



**Framework Convention on
Climate Change**

Distr.: General
17 November 2011

English only

Subsidiary Body for Implementation

Thirty-fifth session

Durban, 28 November to 3 December 2011

Item 5(c) of the provisional agenda

Financial mechanism of the Convention

Other matters

Support provided to developing country Parties and activities undertaken to strengthen existing and, where needed, establish national and regional systematic observation and monitoring networks

Note by the secretariat

Summary

This document contains information on support provided to developing country Parties and activities undertaken to strengthen existing and, where needed, establish national and regional systematic observation and monitoring networks, based on information contained in the relevant submissions from Parties and information contained in the fifth national communications of Parties included in Annex I to the Convention.

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I. Introduction

A. Background

1. The Subsidiary Body for Implementation (SBI), at its thirty-fourth session, considered¹ the invitation made by the Subsidiary Body for Scientific and Technological Advice (SBSTA) at its thirty-third session² to discuss the funding needs for global climate observations and to explore how further support could be provided to strengthen observation networks and capabilities in developing countries, especially the least developed countries (LDCs) and small island developing States.

2. In considering the invitation of the SBSTA, the SBI noted the information related to additional funding needs identified in the 2010 updated Global Climate Observing System (GCOS) implementation plan³ and emphasized the importance of ensuring that these needs be taken into account in the future financial architecture of the Convention, recognizing that their funding is also being processed through multiple existing channels, including those under other specialized programmes, such as GCOS, and other conventions.⁴

3. The SBI invited Parties to submit to the secretariat, by 19 September 2011, information on support provided to developing country Parties and activities undertaken to strengthen existing and, where needed, establish national and regional systematic observation and monitoring networks, for compilation into a miscellaneous document for consideration by the SBI at its thirty-fifth session.⁵

B. Mandate

4. The SBI requested the secretariat to compile, into an information document, information from the national communications of Parties included in Annex I to the Convention (Annex I Parties) and from the submissions of Parties, referred to in paragraph 3 above, containing information on support provided to developing country Parties and activities undertaken to strengthen existing and, where needed, establish national and regional systematic observation and monitoring networks.⁶

C. Objective and scope

5. This document compiles and synthesizes the information provided in the fifth national communications of 25 Annex I Parties on the support provided by Annex I Parties to developing country Parties relating to systematic observation and monitoring networks, as well as the information provided in the submissions referred to in paragraph 3 above received from developed and developing country Parties.

6. The compiled information from the fifth national communications of Annex I Parties was taken from the chapters on research and systematic observation and on financial resources and technology cooperation. The compilation and synthesis of the fifth national

¹ FCCC/SBI/2011/7, paragraph 57.

² FCCC/SBSTA/2010/13, paragraph 57.

³ A summary of the plan is contained in FCCC/SBSTA/2010/MISC.9.

⁴ FCCC/SBI/2011/7, paragraph 59.

⁵ FCCC/SBI/2011/7, paragraph 61.

⁶ FCCC/SBI/2011/7, paragraph 62.

communications of Annex I Parties contains additional information on the issue of research and systematic observation in general.⁷

7. The secretariat received six submissions in response to the invitation referred to in paragraph 3 above, from Australia, Colombia, El Salvador on behalf of Guatemala and Honduras, Pakistan, Poland and the European Commission on behalf of the European Union and its member States, and the United States of America. Those submissions have been compiled into a miscellaneous document⁸ and the information contained therein synthesized in this document.

D. Possible action by the Subsidiary Body for Implementation

8. The SBI may wish to consider the information contained in this document to guide its deliberations on the funding needs for global climate observations and to explore how further support could be provided to strengthen observation networks and capabilities in developing countries.

II. Information from the fifth national communications of Annex I Parties on support provided to developing country Parties and activities undertaken

A. Capacity-building and training relating to research and systematic observation

9. Parties reported in their fifth national communications on support provided for activities relating to systematic observation and monitoring in developing countries. Many of the activities have a strong emphasis on general capacity-building and training, whereas other activities are aimed specifically at enhancing institutional capacity, which involves aspects of data collection and management.

