WORLD METEOROLOGICAL ORGANIZATION

REPORT OF

INFORMAL PLANNING MEETING OF THE VOLUNTARY COOPERATION PROGRAMME

Geneva, Switzerland

11 & 12 April 2011

1. OPENING OF THE MEETING

1. The Informal Planning Meeting (IPM) of the Voluntary Cooperation Programme (VCP) met in Geneva, Switzerland 11-12 April 2011 under the chairmanship of Mr Jaakko Nuottokari (Finland). The meeting was attended by representatives of China, Finland, France, Germany, Japan, Russian Federation, Spain and UK. The full list of participant is given in Annex I.

2. ADOPTION OF THE AGENDA

2. The agenda agreed by the meeting is given in Annex II.

3. REPORT OF THE VCP 2010

3.1. Overview VCP and VCP Coordinated Activities 2010

3. The meeting was informed of the activities supported at the national level in developing and least developed countries under the Voluntary Cooperation Programme including through the VCP (F) and through activities coordinated through WMO VCP (ES).

4. The meeting welcomed the information that in 2010, in addition to major regional development projects, support in the form of replacement, upgrading and extension of observing and communications infrastructure was provided through the VCP Programme. Full details are provided in Annex III. In terms of VCP (ES) and VCP (F), support provided amounted to some US$ 1,885,877. Additionally, seven members made cash contributions to the VCP Fund (VCP (F)) amounting to approximately US$ 212,754.

5. Regarding reporting of financing of activities, it was requested in future to present the activities carried out from the Emergency Assistance Fund totally separately and to provide more detailed financial information regarding this fund.

3.2 Overview Member Technical Cooperation Activities 2010 and planned for 2011

6. The meeting was also informed of a broad range of development assistance being provided through bi-lateral means by WMO Members to improve the delivery of climate, weather and water related service in developing country member states including the efforts of China, Finland, France, Germany, Japan, Russian Federation, Spain and UK. The full details of these activities have been provided in Annex IV. A large number of countries were supported through bi-lateral arrangements and the value of the total support provided is estimated to some US$ 18,553,818.

7. It was noted that there is some lack of clarity as to what activities should be reported under bi-lateral cooperation activities and lack of consistency in reporting amongst the IPM member countries. However, it was agreed that the more information was reported, the better the overview of activities was among participants. It was suggested that WMO should be more proactive in identifying synergies and suggesting cooperation between the different actors in this field.

3.3 Priorities proposed by WMO Technical Programmes for VCP 2011

8. The meeting was informed on the priority needs and opportunities for capacity building of the developing country Members as offered by the WMO Technical Programmes (Annex V).

9. The group held extensive and wide-ranging discussions on capacity building and development needs in the WMO system, including priorities for the immediate future. With regard to the input from OBS to reactivating silent stations, it was pointed out that some of those stations were silent for many years and not needed any more in the network. An assessment by OBS, including a priority list would therefore be necessary. It was added that the same issue applies to Regional Calibration Centres: Some are practically not operating at all, as due to customs the shipment of equipment to those centres is impossible or too costly.

10. With regard to training initiatives, the meeting noted, that not always the person who needs the training most would attend. This was down to the WMO procedure of informing the PR to nominate the trainee. Priority should be given to dealing with those issues.

3.4 Report of EC Capacity Building Working Group.

11. The meeting was briefed on the outcomes of the previous meeting of EC Capacity Building Working Group and actions arising from that meeting. (Annex VI)

4 VOLUNTEERISM AS A MEANS OF SUPPORTING DEVELOPING COUNTRIES AND EMERGENCY ASSISTANCE

12. The Secretariat introduced the concept note on volunteerism (Annex VII) and invited participants to exchange views on the volunteerism as an instrument that could be utilized in WMO as a means of supporting developing countries requiring assistance under normal and emergency situations. The meeting participants were in favour of the idea and reported on their countries' initiatives on sourcing volunteers or dispatching retirees. Possible links to these could be established in the future.

5 WMO AND THE ADAPTATION FUND

13. The Secretariat informed the meeting on the recent accreditation of WMO as a multilateral implementing entity (MIE) by the Adaptation Fund Board (Annex VIII) and the opportunities to formulate projects and programmes in support to the GFCS development. It was noted, that executive management will need to decide on WMO's position and provide process and guidance as to how to collaborate with countries and their expectations. It was also stressed, that RMO was not adequately staffed to take full responsibility of writing proposals and managing the projects. Finland offered their help with regard to project management.

6 DEVELOPMENT PARTNERS ROUND TABLE

6.1 Welcome

14. Representatives from the following UN and other partner organizations joined the meeting to share information about on-going development project initiatives related to weather, climate and water: EUMETSAT, UNISDR, UNEP, UNDP, WHO and World Bank.

6.2 Overview current and emerging major partnerships

15. The Secretariat gave an overview on the work of WMO with regard to capacity building and its operational mechanisms (Annex IX). It was stressed that developing countries' NMHSs needed help to generate products and get stakeholder engagement to become sustainable.

6.3 Presentations from Development Partners on their Projects related/relevant to the Hydromet Sector

16. **EUMETSAT (AMESD):** *EUMETSAT support to WMO RA Strategic Plans*: An overview was given on the scope of observations and membership. Programmes are a long-term perspective and contribute to Global Observation System. WMO is mentioned in their convention and therefore there is a legal commitment to follow WMO's recommendations.

17. **UNISDR:** *ISDR activities in weather and climate*: The linkage to the DRR/SEE project was highlighted.

18. **UNEP:** *UNEP Activities in Haiti*: It was pointed out that floods are a major issue for the island. An alert system is currently working thanks to donors, but information for rebuilding was needed, as floods take away soil for agriculture. It would have been essential to have an expert on the ground, who would be integrated into all aspects.

19. **UNDP:** *UNDP projects that utilize services in relation to climate risk hazards*: An overview was given on projects with regard to DRR. D/DRR mentioned that the focus is usually on technical aspects but that cooperation with the government is lacking.

20**.** **WHO:** *Climate Services as a Resource for protecting Human Health*:

21. **World Bank:** *World Bank activities that strengthen weather and climate services in developing countries*: Participants criticized that projects are managed by country, but weather crosses boundaries and interaction is therefore essential and lacking at the moment in many cases. Concern about the procedure of working with consultants was voiced as this could lead to sustainability issues.

7 WMO CAPACITY DEVELOPMENT STRATEGY

22. The Secretariat briefed the participants on the WMO Capacity Development Strategy (Annex X). It was noted, that the Capacity Development Strategy required a change in approach and that currently, the "Guidelines for management" for NMHSs

were updated and a compliance list included. Participants were in favour, but emphasized that action needed to be taken.

23. Question was raised regarding financing of new partnerships. However, investment into WMO is needed to make more funds available. At the moment RMO is understaffed to take up the responsibility of setting up new contracts and partnerships. Long-term planning was essential and GFCS might provide a platform to raise political profile of NMHSs, which could lead to new partnerships and funding.

24. The Secretariat suggested formalizing the role of IPM as a sub-WG to the EC-WG on Capacity Development. The group was generally happy with the current role of the IPM and stressed, that EC-CB was not delivering as thought. It was also noted that a former meeting including EC members in Dubrovnik, in 2008, was seen negatively and IPM was to remain as an informal mechanism. The group emphasized that they appreciated the possibility of exchanging with development partners and that this should be continued in the future. D/DRA noted that becoming part of the EC-WG would formalize recommendations from IPM to be considered by EC. A possible solution would be to consider IPM an informal advisory body to the EC-WG. It was agreed that the strategy would be put forward with this option, but no final decision taken, as some major IPM participants were not present at this meeting.

8 DISCUSSION AND AGREEMENT ON PRIORITY AREAS FOR VCP AND TECHNICAL COOPERATION FOR 2011/12

25. The group stated that clear technical indications are needed regarding silent stations and calibration centres. This would help prioritizing requests and make better arrangements to insure calibration. OBS is requested to provide a priority list of stations, similar to GCOS and guidance needs to be sought by OBS and data processing staff from the countries.

26. It was agreed that Central Asia is a clear focus region and better collaboration between different actors in region, including FMI, Germany, World Bank, Asian Development Bank, ISDR and UNDP is needed. The Secretariat suggested organizing a coordination meeting.

27. The group recommended the integration of SWFDP into projects. Admittance to trainings should be linked back to projects as a value-added activity.

28. The group recommended that a project management unit should be established within WMO to handle Adaptation Fund requests and other available sources of funding. It was also suggested, as there are currently no internal resources available, Members could offer services for proposal writing under VCP.

29. The meeting was in favour of the volunteerism proposal, but concerned with the cost related to it. Volunteers could replace the use of consultants in some cases, but should not replace in-country employment. The Secretariat will report back to the IPM, so Members can support recruitment and dissemination efforts.

30. The meeting recommended that the suggestion from UNEP regarding on-site “experts” should be built into future project proposals. Care needs to be taken to include the perspective of the Met Service.

31. It was agreed that the Development Partners Round Table should continue in the future. If the meeting is held outside Geneva, the Round Table should focus on the region, with partners from that area.

9 DATE AND PLACE OF THE NEXT MEETING OF THE IPM

32. A side meeting during Congress will be considered. The group agreed that the next IPM meeting in 2012 should be earlier in the year, closer to financial reporting. The decision about date and place will be made later in the year with regard to the WMO calendar. One proposal was the upcoming AMCOMET, so as to have it in Region I.

