the already daunting hunger and poverty. The author recommends large scale studies to further understand more on the climate impacts on surface water resources.

TANZANIA

The project work from Tanzania underlines climate variability as a big challenge to farmers, particularly those who solely depend on rainfall to grow their crops. For various reasons there is widespread lack of use of weather and climate information in farm management. The



Participants during a lecture at SMHI in Sweden.

author believes that the application of climate forecasts can significantly improve the farmers' decision-making and adaptation to the changing climate.

ZAMBIA

The *Zambian* example emphasises the need for communication networks for disseminating climate change information and raising of awareness in rural communities. The results show that rural communities are aware that climate is changing but they know little about the causes. The project achieved the goal to disseminate climate change information in three communities and to raise awareness on climate change amongst them. This in the end enabled the communities to identify climate hazards affecting their area and develop appropriate coping strategies.

NEW ROUND OF CLIMATE CHANGE ITP STARTED IN 2015

A new series of the Climate Change – Mitigation and Adaptation programme is ongoing, with the first course started in autumn 2015. In this ongoing ITP, even more emphasis is put on the end-user focus as well as on a more technical and hands-on content.

Ultimate beneficiaries of actions to cope with a changing climate and its negative impacts is the general public in a country, among them often the poorest and most vulnerable such as women and children. Experts and decision-makers at regional, governmental, district and local authorities, NGOs, etc., will more directly benefit from new knowledge, experience and lessons learnt by others, thus allowing them to make better

informed decisions. Agriculture and water resources are key focal points in the ITPs.

The ongoing ITP targets some developing countries in West, East and Southern Africa, all of them being partner countries within the Swedish Development Cooperation.

Activities during an ITP include a start-up seminar in the region followed by a training period in Sweden. After this initial phase, the participants concentrate on their change project which is – in contrast to earlier ITPs – more focused on the participant's organisational goals rather than an individual project work. This setup allows for long-term projects that ideally could be continued by other upcoming participants from the same organisation, thus leading to a process of change. Long-term commitment of the participating organisations (3-5 years) is therefore a key factor for the success of this institutional development project.

Examples of possible organisation-owned projects could be "Improved access to and uptake of climate information" or "Assessing cost effectiveness of adaptation methods as means for prioritising actions".

The Climate Change ITPs in African countries additionally form a part of a wider concept on , Water and Climate Change Information for Africa (WACCA), which consists of three closely linked themes:

Theme 1: Education, ITP and other courses

Theme 2: Water Information Services

Theme 3: Climate Information Services

SMHI FACTS

The Swedish Meteorological and Hydrological Institute (SMHI) is a government authority subordinate to the Ministry of the Environment. SMHI has integrated expertise in the fields of meteorology, hydrology, oceanography, and climate science. Activities centre on forecasting, environmental monitoring, research, early warning and international co-operation including capacity building and consulting. Products and services offered focus on general weather forecasts, customised forecasts, climate modelling, analyses, surveys, statistics, expert opinions and reports, and comprehensive climate studies. Core operations include monitoring net-works, systems development, compilation and storage of large datasets and laboratory activities. The institute represents Sweden in the World Meteorological Organisation (WMO) and actively contributes to activities within the World Climate Research Programme (WCRP).

ROSSBY CENTRE RESEARCH AND DEVELOPMENT

The Rossby Centre is SMHI's climate modelling research unit, a leading centre in Europe with long expe-

rience in regional dynamical downscaling for Europe, Africa, Latin America and other regions around the globe. The Centre pursues research on climate processes and on the behaviour of the climate system. The principal tools are the global and regional climate models developed within the research unit. Research activities focus on increasing knowledge of the future climate, covering meteorological, oceanographic and hydrological aspects.

Work is conducted both on model development and evaluation of data, as well as modelling applications for process studies and climate change research in support of impact and adaptation studies.

The Rossby Centre is involved in a number of national and international projects within climate modelling, climate change research and the application of climate change information in support of downstream research and decision making.

HYDROLOGY RESEARCH AND DEVELOPMENT

The hydrology research unit at SMHI is at the forefront of hydrological research and modelling. The group has developed and continue to support the state-of-the-art operational hydrological model HYPE-Hydrological Predictions for the Environment.

HYPE is a free of charge, open source hydrological modelling initiative which provides transparency and ownership to many users around the globe. HYPE is used both operationally and in hydrological research and is increasingly strengthening international collaboration in hydrological modelling and data production.

INTERNATIONAL PROJECT OFFICE FOR CORDEX

In 2015, following a keenly competitive selection process, SMHI was chosen by the World Climate Research Programme (WCRP) as host institution of the new International Project Office for CORDEX (Coordinated Regional Climate Downscaling Experiment). CORDEX is a global collaborative initiative to develop regional climate scenarios for the world's land areas.

The Office supports the development of climate models and projections of future climate, facilitates cooperation between regions and countries, and promotes knowledge exchange and capacity building with a particular focus on developing regions.

SWEDISH NATIONAL KNOWLEDGE CENTRE FOR CLIMATE CHANGE ADAPTATION

In 2012, the Centre was established to be a resource for those with a responsibility for, or interest in, Sweden's

adaptation to the impacts of climate change. It provides tools and information to help society cope with a changing climate today and in the future. The Centre links science, policy and practice, bringing together the decision makers, businesses, research providers and organisations that make climate change adaptation happen. It collects, develops and shares research, information from authorities and good examples to facilitate sound decision making.



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