10. Support has been provided through bilateral and multilateral assistance and cooperation programmes and projects, which include international research forums and consortia, as well as United Nations organizations and international research programmes, such as the World Meteorological Organization (WMO), the Sixth and Seventh Framework Programmes of the European Commission, the United Nations Environment Programme and the Ibero-American Network of Climate Change Offices (RIOCC), with the main focus on bilateral and regional cooperation. Support for capacity-building activities has also been channelled through GCOS and its Cooperation Mechanism. In general, capacity-building activities, including the enhancement of institutional capacity, to strengthen systematic observation and monitoring abilities range from training and the transfer or enhancement of knowledge and education to the establishment of various weather, meteorological and hydrological observation, monitoring and/or information stations. Financial and personnel support were provided for the application and management of research and data and the implementation of practices and processes in systematic observation.

11. It is difficult to distinguish between activities relating to capacity-building, training, institutional capacity-building and data collection and management, as Parties used these terms interchangeably in their national communications.

⁷ FCCC/SBI/2011/INF.1/Add.2, paragraphs 96–107.

⁸ FCCC/SBI/2011/MISC.6 and Add.1.

1. Capacity-building and training activities

12. A number of the activities reported by Annex I Parties in the field of capacity-building and training aim at enhancing national meteorological and hydrological services in order to also strengthen national climate forecasting systems and networks with a view to improving the understanding of possible climate change impacts, especially in developing country Parties. Support provided includes building up technical expertise and know-how, as well as establishing networks of scientists by, inter alia, training personnel and holding workshops, technical seminars and meetings.

13. Training activities supported by Annex I Parties include the training of local personnel in improved data collection, remote sensing and respective meteorological projection methods, as well as in the digitization and distribution of climate data. For example, one Annex I Party reported the provision of general assistance and routine in-country technical preventive and emergency maintenance support to GCOS Upper Air Network stations. Additionally, transfer of skills and technology were reported by some Annex I Parties.

14. The promotion of the exchange of knowledge, information and experiences in relation to climate change research and systematic observation, as well as the establishment of integrated observation networks employing satellite, oceanic and land observation systems and building observation networks in areas lacking such facilities, were among the activities reported by Parties. Developing country Parties were encouraged and supported by Annex I Parties in accessing and contributing to global observation systems, such as GCOS, through the provision of relevant information.

15. Contributing to the existence of viable and up-to-date climate projection software, and the provision of the related technology and training, were some of the major aims of many reported projects aiming to reduce climate-related risks as well as to support the adaptation activities of developing country Parties.

2. Institutional capacity-building, and data collection and management activities

16. Regarding institutional capacity-building, the overall aim of the support provided is the implementation of, and enhancement of the ability to perform, monitoring and observing activities using relevant technologies. Support provided was delivered through assistance in terms of research collaboration, enhanced climate data collection and management systems, and the improvement of forecasting systems and services, etc. Some of the activities supported were, inter alia, capacity-building in the area of institutional approaches to the long-term and sustainable operation of modernized observing networks, the re-establishment of networks of meteorological stations, and the provision of institutional capacity for systematic planning and management by developing decision support tools.

17. Some of the Annex I Parties reported on support provided in relation to the integration of the management of climate change into decision-making processes by producing climate data and projections, as well as on support in relation to the promotion of cooperation between research institutions in order to advance a socially robust knowledge basis for mitigation actions and to generally build up competence and capacity.

18. In terms of data collection and management, activities included, inter alia: the creation of climatological databases; the establishment of systems of data collection; the establishment of regional information systems for the collection of data and the monitoring of climate variability and change; as well as the provision of information from various relevant sources, such as improved monitoring services, and geospatial data for scientific knowledge and decision-making.

19. Contributions to better tools, methods and methodologies in recipient countries for the enhancement of institutional data collection and management, as well as the upgrading of the quality of data and information, were also supported by many Parties, including the provision of practical tools and equipment. Additionally, scientific and technological know-how for monitoring and assessing vulnerabilities was provided in relation to, inter alia, ecosystems, biodiversity, water resources and coastal zone management, deforestation and forest degradation, and poverty reduction in developing countries.

20. Many of the activities reported by Annex I Parties also aim at enhanced institutional capacity-building and data collection and management on a global scale through the support of the establishment of global monitoring systems and stations utilizing satellite imagery, offering a range of climatic and geospatial data for a variety of uses and users.