ANNEX 1

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ANNEX 2

AGENDA

Monday 11th April 09.30

1. OPENING OF THE MEETING

2. ADOPTION OF THE AGENDA
- 2.1. Adoption of the agenda
- 2.2. Working Arrangements of the meeting

3. REPORT OF THE VCP 2010
- 3.1. Overview VCP and VCP Coordinated Activities 2010 (WMO VCP SEC).
- 3.2. Overview Member Technical Cooperation Activities 2010 and planned for 2011.
- 3.3. Priorities proposed by WMO Technical Programmes for VCP 2011 (WMO Directors or nominees).
- 3.4. Report of EC Capacity Building Working Group.
- 3.5. Overview current and emerging major partnerships / regional HydroMet development projects
- 3.6 Discussion and agreement on priority areas for VCP and Technical Cooperation for 2011/12.

4. VOLUNTEERISM AS A MEANS OF SUPPORTING DEVELOPING COUNTRIES AND EMERGENCY ASSISTANCE

5. WMO AND THE ADAPTATION FUND

Tuesday 12th April

6. DEVELOPMENT PARTNERS ROUND TABLE
- 6.1 Welcome, Introductions and background to the meeting.
- 6.2 Overview current and emerging major partnerships / regional HydroMet development projects regional development programmes including major bi-lateral underway or planned WMO. (WMO SEC / IPM Chair).
- 6.3 Presentations from Development Partners on their Projects related/relevant to Hydromet Sector:
  - EUMETSAT (AMESD)
  - UNDP
  - UNEP (Haiti)
  - UNISDR
  - WHO
  - World Bank
- 6.4 Round Table discussion on possible synergies and interactions, followed by lunch.

7. WMO CAPACITY DEVELOPMENT STRATEGY

8. ANY OTHER BUSINESS

9. DATE AND PLACE OF THE NEXT MEETING OF THE IPM

ANNEX 3

VCP AND VCP COORDINATED ACTIVITIES 2010

1. Management of the Voluntary Cooperation Programme

1.1 Management of the Voluntary Cooperation Programme

VCP Management Activities in 2010 focused on:

- Enhancing the visibility of capacity development and VCP Programme, and ensuring the cost-effective and efficient management of the VCP Programme and the timely distribution of the relevant information to Members;
- More rapid response to VCP Members' requests for assistance using the VCP(F), the Emergency Fund or through the VCP Coordinated Programme;
- Retirement and / or supporting outstanding VCP requests;
- Strengthening working relationship with Scientific Departments and Regional Offices for support of VCP projects;
- Upgrade of Website;
- New VCP Brochure and other promotion materials;
- Securing additional human resources support for RMO and VCP Programmes.

1.2 2010 Informal Planning Meeting on the VCP and related Technical Cooperation and Executive Council Working Group on Capacity Building (EC-CB)

The 2010 Informal Planning Meeting (IPM) on the Voluntary Co-operation Programme (VCP) and related Technical Co-operation Programmes met in Bali, Indonesia from 7 to 8 May 2009 under the chairmanship Mr Steve Palmer (UK). The meeting was attended by representatives of Australia, Canada, China, Finland, France, Germany, Japan, New Zealand, Republic of Korea, Spain, United Kingdom and Unites States of America. The meeting was also attended by Mr Arona Ngari, outgoing President of RA V and Mr Dean Solofa, from South Pacific Regional Environment Programme (SPREP).

1.2.1 Review of actions arising of last IPM Meeting

Regarding the WMO Revolving Fund mechanism the meeting recommended:

1. Based on prior consultations with D/LDCR the mechanism should be retired as it has not been used in the last few years by developing countries. The funds remaining should be transferred to the Emergency Assistance Fund.

Progress made:

The WMO Revolving Fund mechanism has been retired and the remaining funds have been transferred to the Emergency Assistance Fund.

Regarding resource mobilization and project development at the national, regional and sub-regional level the meeting suggested:

2. Regional Associations to be encouraged to consider the establishment of a subsidiary body that is charged with addressing capacity building, with a particular focus on priority areas identified at the regional level.
3. Regional Associations to communicate with the support of the Secretariat their priorities for capacity building to WMO subsidiary bodies, especially those with capacity building programs, and to bilateral and multilateral development agencies.

Progress made:

The presidents of the Regional Associations support these ideas related to capacity development and the discussions are on-going. This has also been reflected in the strategic development plan. Several Regional Association Presidents sit on the EC working Group on Capacity Building

2 WMO Voluntary Cooperation Programme – Activities supported

2.1 VCP (F) Supported Activities

A wide range of activities were supported through the VCP-F in 2010 including:

Expert Missions and services:

- Expert mission to Mongolia to assist with developing BUFR code
- Expert services for Guyana and Suriname in telecommunications to link NMS with the rest of RA III countries
- Expert missions to Cambodia for the restoration of the GTS connection and the satellite receiving system with related training
- Expert fact-finding mission to Bhutan
- Support to the 32nd session of the RA IV Hurricane Committee, Hamilton, Bermuda
- Support to the 42nd session of the Typhoon Committee, Singapore
- Support to the RA V Tropical Cyclone Meeting, Denpasar, Bali
- Climate Data Valorization in-country training in Mauritania

VCP Spares/shipping of equipment

- Provision of internet connection for NMS of Guinea Bissau and for Afghanistan Meteorological Authority
- Upgrade of Cook Islands basic synoptic network
- Purchase and installation of the electricity generator for NMS of Zambia

Support to CDMS and Climatological Activities

- CLIDATA software: Installation and training to the Cyprus NMS
- Support to the Climate Data Rescue and Digitization in Africa and other regions through International Environmental Data Rescue Organization (IEDRO)
- Purchase of two computers and one server for NMS of Mauritania

Training (see also 2.8)

- Training for forecasters in Solomon islands (together with the Office for the Least Developed Countries and Regional Coordination and with additional funds from UK)
- Training of Weather Forecasters in Kiribati (together with the Office for the Least Developed Countries and Regional Coordination)

Public Weather Service

- TV weather presentation for the Comoros Meteorological Service (with additional funds from UK)

2.2 Emergency Assistance (in combination with Emergency Assistance Fund)

Table 1 – Emergency Assistance activities supported during 2010

Country	Description	Donor
Yemen	Rehabilitation of the Meteorological Networks: Provision of two AWS fully equipped to operate as synoptic weather stations	VCP(F) and VCP Emergency Assistance Fund
Bangladesh	Rehabilitation of the Meteorological Networks: Provision of two AWS fully equipped to operate as synoptic weather stations	VCP(F) and VCP Emergency Assistance Fund
Haiti	Rehabilitation of the Meteorological Networks: Provision of seven AWS fully equipped to operate as synoptic weather stations	VCP(F) and VCP Emergency Assistance Fund
Haiti	Secondment of forecasters, website development and management	Canada
Haiti	Training of five meteorologist in Toulouse, telecommunication for NMS of Haiti, development of extranet and meteorological products for Haiti in the unit established in Martinique	France
Haiti	Secondment of forecaster as part of the team based in Martinique to support Haiti	UK
Pakistan	WMO Fact-finding/needs-assessment mission and opening of WMO ad hoc liaison office, Islamabad, Pakistan, 14 October - 12 November 2010	VCP Emergency Assistance Fund
Seychelles (2008)	Rehabilitation of the Meteorological Networks: Provision of two AWS fully equipped to operate as synoptic weather stations	VCP(F) and VCP Emergency Assistance Fund
Tonga (2009)	Restore fully destroyed Niuatoputapu Meteorological Station and upgrade earthquake and tsunami Early Warning System	Under discussion

2.3 VCP- F Expenditure for 2010

Full details on VCP-F expenditure for 2010 are provided in **Appendix 1** and summarized in **Table 2** below. **Table 3** indicates expenditure trends over the period 2006 to 2010 and shows a general trend towards annually increasing expenditure over the time frame.

As expenditure now greatly exceeds income to the TF efforts will be made to expand the support of the VCP-F.

	Table 2 - VCP (F) Activities Supported in 2010 (incl. requisitions)	USD
1	Expert Missions	52,407
2	Project Development	4,236
3	Fellowships and training activities	67,161
4	Equipment	282,996
5	Internet connection services	11,815
6	Support to CDMS and climatological activities	62,774
7	TV promotion and distribution	25,276
8	VCP Management (Website Update, Brochure, Communication-Visibility Actions)	29,006
	TOTAL	**535,671**

Table - 3 VCP(F) Expenditure 2006-2010 (USD)						
	Activity Area	**2006**	**2007**	**2008**	**2009**	**2010**
	Project Development Activities				34,648	4,236
	VCP spares/shipping/equipment	1,480	170	147,267	281,782	64,255
	Expert services		14,013	16,528	33,342	52,407
	Short-term fellowships	40,954	45,339	106,570	133,530	62,928
	Group Training Activities			20,999		
	TCDC activities	14,852	4,462			
	Improvement of GTS		59,316			
	Improvement of GTS Asia/Pacific					
	Improvement of GTS Africa		79			
	Improvement of GTS South America					
	Improvement of GTS South-East RA VI					
	Improvement of GTS Central & Eastern Euro			3,238		
	Improvement of upper-air observing systems		22,643	28,688		
	Upper-air stations & GCOS	5,846	7,230		18,851	
	Improvement of GDPS	4,065				
	Agricultural meteorology activities					
	Support to CLICOM & climatological activities			4,490	38,472	62,774
	Mitigation of natural disasters	2,810				
	Emergency disaster assistance	13,328	101,553			218,741
	ACMAD	6,427				
	EAMAC	8,705	585			
	Operational hydrology activities		79			
	Improvement of satellite reception					
	Internet capabilities			13,916	6,257	11,815
	Long-term fellowships		1,682			4,233
	Support to LDCs		50,000			
	Public Weather Services					25,276
	Training activities by ETR		1,229			
	VCP Management				17,288	29,006
	Total	**98,467**	**307,210**	**341,696**	**564,173**	**535,671**

2.4 VCP (ES) Coordinated

In 2010, **5 donor Members** offered equipment and / or expert services within the framework of the VCP Equipment and Services Programme (VCP-ES) including for outstanding requests carried over from previous years. In total **27 new project requests** were received in 2010 (Appendix 2), out of which 11 could not be supported from VCP-F. These were posted to the web and circulated among the potential donors and VCP members. Of these **7 projects were supported through VCP (ES) Coordinated** in 2010 (Table 4) with additional support from other UN Agencies.