B. Strengthening observation networks and monitoring

21. Annex I Parties provided in their fifth national communications information on their commitment to supporting systematic observation in developing countries, and they reported on a number of activities that aim to strengthen existing national and regional systematic observation and monitoring networks, as well as to fill gaps in observations by establishing new observing stations and networks.

22. Channels for providing support include development assistance, regional and bilateral cooperation, and the funding of projects and partnerships established by the institutes of meteorology and hydrology and other national institutes with respective counterparts in developing countries. Support for regional cooperation on climate monitoring and related activities (e.g. Climate for Development in Africa, and the Pacific Islands Global Climate Observing System), GCOS Regional Action Plans and participation in the GCOS Cooperation Mechanism have been highlighted as channels for providing support to strengthen the capacity for the monitoring of the essential climate variables (ECVs) in developing countries. Parties have also provided support through financial instruments, such as the Global Environment Facility (GEF).

23. Examples of regional and international research consortia include the Sixth and Seventh Framework Programmes of the European Commission, the Asia-Pacific Network for Global Change Research and RIOCC, which fund several initiatives related to the development and improvement of monitoring networks, the collection, exchange and use of observational data, and related capacity-building, including in the LDCs and countries in their respective regions.

24. Parties contributing to the operation of global observation programmes, including satellite observations, reported on several activities aiming to enhance observations in the atmospheric, oceanic and terrestrial domains, which have global coverage.

Box 1

Selected example of an activity related to strengthening observation networks and monitoring

The Royal Netherlands Meteorological Institute participated in the Global Climate Observing System (GCOS) Cooperation Mechanism through a EUR 800,000 total contribution for the 2007–2010 period to the GCOS Regional Action Plan for Africa, and it has coordinated and provided support of EUR 100,000 annually for the operation of a Global Atmosphere Watch station at the Meteorological Service of Suriname in Paramaribo. There are plans under development for further capacity-building with regard to atmospheric monitoring at the Anton de Kom University in Suriname.

1. Atmospheric domain

25. Several Annex I Parties reported on support provided to atmospheric observation networks in developing countries for measuring the atmospheric ECVs of GCOS, which include temperature, wind speed and direction, water vapour, pressure, precipitation, radiation budget, cloud properties and composition of the atmosphere (greenhouse gases (GHGs), ozone and aerosol properties).

26. Activities reported cover the monitoring of meteorological, hydrological, radiative and climatological parameters and measurements of the composition of the atmosphere. Examples of activities include:

(a) Providing technical aid and general assistance to establish, strengthen, maintain and operate meteorological observing networks and weather services;

(b) Setting up permanent automatic meteorological stations, supporting the ground verification of satellite measurements and providing reference climate data records for use by the LDCs;

(c) Developing regional action plans for the improvement of weather and climate observation networks and services, including with the aim of strengthening capacity in weather-related disaster management and climate change adaptation;

(d) Promoting collaboration on climate monitoring between national meteorological services, universities and research centres;

(e) Responding to the updated GCOS implementation plan and providing support to global observation campaigns such as the GCOS Reference Upper Air Network.

27. Some Annex I Parties reported on specific observation activities, including scientific and technical cooperation in the development of precipitation measuring technology using radar technology, and the remote sensing of aerosols to provide globally distributed observations of spectral aerosol optical depth, inversion products and precipitable water in diverse aerosol regimes. Examples of activities relating to ozone and trace gas measurements include the ground verification of satellite tropospheric ozone measurements in tropical and subtropical regions of the southern hemisphere. The Atmospheric Brown Clouds research cooperation programme between Asia, Europe and United States was included in some Parties' fifth national communications as an initiative addressing the contribution of the burning of wood and cowpats to climate change and the environmental consequences of rising levels of aerosol use in the Asia-Pacific region.

2. Terrestrial domain

28. The updated GCOS implementation plan specifies a number of terrestrial ECVs, which relate to surface and groundwater, water use, cryosphere, land cover and its physical characteristics (albedo, fraction of absorbed photosynthetically active radiation and leaf area index), soil characteristics (soil carbon and moisture), above-ground biomass and fire disturbance. Some Annex I Parties included in their fifth national communications information on activities and support provided in relation to strengthening observation networks and monitoring within the terrestrial domain.