Project requests were mainly aimed at strengthening surface observing stations, strengthening communications systems, and improving meteorological applications. Some requests concerning TV weather presentation and expert services for legislative purposes were also received.

VCP Management Activities focused in 2010 on retirement and / or supporting outstanding VCP requests and discussions with Scientific Programmes and Regional Offices concerned in order to

support valid projects using the VCP (F) and close requests that are no more valid. In the end of the year 2010 only nine VCP requests remained unmet in the system.

Table 4 - VCP Coordinated Projects supported in 2010

	Members support			
	Requesting Country	Focus	Supporting country	Amount (estimates)
1	Angola	Rehabilitation of eight GSN stations	Netherlands (GCOS)	EUR 100,000
2	Comoros	TV weather presentation	UK (together with VCP (F))	GPB 12,000
3	Maldives	Consumables for upper-air system at Gan	UK	Balloons: GBP 3,950 Radiosondes: EUR 51,595
4	Moldova, Republic of	Hydrologist automatic workstation	Russian Federation	USD 40,000
5	Solomon islands	Training for forecasters	UK (together with the Office for the Least Developed Countries and Regional Coordination)	GBP 2,000
6	Uruguay	Meteorological instruments for the synoptic station of World Climate Observation System	Spain (GCOS)	EUR 40,000
7	Zimbabwe	Supply of 400 radiosondes and upgrade of the upper-air sonding station	Switzerland (GCOS)	EUR 40,000
	UN Agency Support			
8	Tanzania	GTS connection to coastal stations and SYNERGY upgrade	UNISDR	USD 65,000
9	Sierra Leone	AWS Network	UNDP	UNDP 100,000

2.5 Members Related Technical Cooperation Activities

See IPM/(2011)/Doc. 3 for a full inventory of Members bi-lateral cooperation activities.

2.6 WMO Voluntary Cooperation Programme – 2010 Financial Contributions

The total Members' contributions to the WMO Voluntary Co-operation Programme in 2010 are shown in **Table 5** in terms of VCP(ES) and VCP(F) and reported bi-lateral support.

In 2010, six Members made cash contributions to the VCP Fund (VCP(F)), amounting to approximately USD **212,754** while USD **1,673,123** and equivalent support was provided to VCP Coordinated Projects through WMO and some USD **16,667,941** equivalent through bi-lateral arrangements for a total investment of USD **18,553,818**.

Regarding reported bi-lateral figures are of course very indicative (and as at March 25th 2001). There are some difficulties with representing "Reported" figures and it is likely that not all IPM members have reported similar activities under this section.

Table 5 - Total VCP Contributions in 2010 (USD)

Member	VCP(F)	VCP(ES)	Bi-Lateral As Reported		Total
		Equipment and Services through WMO	Equip & Services	Fellowships & Training	
Australia	41,731				**41,731**
Canada			680,000		**680,000**
China	10,000	27,000	156,852	559,918	**753,770**
Finland			2,335,732		**2,335,732**
France			174,517	1,035,534	**1,210,051**
Germany			4,259,853	1,017,919	**5,277,772**
Japan	128,000[1]	514,300*		250,000	**892,300**
Maldives	1,000				**1,000**
Mauritius	1,537				**1,537**
Myanmar	486				**486**
Netherlands		133,620			**133,620**
New Zealand			1,628,989	280,831	**1,909,820**
Republic of Korea	30,000		1,263,100	406,700	**1,699,800**
Russia		40,000			**40,000**
Spain		53,448	76,292	307,000	**436,740**
Switzerland		53,448			**53,448**
UK		38,701	999,618	120,792	**1,159,111**
USA		812,606	408,679	705,615	**1,926,900**
Total	**212,754**	**1,673,123**	**11,983,632**	**4,684,309**	**18,553,818**

2.6.1 Additional Member Support through WMO (refer IPM/ (2011)/Doc. 6)

Several Members provide additional financial support to Technical Cooperation activities:

- Spain continued to finance the activities of the "Program of Cooperation for Ibero American NMHSs" and the activities of "West Africa Cooperation Program".

- Greece provided funding for a regional project in Sub-Saharan Africa.

- *Japan opened a new trust fund for Global Frameworks in order to facilitate the financial contribution of JMA to a broad range of WMO programmes and projects that support the establishment, implementation and strengthening of all components of the Global

[1] The following transfers were made: 20,000 USD to Emergency Assistance Fund, 30,000 USD to African Ministerial Conference Trust Fund and 12,000 USD to ESCAP/WMO Typhoon Committee Trust Fund

Framework for Climate Services, including disaster prevention, agriculture, and water resource management in the world.

- USA also operates and individual Trust Fund that supports a range of Technical Cooperation Activities through WMO technical Departments and direct assistance to countries.

2.7 Trends in Contributions to WMO VCP Programme

The trends in contributions to VCP – F over the past six years indicate a fairly constant support of the VCP – F and of VCP ES through the WMO (Table 6). This is illustrated below in Figure 1.

Overall in any given year, four to five countries account for over 90% of the VCP-Funds contribution as illustrated in Table 6 below. This poses the risk of over reliance on a small number of donors, which may impact on overall delivery objectives for VCP. An increased participation from other countries to diversify the base of the programme is highly desirable.

However, this is compensated to an extent by the very positive move towards support by members for major development programmes and a generally increasing trend in other technical cooperation trust funds.

Figure 1. Contributions to VCP (F&ES) 2005 - 2010

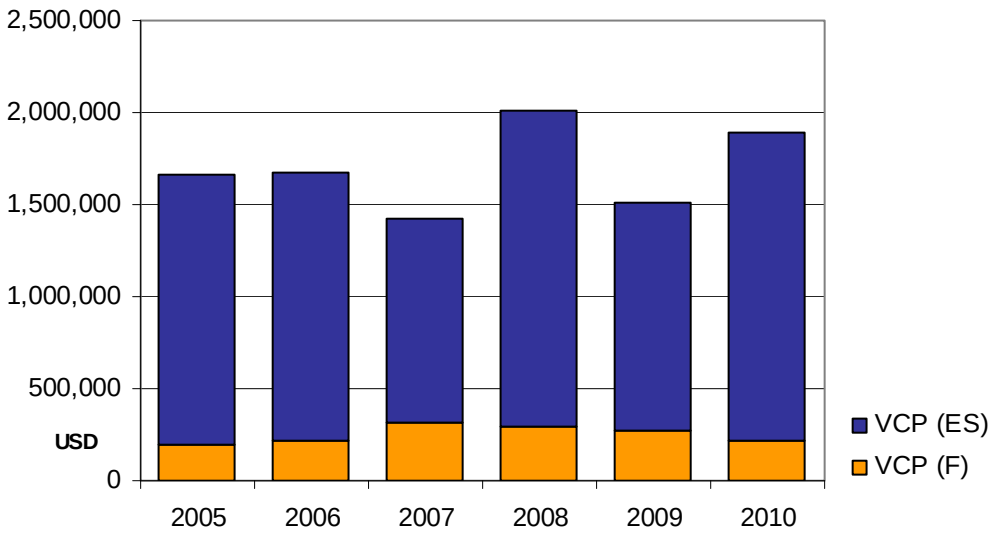

Table 6 - VCP-F and VCP Financing 2006 to 2010

	2010			2009			2008			2007			2006		
Donor Member	**VCP(F)**	**VCP(ES) Equipment & Services through WMO**	**Total**	**VCP(F)**	**VCP(ES) Equipment & Services through WMO**	**Total**	**VCP(F)**	**VCP(ES) Equipment & Services through WMO**	**Total**	**VCP(F)**	**VCP(ES) Equipment & Services through WMO**	**Total**	**VCP(F)**	**VCP(ES) Equipment & Services through WMO**	**Total**
Australia	41,731		41,731	50,000	147,700	197,700	50,000	87,000	137,000	50,000	238,350	288,350	40,000	216,600	256,600
China	10,000	27,000	37,000	10,000		10,000	37,000	47148	20,000	10,000		10,000	10,000	103,650	113,650
Finland					7,343	7,343									
France					4,479	4,479									
Germany											14,800.00	14,800.00			
Ireland				9,555		9,555	8,760		8,760	7,500		7,500	8,270		8,270
Italy											160,000	160,000			
Japan	128,000	514,300	642,300	91,000	105,000	196,000	106,000	22,000	128,000	178,000	17,000	195,000	144,000	69,500	213,500
Kenya										9,792		9,792			
Kingdom of Saudi Arabia								13,579	13,579						
Maldives	1,000		1,000	10,000		10,000	1,000		1,000	1,000		1,000	1,000		1,000
Mauritius	1,537		1,537	1,460		1,460	2,685		2,685				2,175		2,175
Myanmar	486		486				972		972						
Netherlands		133,620	133,620												
Norway				70,000		70,000	54,852		54,852	50,000		50,000		84,309	84,309
Pakistan							978		978	499		499	499		499
Republic of Korea	30,000		30,000	27,700		27,700	27,500		27,500	10,000	100,000	110,000	10,000		10,000
Russian Federation		40,000	40,000					10,000	10,000					25,000	25,000
Spain		53,448	53,448		243,500	243,500		443,312	443,312		331,000	331,000		335,000	335,000
Switzerland		53,448	53,448		9,734	9,734								352,308	352,308
UK		38,701	38,701		71,000	71,000					19,000	19,000		40,431	40,431
USA		812,606	812,606		654,912	654,912		1,096,180	1,096,180		230,000	230,000		230,000	230,000
Total	212,754	1,673,123	1,885,877	269,715	1,243,668	1,513,383	289,747	1,719,219	1,944,818	317,791	1,110,150	1,426,941	215,944	1,456,798	1,672,742

2.8 Education and Training Fellowship Activities

2.8.1 Training

VCP (F) funds continue to be used to support very short term training activities offered by WMO RTCs and Member countries in areas such as agricultural meteorology, nowcasting, statistics in applied climatology, satellite meteorology, meteorological telecommunication, numerical weather prediction, disaster risk reduction, multi-hazard early warning, and radar meteorology. In 2010, USD 62,928 were used to support 27 participants in 13 training related events by covering travel, accommodation, and tuition of individuals; and by providing partial financial contribution to overall course expenses of two courses (Table 7).

Table 7 – Training activities funded from VCP (F) in 2010 through ETR

Event Title	Countries Supported	No. of Participants Supported	VCP (F) Used (USD)
International Course on Agricultural Meteorology, Beijing, China, 18 to 29 October 2010	Ethiopia, Kenya, Rwanda	3	4'840
International Course on Enhanced Use of Satellite and Radar Imagery in Thunderstorm Nowcasting, Sibiu, Romania, 30 August to 3 September 2010	Belgium, Bosnia and Herzegovina, Bulgaria, Czech Republic, Germany, Greece, Italy, Latvia, Lithuania, The former Yugoslav Republic of Macedonia, Netherlands, Poland, Republic of Moldova, Romania, Serbia, Spain, Switzerland, Turkey	Partial financial contribution to overall course expenses	10'361
On-line Course on Statistics in Applied Climatology, January to May 2010	Nepal	1	1'223
Advanced Training workshop on the application of Met. information to renewable energy and green building, RTC Bet Dagan, Israel, 15-29 November 2010	Russian Federation	1	948
Training course on Meteorological Telecommunication and METCAP Software, Alanya, Turkey, 22-30 September 2010	Czech Republic (Lecturer), Democratic Republic of Congo,	2	2'488
International Training course on numerical weather prediction, 13-24 September 2010, Nanjing, China	Ethiopia, Kyrgyzstan, Uzbekistan	3	5'571
Satellite Meteorology Course to be held in Beijing, China, 22 June to 2 July 2010	Lao, Uzbekistan	2	1'815
Advanced International Workshop on "Operation of Meteorological and Agrometeorological Station Networks - Conventional and Automatic", Bet Dagan, Israel, 1 - 15 June 2010	Belarus, Kazakhstan, Kyrgyzstan, The former Yugoslav Republic of Macedonia, Uzbekistan, Ukraine, Tajikistan, Armenia, Georgia, Republic of Moldova	Partial financial contribution to overall course expenses	8'000
International Training Course on "Multi-hazard early warning", Nanjing, China, 10-28 May 2010	Tonga	1	2'544
International Training Course on Weather Radars, RTC Turkey, Istanbul, Turkey, 10-14 May 2010	Lao, USA (Lecturer)	2	3'014
EUMETCAL NWP Applications Course, Finland, 27 October to 4 December 2009	Georgia	1	2'434
WMO Symposium on Meteorological Service Delivery and Disaster Risk Reduction and Study Tour, Beijing, Nanjing, Shanghai, 6-15 May 2010	Thailand, Viet Nam, Uzbekistan, Indonesia, Nepal, Malaysia	6	7'308
Eleventh International Pyrheliometer Intercomparison, Davos, Switzerland	Chile, Kenya, Romania	3	12,382
TOTAL		**27**	**62,928**

2.8.2 Fellowships

During 2010, WMO worked with partners through the VCP arrangement to fund long-term and short-term fellowships. Tables 8 and 9 show the list of fellows funded through VCP arrangement in 2010. It is particularly noteworthy that Lesotho, a LDC, and Swaziland, a developing country, have provided tangible resources for training their nationals through their VCP arrangements.

The provision of VCP Fund from USA enabled WMO to facilitate the training of 26 experts from 21 countries, which took the form of on-the-job training (OJT) at the National Oceanic and Atmospheric Administration (NOAA). End of the programme reports submitted from the fellows trained at NOAA have shown that many of them have established the network of collaboration with officers and colleagues they worked with. This unique experience has shown that short term training through attachment should be further encouraged for experts from the NMHSs of LDCs and developing countries.

Table 8 shows the number of WMO short term fellows supported by the VCP Fund by beneficiary and the total budget corresponding to each beneficiary in 2010.

Table 8 - The number of WMO short term fellows supported by the VCP and Trust Funds in 2010

Beneficiary	**2010**	**Budget (CHF)**	**Fund**
Antigua and Barbuda	1	5,266	USA VCP
Argentina	2	12,151	USA VCP
Bolivia	1	4,515	USA VCP
Brazil	1	1,505	USA VCP
Djibouti	1	8,726	USA VCP
Ethiopia	1	8,179	USA VCP
Ghana	1	8,021	USA VCP
Guinea	1	6,979	USA VCP
Guinea Bissau	1	8,174	USA VCP
Honduras	1	6,003	USA VCP
Kenya	1	6,120	USA VCP
Lesotho	3	11,347	Lesotho Trust Fund
Lithuania	1	6,593	France VCP
Mali	1	8,939	USA VCP
Mexico	2	12,377	USA VCP
Nigeria	2	11,568	USA VCP
Panama	1	5,991	USA VCP
Peru	1	6,001	USA VCP
Rwanda	1	1,505	USA VCP
Senegal	1	9,079	USA VCP
Swaziland	1	7,845	Swaziland Trust Fund
Tanzania	1	8,473	USA VCP
Trinidad and Tobago	2	11,478	USA VCP
Uruguay	1	7,426	USA VCP
Zambia	1	4,515	USA VCP
Total	**31**	**188,777**	

Summary	Fellows	Contribution
USA VCP Trust Fund	26	162,992
Lesotho Trust Fund	3	11,347
Swaziland Trust Fund	1	7,845
France VCP	1	6,593

Table 9 shows the number of WMO long term fellows supported by the Swaziland Trust Fund and VCP Fund in 2010 by beneficiary and the total budget corresponding to each beneficiary in 2010. For reference, Table 10 shows fellows supported by the WMO regular budget, totaling 114 fellows from 54 countries during 2010.

Table 9 - The number of WMO long term fellows supported by VCP (F) and Trust Funds in 2010

Beneficiary	2010	Budget (CHF)	Fund
Swaziland	11	179,487	Swaziland Trust Fund
Cayman Islands	1	778	VCP(F)

Table 10 - The number of WMO fellows supported by the regular budget in 2010

COUNTRY	2010	COUNTRY	2010	COUNTRY	2010
Angola	1	Comoros	2	Mozambique	3
Antigua and Barbuda	2	Congo	2	Myanmar	4
Argentina	1	Cote d'Ivoire	3	Namibia	2
Azerbaijan	1	El Salvador	1	Nepal	1
Bahamas	2	Ethiopia	2	Nigeria	1
Bangladesh	1	Fiji	1	Paraguay	1
Benin	1	Gabon	1	Rwanda	2
Bhutan	1	Gambia	2	Sao Tome and	2
Botswana	1	Ghana	1	Senegal	2
Bulgaria	1	Guinea	4	Sierra Leone	1
Burkina Faso	3	Honduras	1	Sri Lanka	2
Burundi	1	Jamaica	1	Sudan	17
Cameroon	1	Kenya	1	Tajikistan	5
Cape Verde	1	Lesotho	4	Tanzania	1
Cayman Islands	1	Liberia	2	Turkey	1
Central African	3	Mali	3	Uganda	3
Chad	2	Mauritania	3	Uzbekistan	1
Colombia	1	Mongolia	2	Zambia	4
				Total	**114**

It should also be noted that considerable number of fellows have been undergoing training in China and in Russia under the aegis of bilateral arrangements between the People's Republic of China and WMO, and also between Russia. Although the resources from these countries are not paid directly into WMO account, the terms of the arrangement allows WMO to train fellows at reduced cost, compared to if such agreements do not exist. Plans are under way to secure similar agreement with Spain and the UK.

It is expected that partners that provided resources through VCP in past years will maintain the same level of support during 2011.

2.9 Enhancement of VCP Coordination

RMO has been able to secure one new associate to support resource mobilization and capacity development activities: Mr Makoto Suwa joined the DRA department in November as a JPO supported by the Japanese Government.