29. Support reported in terms of monitoring activities in the terrestrial domain includes: land-cover mapping, with a focus on agriculture; observations of forests using satellite imagery and space-based and on-the-ground observations of land cover and forest changes, in order to contribute to the global monitoring of terrestrial resources and the study of global changes in order to improve natural resources management; lake observations and physiochemical surveys in crater lakes; the monitoring of ice caps and glaciers, including

the collection of photographic documentation; and water management mapping in support of developing adaptation strategies and improving resilience.

30. One Annex I Party also reported on activities in relation to flood forecasting and prediction systems for use in regions with poor hydrological information, utilizing data on rainfall amounts observed by artificial satellites.

3. Oceanic domain

31. A few Annex I Parties reported on activities related to the observation of the ECVs for the oceanic domain, including: temperature, salinity, current, partial pressure of carbon dioxide and ocean acidity for both surface and subsurface water; sea level, sea state, sea ice, ocean colour and phytoplankton for surface water; and nutrients, oxygen and tracers for subsurface water.

32. Such activities include surface water and marine observations by providing fixed and surface-drifting buoys, subsurface floats and volunteer observation ships, providing support through a network of sea-level tidal gauges, the regional analysis of climate change on coral bleaching, cyclone intensity, sea level rise and destruction of corals, and the strengthening of observation systems and warning systems.

33. Additionally, the provision of data and the implementation of regional-scale weather and sea forecasting systems were reported in relation to the oceanic domain.

4. Satellite observations

34. Parties with satellite observation programmes that also support space agencies reported on a range of space-based observations with global coverage, which include the monitoring of nearly all aspects of the Earth system, including the atmosphere, land and oceans. Many Parties also reported on their satellite observation activities in the context of the Global Earth Observation System of Systems.

35. Activities reported in this context include supporting the detection of natural hazards, such as severe storms, floods, drought, landslides and wildfires, by improving environmental satellite coverage, as well as improving observing systems for water resource management. Initiatives related to the collection, exchange and use of observations in the LDCs with the aim of quantifying and understanding the carbon cycle and other GHG emissions were also reported, as well as the harmonization of efforts in the area of marine monitoring.

36. Further support includes work on a georesource information system for Africa, providing GEONETCast⁹ applications for developing countries, and maintaining observational records of stratospheric ozone, radiative energy fluxes of the Sun and the Earth, atmospheric carbon dioxide, global surface temperature and global sea levels.

37. Other reported activities include the provision of support through ground-based, air-based and ocean-based monitoring devices which provide high-quality observation data for multiple uses, such as urban planning, adaptation to climate change, disaster reduction, disease control and humanitarian relief.

⁹ GEONETCast is a “near real time, global network of satellite-based data dissemination systems designed to distribute space-based, air-borne and in situ data, metadata and products to diverse communities”; see <<http://www.earthobservations.org/geonetcast.shtml>>.

C. Climate observations and monitoring reported in the context of climate change research, projections and services

38. Many Parties reported on activities to strengthen the availability of climate data and information in order to enhance understanding of the climate and the impacts of climate change in developing countries.

39. Research activities reported by Annex I Parties addressing global issues with relevance to developing countries include: research to track trends in climate and to understand climate drivers and processes such as ocean acidification and sea level rise in the Pacific region; bilateral research cooperation programmes in Africa, Asia and Latin America, related, inter alia, to climate change impact and disaster mapping and risk reduction in various sectors; as well as collaborative research to further develop the understanding of potential climate change impacts, with the aim of, for example, developing strategies to reduce the socio-economic impacts of climate variability and change.

40. Some Annex I Parties also reported on support through: the provision of monthly and seasonal climate forecasts and weather forecasts in the short and medium terms; the development of climate change scenarios for, inter alia, river systems; as well as improved climate information, aiming, for example, to provide weather and climate information that is useful to rural communities and populations in remote regions of Africa, Asia, the Pacific, and Central America, thereby supporting adaptation to climate change in those regions.

41. A number of Annex I Parties reported various forms of collaboration, such as in the development and testing of a system integrating satellite-based and other existing spatial data sets to provide maps and information products related to land use, land-use change and forestry, as well as collaboration on researching impacts of climate change on agriculture and on strengthening climate change adaptation.