Appendix 1

	VCP (F) Activities Supported in 2010	USD
1	**Expert Missions**	**52,407**
	Expert fact-finding mission to Bhutan	2,725
	Expert mission to Mongolia to assist with developing BUFR code	13,965
	Expert missions to Cambodia for the restoration of the GTS connection and the satellite receiving system with related training	16,470
	Climate data valorization in country training in Mauritania	6762
	Support to the 32nd session of the RA IV Hurricane Committee, Hamilton, Bermuda	5311
	Support to the 42nd session of the Typhoon Committee, Singapore	2868
	Support to the RA V Tropical Cyclone Meeting, Denpasar, Bali, 26-29 April 2010	3,671
	Expert services for Guyana and Suriname in telecommunications to link NMSs with the rest of RAIII countries	0
	Other	635
2	**Project Development**	**4,236**
	Translation and text-processing from French into English of the Report "Développement des services météorologiques et hydrologiques en Haïti - Propositions d'actions pour le moyen terme"	4,236
3	**Fellowships and training activities**	**67,161**
	International Course on Agricultural Meteorology, Beijing, China, 18 to 29 October 2010	4,840
	International Course on Enhanced Use of Satellite and Radar Imagery in Thunderstorm Nowcasting, Sibiu, Romania, 30 August to 3 September 2010	10,361
	On-line Course on Statistics in Applied Climatology, January to May 2010	1,223
	Advanced Training workshop on the application of Met. information to renewable energy and green building, RTC Bet Dagan, Israel, 15-29 November 2010	948
	Training course on Meteorological Telecommunication and METCAP Software, Alanya, Turkey, 22-30 September 2010	2,488
	International Training course on numerical weather prediction, 13-24 September 2010, Nanjing, China	5,571
	Satellite Meteorology Course in Beijing, China, 22 June to 2 July 2010	1,815
	Advanced International Workshop on "Operation of Meteorological and Agrometeorological Station Networks - Conventional and Automatic", Bet Dagan, Israel, 1 - 15 June 2010	8,000
	International Training Course on "Multi-hazard early warning", Nanjing, China, 10-28 May 2010	2,544
	International Training Course on Weather Radars, RTC Turkey, Istanbul, Turkey, 10-14 May 2010	3,014
	EUMETCAL NWP Applications Course, Finland, 27 October to 4 December 2009	2,434
	WMO Symposium on Meteorological Service Delivery and Disaster Risk Reduction and Study Tour, Beijing, Nanjing, Shanghai, 6-15 May 2010	7,308
	Eleventh International Pyrheliometer Intercomparison, Davos, Switzerland, 27 Sep – 15 Oct 2010	12,382
	Fellowship related international travel (A. Porter, Cayman Islands and L. Seqhobane, Lesotho)	3,154
	Contribution to the Lesotho Trust Fund	1,079
4	**VCP Spares/shipping of equipment**	**282,996**
	Automatic Weather Stations: Complimenting Emergency assistance to Haiti, Seychelles, Bangladesh and Yemen	218,741

	Upgrade of Cook Islands basic synoptic network (with additional funding from UK)	26,893
	Purchase of Electricity Generator for NMS of Zambia	35,904
	Handling fees related to shipping and procurement	1,458
5	**Internet connection services**	**11,815**
	Afghanistan	6,644
	Guinea Bissau	5,171
6	**Support to CDMS and climatological activities**	**62,774**
	CLIDATA software: Software Installation and training to the Cyprus NMS	36,012
	Support to the Climate Data Rescue and Digitization in Africa and other regions	20,000
	Purchase of two computers and one server for NMS of Mauritania for climate applications	6,762
7	**TV promotion and distribution**	**25,276**
	TV weather presentation for the Comoros Meteorological Service (with additional funds from UK)	25,276
8	**VCP Management (Website Update, Brochure, Communication-Visibility Actions)**	**29,006**
	VCP brochures, Posters, Website	19,803
	Short-term temporary staff cost contribution (replacing VCP Overhead cost)	9,203
	TOTAL	**535,671**

Appendix 2

VCP requests received in 2010			
COUNTRY	**INDICATOR**	**PROJECT TITLE**	**REQUESTED ITEMS**
AFGHANISTAN, ISLAMIC STATE OF	TE/5/3/3	Internet connection services for Afghanistan Met Authority	Internet connection
ANGOLA	OB/2/2/1	Rehabilitation of eight GSN stations	Supply and installation of equipment for the stations of the GNS, capacity building
ANGOLA	OB/1/2/7	Rehabilitation of the 3 upper-air stations of Angola	Supply and installation of upper-air radio sonding system, capacity building
ARMENIA	OB/1/2/7	Provision of GPS radiosondes and balloons	400 sets of Vaisala GPS radiosondes (RS92), 450 pieces 350g balloons for the conducting continuous upper-air observations on the Yerevan (37789) upper-air station
ARMENIA	OB/2/2/5	Provision of hydrometeorological thermometers	Mercury thermometers for measuring maximum air temperature (TM-1) 30 pcs, Thermometers (alcohol) for measuring minimum air temperature (TM-2) 60 pcs, Mercury thermometers for measurement of soil temperature at depth and to measure the surface temperature of water in reservoirs (the Russian equivalent of the TM-10) 30 pcs, mercury thermometers for meteorological measurements of water temperature in water reservoirs (the Russian equivalent of the TM-4) 40 pcs
BAHAMAS	OB/2/4/1	Provision of three sea level observation stations for use in satellite products and ocean models validation	3 dataloggers; 3 transmitters; data receiver, receiver antenna and transmitter antennas; sea level sensors; manual, documents and software; additionals

			(cables, supports, connectors, etc.)
CAMBODIA	TE/EX/1	Expert mission for the restoration of the GTS connection and the satellite receiving system	Expert services with related training
COOK ISLANDS	OB/11/3/1	Upgrade of Cook Islands basic synoptic network	5 tailor-made personal computers travel to 3 islands for upgrading the systems
DOMINICA	OB/2/3/2	An audiovisual media center	An audiovisual media center for the dissemination of meteorological information to users and the general public
ECUADOR	OB/1/2/9	Radio sondes and balloons for Galapagos	Sondes and balloons
EL SALVADOR	OB/9/1/1	Training and programming software for Automatic Station Vaisala QML201	Training (in El Salvador or somewhere else) on how to operate Vaisala QML201 Automatic Weather Station
GUINEA BISSAU	TE/5/3/2	Provision of Internet connection	Installation and 1-year subscription fee
GUYANA	TE/EX/1	Expert services in telecommunications to link NMS with the rest of RA III countries	Advice of an expert from the RTC (Brasilia) to help on the use of the new RA III telecommunication network
KYRGYZSTAN	OB/3/4/1	Converter of receiving platform for the Alisa-CK platform complex	Converter
MAURITANIA	WCP/2/2/1	Workstation to support Climate Data Modelling	Computer equipment
MAURITANIA	WCP/2/2/2	Climate Data Valorization in country training	Training/seminar in Noukachott, Mauritania 6-9 December 2010
NIUE	PWS/1/EX	Development of Niue Meteorological Policy and Act/Legislation	Financial assistance to allow Niue to work with SPREP to develop meteorological polica and act. The funds will be used to work with SPREP and to hire a consultant.
REPUBLIC OF MOLDOVA	HY/4/1	Hydrologist automatic workstation	Automatic workstations soft wares, developed by Russian Federation, for hydrologist forecaster and synoptic meteorologist.
SURINAME	TE/EX/1	Expert services in telecommunications to link NMS with the rest of RA III countries	Advice of an expert from the RTC (Brasilia) to help on the use of the new RA III telecommunication network
SURINAME	OB/4/2/1	Repair/upgrade of an existing Weather Radar	Visit of an Radar system expert for the evaluation of the present status, depending on the outcome of the diagnosis, the VCP support should include purchase of parts
UNITED REPUBLIC OF TANZANIA	WCP/2/2/1	Migration to table driven code forms demonstration project for South and East Africa	Five computers, an expert from ECMWF, organization costs and expert allowance to local resource people
UNITED REPUBLIC OF TANZANIA	WCP/2/1/5	Migrating from CLICOM to CLIDATA	Acquisition of the latest CLIDATA software edition, training and installation of the target server and the workstations, assistance with the data transfer and setup
URUGUAY	OB/2/2/1	Meteorological observation instruments for the synoptic station of the World Climate Observation System	4 mercurial barometers, 4 anemometers, 4 maximal thermometers, 4 thermohygrographs, 4 barographs and pluviometers, 4 evaporation tanks.
UZBEKISTAN	WCP/2/2/2	Provision of a system for the receiving, processing and dissemination of hydrometeorological information in table-driven code forms	System for the receiving, processing and dissemination of hydrometeorological information in table-driven code forms + 2 weeks of training
VANUATU	PWS/1/EX	Financial and technical assistance to update Vanuatu Meteorological Act	Consultant, Travel cost, Workshop cost
ZAMBIA	TE/4/2/1	Automatic Message Switching System (AMSS) for use as Global Telecommunications System (GTS)	Dual Automatic Message Switching System (AMSS)
ZIMBABWE	OB/1/2/5	Supply of 400 radiosondes and upgrade of the upper-air sonding station	400 radiosondes, station upgrade or supply of a new station

ANNEX 4

REPORTED BILATERAL TECHNICAL COOPERATION ACTIVITIES IN 2010

Canada

Activities in 2010

Direct Financial Support

Canada continued its contribution to Trust Funds[2] that help to enhance scientific and technical capacity in developing countries.

Expert Services & Training

Canada concentrated efforts on the mission to rebuild the "Centre national de Météorologie" of Haiti in the aftermath of the January 12th, 2010 earthquake. Canada, in collaboration with Meteo-France - Martinique, the UK, USA, CNM and the WMO provided equipment, services and meteorologists to ensure a reliable forecast program for the 2010 rainy and hurricane season. In addition, Canada invested a person year human resources efforts to plan, design, develop, implement a website on behalf of CNM including monitoring and improving the site after launch.

Canada assigned an expert to work with the WMO Department of Education and Training to develop the compliance kit to assist WMO Members demonstrate that their aviation meteorological forecasters meet the new competencies.

Other

Canada concentrated efforts to improve monitoring and prediction in Polar Regions through its leadership on the EC Panel of Experts on Polar Observations, Research and Services. Canada also remains engaged in the Sustaining Arctic Observing Network (SAON) initiative undertaken under the auspices of the Arctic Council.