42. One Annex I Party reported on projects covering agriculture, coastal zone management, disease prediction models and urban issues.

43. In addition, many of the projects reported which include components to strengthen observation capacities, such as those carried out within a regional research framework, include further developing the data acquired into information and service products, such as improved weather forecasts, thereby supporting adaptation efforts and strategies in various sectors.

Box 2

Selected example of an activity related to climate observation and monitoring

From 2008 to 2011, Australia, within the framework of the Pacific Climate Change Science Program, has carried out research for example to track trends in climate and to understand climate drivers and processes such as ocean acidification and sea level rise in the Pacific region. The Pacific Islands – Climate Prediction Project has enhanced the capacity of Pacific Islands' national meteorological and hydrological services in seasonal climate forecasting. Australia's contribution to the project was 20 million Australian dollars.

III. Information from the submissions of Parties on support provided to developing country Parties

44. Following the invitation of the SBI referred to in paragraph 3 above, the secretariat received submissions from Australia, Colombia, El Salvador on behalf of Guatemala and Honduras, Poland and the European Commission on behalf of the European Union and its member States, and the United States containing information on support provided to developing country Parties and activities undertaken to strengthen national and regional systematic observation and monitoring networks. Tables containing a summary of information on funding support provided and received can be found in the annex to this document.

45. The submissions received contain information on various kinds of activities undertaken by both developed and developing country Parties in relation to capacity-building and training and monitoring and systematic observation, with both a regional and a global focus, in order to strengthen national and regional systematic observation and monitoring networks. The submissions include an overview of activities and some examples of project-based information. A few of the submissions also include needs and challenges identified in relation to support provided to developing country Parties. The support provided follows, in many cases, the implementing actions included in the updated GCOS implementation plan and flows through multilateral channels, such as WMO and the Adaptation Fund, as well as through bilateral channels.

A. Capacity-building and training relating to research and systematic observation

46. In their submissions, Parties provided information on various kinds of activities in relation to capacity-building and training for the strengthening and establishment of national and regional systematic observation and monitoring networks.

47. Most of the submissions include information on a wide range of capacity-building activities, comprising, inter alia: the installation and upgrading of observation equipment; the provision of maintenance of observation equipment; the maintenance of hardware and software for the satellite systems of the Tropical Cyclone Warning Centre in Indonesia; work to implement the national policy on climate change through various components, including capital contributions, and technical and financial assistance for reducing vulnerability and improving adaptation; the creation and maintenance of websites; and the establishment of interdisciplinary groups on climate change specific issues, such as sustainable land management.

48. A number of the submissions mention training activities, such as the training of professionals for data generation, the development of climate scenarios for adaptation and the purchase of equipment, as well as for disaster risk management and climate database management, through, inter alia, training workshops, networking and outreach. For example, one Annex I Party operates the Regional Instrument Centre, which provides training as well as calibration services and meteorological advice to national meteorological organizations within WMO Regional Association V, which includes South Pacific Island countries, East Timor, Indonesia, Malaysia and Papua New Guinea.

49. Many activities listed in the submissions focus on data collection. For example, the provision of satellite data through SATAID is part of the support provided by one Annex I Party, which allows low-resolution data access to the meteorological services of Pacific nations. Another project of an Annex I Party brings together disparate sources of environmental, added-value data sets (both in situ and satellite based) in Africa, Europe and

South America and disseminates the data sets in (near) real time and at a low cost via GEONETCast. One developing country Party included information on the Global Change Impact Studies Centre in its submission, which provides research and assistance to national planners and policymakers, including on, inter alia, climate scenarios, impacts on water resources and food security, the development of climate extremes indices for the South Asia region and the development of seasonal, inter-annual and decadal predictability systems.

50. On data management, activities include the digitization of data, data storage and retrieval, as well as system upgrades. One Annex I Party's submission provides information on projects that aim at providing support and training in order to rescue, rehabilitate and analyse observational data through the Pacific Climate Change Science Program, including the development of tools that will be provided to partner countries together with training in their use, and the provision of and training in relation to climate database management systems. Additionally, that Party provided information on work in relation to data rescue.

B. Strengthening observation networks and monitoring

51. Most of the submissions include information on various kinds of activities in relation to national and regional systematic observation and monitoring networks with both regional and global coverage in terms of support provided and received.

52. Activities listed in many of the submissions in this context include support provided for the building of earth observation capacities for, inter alia, agriculture and forest management and warning systems, as well as support provided and received for the strengthening or re-establishing of national meteorological and hydrometeorological networks. The aim of these activities is to improve, for example, the quality and quantity of information on scientific, technical and socio-economic aspects of climate change impacts, vulnerability and adaptation, as well as to improve the creation of tools and the information available in order to assess climate risk.

53. For example, one Annex I Party, which also hosts the World Data Center for Climate, focuses its support on atmospheric, oceanic and terrestrial systems that provide global coverage using satellite-based climate sensors and in situ platforms. Another Annex I Party provided information on the Pacific Islands Climate Prediction Project Phase 2, which fostered networking among 10 Pacific national meteorological and hydrological services through a monthly online Climate Outlook Forum teleconference. Further examples of developed country Parties' activities include, among others, funding GCOS Upper Air Network observing on small islands, as well as the construction of an observing system, out of existing ground measurements and current and future satellites, to determine and monitor the water yield of the Tibetan Plateau.

C. Needs identified in relation to support provided to developing country Parties

54. Two of the submissions received include a range of needs and challenges identified in relation to support provided to developing country Parties.

55. One submission from a developing country Party highlights various challenges in the area of finance, including, inter alia: a lack of adequate and predictable financial resources, which causes changes in the amount of resources available, thus limiting the quality and range of activities; the problem of different funding sources, with different administrative accounting systems, complicating the implementation of projects; the high cost of technology as well as the lack of knowledge on sustaining the respective types of

technological systems and adapting such technologies to national needs in general; and a general lack of funding from the GEF within the particular region. Overall, the Party indicates in its submission that, in order to develop national networks and improve systematic observation and monitoring, short-term funds are essential to continue strengthening the networks covering the entire region, while medium-term funds are accordingly required to keep these systems functional.

56. Another submission from an Annex I Party includes a range of needs identified in relation to the strengthening of systematic observation. It states that the dimension of the support provided depends on the situation and context of the individual donor countries. Adequate longer-term support is pointed out to be better able to address improvements of climate observing systems, as addressed in the updated GCOS implementation plan. Additionally, the submission identifies the reporting mechanism within the evolving reporting system on financial support under the Convention as potentially being able to improve the identification of financial resources in the context of support provided for the strengthening of systematic observation in developing countries at the national, regional and international levels.

Annex

Tables summarizing the information on funding provided in the submissions included in document FCCC/SBI/2011/MISC.6 and Add.1

Table 1

Parties providing support to developing country Parties and activities undertaken to strengthen existing and, where needed, establish national and regional systematic observation and monitoring networks

<i>Party</i>	<i>Activity</i>	<i>Funding provided</i>	<i>Channels for support</i>	<i>Other</i>
Australia	Installation and upgrade of observation equipment	6,968,000 Australian dollars (AUD) (one-off)	AusAID, Bureau of Meteorology, Torres Strait Regional Authority and Fiji Meteorological Service	
Australia	Maintenance of observation equipment and related systems	AUD 755,000 annually and AUD 10,000 as a one-off	AusAID, Bureau of Meteorology and Badan Meteorologi, Klimatologi, dan Geofisika	
Australia	Operation of the Regional Instrument Centre	AUD 12,000 biannually, AUD 7,000 annually and AUD 22,000 as a one-off	Bureau of Meteorology	
Austria	Reducing climate change induced risks and vulnerabilities from glacial lake outburst floods	EUR 600,000	Austrian development aid	Duration 2008–2012
Austria	Technical Advisory Missions to developing countries and support for their participation in regional workshops (as part of the United Nations Platform for Space-based Information for Disaster Management and Emergency Response, in cooperation with the United Nations Office for Outer Space Affairs)	EUR 50,000		Duration 2009–2010
Belgium	UNESCO-WATCH (development of an operational remote sensing monitoring system of the United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage natural sites in tropical forest environments)	EUR 229,603		
Belgium	VEGECLIM (integrating SPOT-VEGETATION 10-year time series and land-surface	EUR 637,689		