Cash and in-kind contributions 2010 were approximately USD 680,000.

Initiatives for 2011

Considering the state of readiness of the CNM to take charge in 2011, discussions continue between Canada, Meteo-France, WMO and other partners to measure the type and level of continued assistance to the CNM to support their forecast program in 2011. Training and development activities will be undertaken. Canada will also contribute expertise toward the facilitation of Quality Management Systems in NMHSs in Region IV, North and Central America and the Caribbean.

Canada will consider the outcomes of our discussions on the Global Framework for Climate Services to take place in May 2011 to determine an appropriate contribution to its implementation. We continue to scope out opportunities for funding relevant activities to assist NMHSs through the Climate Change Adaptation fund.

Canada will be providing five year funding commencing in April 2011 for the International Research Initiative on Adaptation to Climate Change (IRIAC-FACE) "Faire-face Aux Changements Ensemble" (FACE), an initiative to address water resource management in West Africa. We will also be determining if we can assist with the DBCP's Second Western Indian Ocean Capacity Building Workshop to be held in Mauritius in May 2011.

Canada will continue to contribute to Trust Funds to levels similar to those of 2010.

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[2] Trust fund contributions for 2010 include - DBCP ($25k), AMDAR ($10k), GEO ($88k),Thorpex ($50 k), EC PORS ($50k), IPCC ($50k), Brewer ($30k)

Canada's cash and in-kind contribution to capacity development activities will be in the order of USD 630,000 for 2011.

Contribution to Capacity Building Activities Calendar Year 2010 Canada	
Item	**Value USD**
Haiti NMHS – secondment of forecasters (Canada portion)	50,000
Haiti – Website development and maintenance	80,000
Haiti Equipment (Computers)	35,000
Agrhymet Regional Centre	40,000
Aviation Forecast Competencies - QMS	50,000
Other Bilateral activities	50,000
Trust Funds [3]	303,000
ODA portion of WMO Assessed Contribution (4%)	72,000
Total Contributions	680,000

VCP F	VCP ES - WMO	VCP ES - Bil	Sub Total	Total
Nil	**nil**	**680,000**	**680,000**	**680,000**

Estimated Contribution to Capacity Building Activities Calendar Year 2011 Canada	
Item	**Value USD**
Haiti NMHS support (forecasters, website)	150,000
Aviation Forecaster competencies and QMS in RA IV	50,000
Other Training Activities	50,000
Trust Funds	300,000
ODA portion of WMO Assessed Contribution (4%)	80,000
Total Contributions	630,000

VCP F	VCP ES - WMO	VCP ES - Bil	Sub Total	Total
		630,000	**630,000**	**630,000**

[3] Trust fund contributions for 2010 include - DBCP ($25k), AMDAR ($10k), GEO ($88k),Thorpex ($50 k), EC PORS ($50k), IPCC ($50k), Brewer ($30k)

China

Summary of China's Contribution Through WMO VCP Programme and Bilateral Arrangements in 2010

Item	Description of Projects		Project number	Total cost (USD)
1	Study Tour	39th China Study Tour (China, 6-16 May 2010)		90000
2	Training and Fellowships	International Training Course on Satellite Meteorology (Beijing Component of RTC-Nanjing, 22 June – 2 July 2010)		34000
		Training Course on Agricultural Meteorology in Beijing (Beijing Component of RTC-Nanjing, 16-27 August 2010)		16969
		Field Training Seminar on Typhoon Forecasting and Warning Skills and the Application of DVB-S in Viet Nam (Beijing Component of RTC-Nanjing, 18-24 April 2010)		20300
		Field Training Seminar on Climate Prediction and Warning Techniques (Beijing Component of RTC-Nanjing, 8 November – 3 December 2010)		20500
		International Training Course on Multi-hazard Early Warning (10 to 28 May 2010, RTC-Nanjing)		59394
		International Training Course on Numerical Weather Forecast (13-24 September 2010, RTC-Nanjing)		50909
		Training Seminar on Management for Meteorological Officials from Developing Countries (13 Oct – 2 Nov 2010, RTC-Nanjing)		91636
		International Training Course on South-South Cooperation (8-12 November 2010, RTC-Nanjing)		118788
		International Training Course on Meteorological Information Service (7 June – 4 July 2010, RTC-Nanjing)		11200
		Two-year Master degree training for ten students from Pakistan Meteorological Department under bilateral agreement		46222
3	Donation of Instruments and Equipment by Bilateral Agreement	Upgrade the GTS communication between Beijing and Ulan Bator		6511
		Donation of a Radar 59701C, radio sounders, a server and a projector to DPRK		65465
		Donation of a sandstorm station to Kazakhstan		84876
4	VCP(F)	VCP(F), IPCC Trust Fund, WIS Fund and THORPEX Trust Fund		37000
	Total			753770

Expected Contributions of China to the WMO VCP in 2011

(a) Study Tour
The 40th China Study Tour will be organized from 11 to 19 April 2011. About eighteen participants have confirmed their participation in the study tour.

(b) Training and Fellowships
1. Regional WIS Training Seminar (11-14 April 2011, Beijing)
2. Regional Seminar on Aeronautical Meteorology Service in Asia (11 to 15 April 2011, Beijing)
3. International Training Seminar on Methods for Short-term Climate Prediction (28 March – 8 April 2011, RTC-Nanjing)
4. International Training Course on Satellite Meteorology (18-29 April 2011, RTC-Nanjing)
5. Training Course on Meteorological Hazards Early Warning for Developing Countries (11-13 May 2011, RTC-Nanjing)
6. Training Course on Management for Meteorological Officials from Developing Countries (15 June – 5 July 2011, RTC-Nanjing)
7. Training Course on Climate Change and Climate Information Service for Developing Countries (30 August – 19 September 2011, RTC-Nanjing)
8. International Training Course on Agrometeorology (17 October – 4 November 2011, RTC-Nanjing)
9. International Training Course on Weather Modification (14-25 November 2011, RTC-Nanjing)
10. International Training Course on Tropical Cyclone (5-16 December 2011, RTC-Nanjing)
11. Training Course on Radar Application (September or October 2011, RTC-Nanjing)
12. International Training Course on Application of Satellite Information (Beijing Component of RTC-Nanjing, 7-17 June 2011)
13. International Training Course on Weather Modification (Beijing Component of RTC-Nanjing, 22 August – 2 September 2011)
14. Training Seminar on Regional Climate Change Impact and Adaptation (Beijing Component of RTC-Nanjing, October/November 2011)

(c) Donation of Instruments and Equipment
1. Provision of 20 sets of CMACast user stations and MICAPS 3.1 to 17 countries, including Bangladesh, DPRK, Indonesia, Kyrgyz, Laos, Malaysia, Maldives, Mongolia, Myanmar, Nepal, Pakistan, the Philippines, Sri Lanka, Tajikistan, Thailand, Uzbekistan and Viet Nam
2. Provision of emergency assistance to Pakistan Meteorological Department

(d) Donation of fund
1. USD 10,000 to IPCC Trust Fund
2. USD 10,000 to WMO Trust Fund for Voluntary Cooperation Programme
3. USD 12,000 to WMO THORPEX Fund
4. USD 5,000 to WMO WIS Trust Fund

Finland

Expert Services

Pacific Island Countries

In 2010, the project with SPREP on the Pacific Island Countries Aviation Weather Service QMS implementation has progressed well. The series of training workshops started in

September 2009 in Samoa, continued in July 2010 in Tonga and will conclude in April 2011 in Fiji. The current status of QMS implementation is as follows: Fiji and PNG have completed QMS implementation, have most documents done and have plans for certification; Cook Islands, Niue, Samoa, Solomon Islands, Tonga and Vanuatu have started implementation and have some documentation ready; Kiribati and Tuvalu have not started on the QMS work (small islands and only do observations).

A “Communications and Information Services in Meteorology” workshop was organised in cooperation with WMO, JICA, JMA and FMS and was held on 1-5 February at Nadi, Fiji with co-financing and trainers from FMI. The aim is to assist PIC NMHSs develop communications strategies and cooperate with representatives of the media to increase their visibility.

The study on the regional socio-economic impact of meteorological services has been drafted and will be submitted to the 14th RMSD in July 2011. Cooperation in the convergence of donor activities to support the regional strategy for meteorology in the Pacific is strongly supported by the project.

Peru

In 2010, several FMI expert missions to Lima and SENAMHI expert study tours to FMI have been organised to support the capacity building of the Peruvian NMHS (SENAMHI). The capacity building activities focus on climate change research, NWP and automatic weather observations in Peru and support sustainable development of these functions at SENAMHI.

SADC Countries (Southern Africa)

A project office located at the South African Weather Service (SAWS) in Pretoria was setup in January 2010 and carried out project activities to the 14 SADC member countries. The activities of the project included workshops in aviation weather QMS implementation, TDCF implementation, climate change, remote sensing and strategic planning and in-country assessments of critical development needs for all countries. The project was successfully completed in 2010.

The project produced a regional development project plan in close cooperation with the Meteorological Association of Southern Africa (MASA) and submitted it for approval to the MFA in November. The MFA has approved a financing of 8 M€ for the project over four years starting in 2011 with major components in lightning detection and AWS networks and capacity building.

Viet Nam

A two-year, 500k€ project with the NHMS of Viet Nam was signed in April and launched in May. The project will focus on supporting the use of weather radar products in nowcasting through product development and capacity building, AWS network planning, maintenance and calibration and strategic planning. In 2010, one NHMS study tour and four expert missions were completed.

Caribbean

The MFA is financing four projects in the Caribbean region:

- SHOCS: multi-hazard early warning system and QMS capacity building project with the Caribbean SIDS and ACS & WMO, launched in June, 500k€ over two years. Includes a feasibility study on MHEWS and workshops on DRR and QMS implementation for aviation weather services. In 2010 three expert missions and one co-financed workshop one disaster risk management with WMO were completed.

- Jamaica: weather production system upgrade and capacity building at the Jamaica NMHS, launched in June, 70k€ over one year. In 2010 one expert mission was completed.
- Trinidad & Tobago: weather production system upgrade and capacity building at the Trinidad & Tobago NMHS, launched in June, 70k€ over one year. In 2010 one expert mission was completed.
- Barbados: CIMH regional instrument calibration centre modernisation and capacity building, signed in November, 65k€ over two years. The project will focus on improving the sustainability of the CIMH RIC by developing SOPs, training new staff and purchasing some equipment. Project will begin in 2011.

Nepal

The FMI has started a 2.5-year project with the Department of Hydrology and Meteorology of Nepal (DHM) in February 2010. This MFA funded 500k€ project will focus on building the capacity of DHM in weather observations and remote sensing and adaptation to climate change. In 2010 four FMI expert missions to Nepal and two DHM study tours to Finland were completed. A major stakeholder workshop is planned for February 2011 in Kathmandu.

India

MFA funds a research-oriented project between Finland and India on the research of air pollution and air quality in India. The project is managed by the FMI and involves the research teams on aerosols and air pollution. The project has been granted continuation until 2012. A supplementary EU project also led by the FMI addresses some of the same issues in India.

Secondments

MFA is funding a JPO position at the WMO Resource Mobilisation Office for two years from June 2010. The JPO is Ms Salla Himberg.

Summary 2010

Total sum of all FMI projects funded by the Ministry for Foreign Affairs of Finland in 2010 is **1,501,804.0 EUR (i.e. 1,973,701.19 USD).** In addition, two EU Twinning projects in Croatia and fYR Macedonia in the field of air quality were implemented during 2010 with total value of 276 237,0 EUR.

Plans for 2011

Total MFA funding for 2011 to FMI managed projects in the field of meteorology is estimated at **1,185,000.0 EUR.** The total funding allocations from MFA for 2009-2012 is 3,430,000.0 EUR. In addition to these projects, the government of Finland is supporting several other climate change and adaptation funds, NGOs and mechanisms.

List of projects in 2010:
- Pacific Island Countries
- Peru
- Nepal
- Viet Nam
- Caribbean (ACS)
- Barbados
- Jamaica
- Trinidad & Tobago
- India

Project Proposals in planning for

- Sudan
- Central Asia
- Colombia
- Philippines

2011 Tentative Schedule

- January
  - Jamaica and Trinidad & Tobago weather service study tour to Helsinki
- February
  - 7-11 Feb Workshop on the role of national weather service in the society, early warning and climate adaptation in Kathmandu, Nepal
- April
  - 1-5 Apr 3rd QMS implementation workshop for the PIC NMHSs in Nadi, Fiji
  - 6-7 Apr Strategic planning workshop for the development of meteorology in the Pacific for donors and stakeholders in Nadi/Suva, Fiji
  - 4-8 Apr Weather radar products in nowcasting workshop for NHMS in Ha Noi, Viet Nam
  - 11-13 Apr VCP IPM
- May
  - Observation networks workshop in Viet Nam
  - WMO Congress
- June
- July
- August
  - 1-5 Aug 14th RMSD in Majuro, Marshall Islands
- September
- October
- November
- December

France

Bilateral activities:
In 2010 France's Météo-France contribution to technical cooperation activities by bilateral agreements amounted to 905 591 €.

It includes:

1) Experts services: in 2010, 8 Météo-France experts carried out technical assistance missions in several countries including Algeria, Morocco and Croatia, for an estimated cost of 68 176 €.

2) Training and fellowships: in 2010, Météo-France welcomed 82 trainees and scientists from countries such as Algeria, Benin, Burkina Faso, Bulgaria, Estonia, Ethiopia, Ivory Coast, Madagascar, Morocco, Mozambique, Ukraine, Zambia, Niger, Romania, Sao Tome and Principe, and Senegal for an estimated cost of 774 984 €.

3) Equipment: RETIM through EUMETCast: in 2010 Metéo-France funded the installation of new equipment required by the transition of our satellite data and products broadcasting service (previously known as RETIM) over to the EUMETCast broadcasting system of EUMETSAT for ACMAD, and 11 NMS users of the former RETIM system for an amount of 62 431 €.

In 2011, Météo-France will maintain its contribution to technical cooperation activities by bilateral agreements at the same level as in 2010.

Assistance to Haiti:
Météo-France also participated actively in the WMO coordinated support for Haiti following the devastating Earthquake which struck the country in January 2010.
It took part in the two WMO coordination meetings which took place in Hamilton and San Jose in March 2010 to meet urgent needs and help CNM to cope with the next rainy and hurricane season as well as in the assessment mission which was carried out in Haiti in April 2010 in order to evaluate longer term needs in terms of equipment, infrastructure, training of meteorologists etc.

Its contribution together with those of others WMO Members is underlined in the WMO concept paper “Capacity Development of the National Meteorological and Water resources Services of Haiti to meet Short Term and Immediate Needs”. It consists essentially of:

- Development of a dedicated Extranet with relevant meteorological information, data and prediction products to be used by Haitian forecasters in their production of daily forecasts and warnings with the assistance of a team of forecasters from Environment Canada, UK Met Office, and Metéo-France, based at Méteo-France Office in la Martinique since 28th May 2010. The estimated cost of this operation amounts to 45 000 €

- Training of five Haitians at Ecole Nationale de la Météorologie (ENM) in Toulouse: In August 2010, the Deputy Director of ENM carried out a mission in Port au Prince to evaluate the candidates proposed by the Director of CNM to be trained at ENM. In September 2010, the five selected Haitians began their training at ENM for a period of 11 months. This one year training will allow them to be qualified as meteorological technicians. It will be followed by several weeks of on-the-job training at Météo-France offices in Martinique and Guadeloupe. This operation was financed on the French VCP line for an amount of 60 000 €.

Plans for 2011:
Météo-France will continue to maintain operational the dedicated Extranet and to host and support the visiting forecasters team until the next hurricane season. It will also participate in the discussions, coordinated by WMO, concerning the strengthening of the Haitian forecasting capacities which could include notably:

- The completion of the training of the five technicians already trained at ENM and in Martinique and Guadeloupe to allow them to join and progressively replace the forecasters team based in La Martinique.
- The training of two other Haitians.
- The transfer of the forecast production tool at the CNM, in Port au Prince, as soon as the political situation allows it.

Support to the WMO activities and programmes through Trust Funds:
In 2010, France made the following contributions:

- Intergovernmental Panel on Climate Change (IPCC) Trust Fund: 200 000 €
- THORPEX Programme Trust Fund: 25 000 €
- AMDAR Programme Trust Fund: 21 000 €.
- CCl and CIMO TECO Trust Fund: 6000 €

Support to the ACMAD Centre (Niger):
In 2010, The French Ministry of Foreign and European Affairs continued its support to the ACMAD Centre with an estimated contribution of 216 000 € covering the salary of the technical assistant and the implementation of the 2010 working plan.
Meteo-France also provided scientific, technical and financial support to the organization of ACMAD's PRESAO activities

VigiRisC Project (total cost 4 M€, FGEF contribution 2 M€):
The project started its activities in 2009 under the coordination of the ACMAD Centre. Its objective is to strengthen the capacities of African countries for the prevention of risks and socio-economic impacts related to variability and climate change through relevant and adapted tools.
A workshop on the operational aspects of the implementation of vigilance systems will be organized in Toulouse, from 8 to 10 February 2011, with the support of Météo-France and the participation of the ACMAD Center.
The workshop will include several round tables during which the main actors of the Vigilance System in France will discuss and share their experience with the experts of the project in charge of the development of Vigilance products and services for Africa.

ACClimate (total cost 3 645 000 €, FGEF contribution: 1 000 000 €, French Ministry of Foreign Affairs contribution: 495 000 €, «Région La Réunion» contribution: 215 000 €):
The objective of the project is to strengthen the capacity of the Indian Ocean Commission (IOC) and of its Member States to adapt to the effects of climate change.
In 2010 the main activities of the project focused on:

- Organisation, in collaboration with the «Réseau de surveillance épidémiologique et de gestion des alertes (SEGA)» and the IOC of a symposium on Health and Climate in La Réunion, 17-22 May 2010.
- Participation in the 7th African Development Forum; Addis Ababa, 10-15 October 2010
- Call for tender for a study on the potential of a climate simulation "COI Counties" and the feasibility of a Regional Climate Data Base.

AOC Project (total cost of the project: 3 000 000 €, FGEF contribution: 1 200 000 €, French Ministry of Foreign Affairs contribution: 300 000 €):
The objective of the project is to develop a regional platform for the exchange of information on climate change in West Africa in Agriculture and Water Resources.
It aims to become a component of the Economic Community of West Africa States (ECOWACS) Regional Programme on climate change. A technical assistant was appointed for the project in 2010.

Carib-Hycos:
Activities in 2010:

- Finalization and consolidation of the project budget.
- Launch of a call for tender for the Hydrometeorological Data Management System (HDMS).

Plans for 2011:

- Installation of the HDMS HYDROMET in all the participating countries.
- Organization of training sessions on the use of the HYDROMET software in Dominican Republic and Cuba for Spanish speaking participating countries and in Barbados for English speaking countries.

- Launch of a call for tender for hydrometeorological equipment.