<i>Party</i>	<i>Activity</i>	<i>Funding provided</i>	<i>Channels for support</i>	<i>Other</i>
	modelling to forecast the terrestrial carbon dynamics in a changing climate)			
Denmark	Twinning project with the Zambia Meteorological Department on capacity-building in climate monitoring and modelling and the dissemination of weather and climate products	EUR 70,000		Duration from November 2009 to December 2012
Denmark	Development project with the Meteorological Services Department of Ghana to re-establish a network of meteorological stations in the country			Duration 1997–2004
European Commission	GEONETCast ^a for and by Developing Countries	The total project costs are EUR 2,140,000; European Union (EU) co-financing of EUR 1,850,000		Initiation on 1 May 2008, duration 36 months
European Commission	CEOP–AEGIS ^b	The total project costs are EUR 4,460,000; EU co-financing of EUR 3,400,000		Initiation on 1 May 2008, duration 48 months
European Commission	GEOCARBON (operational global carbon observing system)	EU co-financing of EUR 6,650,000		Initiation on 1 October 2011, duration 36 months
European Commission	AGRICAB (framework for enhancing earth observation capacity for agriculture and forest management in Africa as a contribution to the Global Earth Observation System of Systems)	Project funding of EUR 3,500,000		Initiation on 1 October 2011, duration 42 months
Finland	Finnish Meteorological Institute projects funded by the Ministry for Foreign Affairs of Finland	EUR 3,430,000		Duration 2009–2012
Germany	Support to observing systems for climate in developing countries	USD 290,000	Contribution to World Meteorological Organization (WMO) Voluntary Cooperation Programme (VCP)	2010
Germany	Projects to support observing systems for climate and data management and related information activities and warning systems	USD 3,900,000	Contribution to WMO VCP	2010

<i>Party</i>	<i>Activity</i>	<i>Funding provided</i>	<i>Channels for support</i>	<i>Other</i>
Germany	Projects indirectly supporting observing systems for climate in developing countries	USD 800,000		2010
Germany	Project to establish a database to manage climate adaptation information in Indonesia	USD 3,000,000		Duration from November 2010 to November 2013
Netherlands	Joint project of the national meteorological services of Indonesia and the Netherlands to digitize climate data	EUR 300,000		Duration 2009–2011
Netherlands	Donation to trust fund of the Global Climate Observing System Cooperation Mechanism	EUR 900,000		Duration 2007–2011
Spain	Trust fund for the Ibero-American Cooperation Program	USD 3,793,821		Duration 2007–2010
Spain	Trust fund for the West African Cooperation Program	USD 2,594,566		Duration 2009–2010
Spain	Provision of ozonesonde equipment to the Argentinian Meteorological Service by the AEMET Izaña Atmospheric Research Center	USD 36,800		2010
Spain	Contribution to the WMO Trust Fund for financing the African Centre of Meteorological Application for Development	USD 262,909		2009
Sweden	Capacity-building for meteorological services in Botswana	17,000,000 Swedish krona (about EUR 1,800,000) divided between Sweden and Botswana		Two phases: September 2006 to February 2008; and May 2008 to December 2011
United States of America	Operation of satellite-based climate sensors providing global-scale climate observations	USD 760,000,000 (2010)		
United States of America	Operation of in situ platforms (global coverage)	USD 140,000,000 (2010)		

^a See <<http://www.devcoast.eu/>> for more information.

^b See <<http://www.ceop-aegis.org/>> for more information.

Table 2

Parties receiving support and activities undertaken to strengthen existing and, where needed, establish national and regional systematic observation and monitoring networks

<i>Party</i>	<i>Activity/project</i>	<i>Funding received</i>	<i>Channels for support</i>	<i>Other</i>
Colombia	Strengthening observations of deforestation and carbon content in natural forests	USD 2,323,608 (2008–2010)		
Colombia	Strengthening of the hydrometeorological network	USD 3,069,413 (2002–2007) and a credit of USD 5,700,339		
Pakistan	Project on “Glacial Lake Outburst Floods in the Northern Areas of Pakistan”	USD 4,100,000	Adaptation Fund and United Nations Development Programme	Total cost of project: USD 7,600,000