Germany

Review of Contributions to the VCP in 2010 and Expected Contributions in 2011

In 2010, Germany's total contribution to the WMO Voluntary Cooperation Programme was 5,277,772 US$, consisting of 4,259,853 US$ for bilateral arrangements and 1,017,919 US$ for training and fellowships.

Training:

Germany has continued to provide assistance in training and fellowships, mostly on a bilateral basis, and organized training courses in support of the National Meteorological Services of developing countries:

To support NMHSs in developing countries in the introduction of regional numerical weather prediction, the DWD carried out once again a two-week Regional NWP Training Workshop in July 2010.

The "Advanced EUMETSAT/CM-SAF Training Workshop" for the use of satellite data for climate purposes was held in Rostock in September 2010. In October 2010, the DWD supported participants of the RCC workshop, held at DWD's headquarters in Offenbach.

For all seminars held at the DWD Meteorological Training and Conference Centre or at the DWD headquarters, accommodation expenses are reduced for participants from developing countries and countries with economies in transition.

In connection with the CM SAF (Satellite Application Facility on Climate Monitoring), Germany supported again a CLIPS showcase (WMO's Climate Information and Prediction Services) at the Armenian National Meteorological Service.

Two training courses ("Hydrometeorological Monitoring Network and Geo Data Bases" and "GIS in Hydrology") were organized for representatives of the Central Asian Hydrometeorological services (Afghanistan, Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan) at the German Research Centre for Geosciences in Potsdam (GFZ) in co-operation with the Central Asian Institute for Applied Geosciences in Bishkek.

All costs were covered by the Central Asian Water (CAWa) project funded by the German Federal Foreign Office in the frame of the Central Asia Water Initiative ("Berlin Process").

Together with the Lake Chad Basin Commission (LCBC) Germany continued a project targeting on the training of national experts of the bordering countries in the collection and analysis of surface water-related data and in the consultancy of the LCBC regarding data and information management.

With its support for the GAWTEC (Global Atmosphere Watch Training and Education Centre), Germany contributed to the continuous quality assurance programme of the WMO. Two courses were financed during 2010 to provide technical assistance and training to station personnel and central facilities from all WMO regions, whereby most trainees came from countries in the WMO regions Africa, Asia and South America.

Together with the ArbaMinch University, the German IHP/HWRP Secretariat co-organised and supported the "11th International Symposium on Sustainable Water Resources Development" on 3rd and 4th December 2010 in Arba Minch, Ethiopia. The

symposium was attended by more than 160 national and international scholars in areas related to water resources.

Expert services:

The DWD supports 19 developing countries and countries with economies in transition in the operational use of the DWD's NWP model by providing them with the corresponding boundary data and training.

Several WIS Jumpstart Offers were supported by Germany through on-site training courses (like in Turkey), through assistance of the WMO team in Morocco and Indonesia or through the provision of information on WIS requirements to prepare future Jumpstart Offers.

Germany supported the Mekong River Commission (MRC, Laos, Cambodia, Vietnam and Thailand) in the field of flood management and flood forecasting. The project works in three components: flood-related climate modeling, networking of regional information- and data-systems and support for the implementation of selected aspects of national adaptation strategies.

The GIZ (German Agency for International Cooperation) carried out a project, funded by the Federal Ministry for Economic Cooperation and Development (BMZ), to support the Commission Congo-Oubangui-Sanga (CICOS) in the establishment of an information system, including the exchange of hydrometeorological data from the basin.

Within the framework of bilateral arrangements, Namibia and Germany discussed next steps for a Technical Co-operation in Meteorology, targeting on the improvement and modernization of the Namibian Weather Service.

Germany continued its support of the WMO RA VI Regional Dobson Calibration Centre at Hohenpeißenberg. Following the Nitrogen Oxides (NOx) GAW Workshop held at DWD's Observatory at Hohenpeißenberg in 2009, DWD and WMO developed the NOx report in 2010.

Infrastructure:

In 2010, three automated hydrometeorological monitoring stations were installed in Kyrgyzstan. The station "Baitik", which was installed at an existing meteorological station south of Bishkek, is intended to serve as a training station for the Central Asian Hydrometeorological Services in the framework of the Central Asian Water (CAWa) project. The other two monitoring stations (Taragay and Kokomeren) were installed at higher elevations in the Naryn basin.

The station data will be accessible through the project website www.cawa-project.net and responsibility for the stations is planned to be handed over to the Hydromet services at the end of the project. It is planned that the station data are directly fed into the existing communication system of the Central Asian Hydrometeorological services by then.

In co-operation with the Meteorological Institute Mozambique (INAM), Germany supported the third phase of the establishment of a basic flood warning system for the river Rio Save and the river Búzi and provided appropriate training.

Through the GCOS Co-operation Mechanism Germany was able to contribute to GCOS by supporting the restoration of the building at the GSN station Arragats, Armenia.

Similar to former years, Germany contributed to Trust Funds that help support scientific and technical capacity building activities (e.g. AMDAR, WIGOS, WIS). In 2010, Germany was again able to support the GCOS secretariat

Plans for 2011

In July 2011, Germany will conduct the next NWP workshop “Capacity Building in Regional Numerical Weather Prediction Based on HRM and COSMO Models” at the DWD's Meteorological Training and Conference Centre in Langen.

An international workshop on flood forecasting is planned to be held in Germany in autumn 2011, organized by the German IHP/HWRP Secretariat.

DWD will act as an associated partner of two projects for the establishment of Regional Science Service Centres (RSSC) aiming at sustainable land management and adaptation to climate change in the Southern and the Western African region. The DWD's contribution to these projects, funded by the German Federal Ministry of Education and Research, will be to provide expertise and consulting.

In the framework of the Central Asian Water CAWa project, it is planned to install two more stations in Central Asia in 2011 and to hold two more trainings for Hydrometeorological specialists.

The IPM VCP 2011 meeting was informed that Germany will also continue to provide technical assistance, mostly on a bilateral basis and taking into consideration the relevant recommendations of WMO bodies.

Japan

The VCP and related activities by Japan - report on 2010 and outlook for 2011

Japan's contribution to the WMO Voluntary Co-operation Programme in 2010 (US$)

Donor Member	VCP(F) (US$)	VCP(ES)				Total Contribution (US$)
		Equipment and Services through WMO	Equipment and Servives by bilateral arrangements	Training/ Fellowships	VCP(ES) including fellowships Sub-total	
JAPAN	46,000	184,100		250,000	434,100	480,100

1 Direct Financial Support

In 2010, Japan made a cash contribution of US $46,000 to the VCP (F) and VCP-related activities through the WMO. Further to its budgetary contribution, Japan provided training activities to the value of US $250,000 and several types of in-kind support by Japanese manufacturers during the year.

2 Training issues

The Japan Meteorological Agency (JMA) conducted a three-month Group Training Course in Reinforcement of Meteorological Services with funding support from the Japan International Cooperation Agency (JICA). The course was offered to eight participants from eight countries (Bhutan, Cambodia, Iran, Lao PDR, Malaysia, Mongolia, Myanmar, and Tonga) from 14 September to 18 December 2010. This course aimed at promoting activities to

reinforce the meteorological services of each country applying meteorological data/products such as numerical weather prediction, satellite images, and climate information.

On-the-job training for typhoon forecasters, funded by the Typhoon Committee, was offered to two forecasters from Hong Kong China and Singapore at RSMC Tokyo Typhoon Center from 21 to 30 July 2010.

Training Seminar on Climate Information and Forecasting has started since 2008. The third seminar was conducted at Tokyo Climate Center from 18 to 21 January 2011, offered to participants from 11 countries (Bangladesh, Hong Kong China, Indonesia, Kazakhstan, Lao PDR, Malaysia, Maldives, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Thailand, Uzbekistan and Viet Nam).

3 Infrastructure

In 2010, Oriental Electronics, Inc. Japan generously offered in-kind support through the VCP by providing engineering services to the Department of Meteorology in Cambodia for reinstallation of the MTSAT Satellite Reception System and its connection with the MSS servers, and to the National Agency for Meteorology and Environment Monitoring of Mongolia for upgrading the circuit for the GTS links to the Digital Data Network and migration of data exchange code to the Table Driven Code Format. .

4 Expert Services

JMA sent experts for technology transfer to Argentina, Paraguay and Uruguay in the field of climate adaptation, to Indonesia in the field of satellite meteorology, to Thailand in the field of calibration of meteorological instruments, and to Philippine in the field of ozone observation.

5 Grant Aid Projects

A Grant Aid Project (total: $29 million) was launched in November 2009 in the Philippines for the improvement of the meteorological radar system. Three radar systems at VIrac, Aparri and Guiuan and data satellite communication system are being installed under this project.

A Grant Aid Project (total: $8 million) was launched in 2010 in Samoa for Improving the Weather Forecasting System and Meteorological Warning Facilities. Seven AWS, one airport observation system, one wind profiler system and data communication systems are being installed under this project.

6 Technical Cooperation Projects

A technical cooperation project on developing human resources for meteorology and hydrology in Lao PDR started in July 2006. This project followed the two-year Grant Aid Project for installation of a meteorological radar system and an MTSAT data-receiving/analysis system. This technical cooperation project is scheduled to continue until the beginning of 2011.

A technical cooperation project in Bangladesh on development of human capacity on operation of weather analysis and forecasting was launched in 2009. This is to follow-up the Grant Aid Projects for the improvement of the meteorological radar system.

A technical cooperation named Disaster Management Capacity Enhancement Project Adaptable to Climate Change in Sri Lanka was launched in November 2009. This is to follow-up the Grant Aid Project for the improvement of the meteorological and disaster information network.

A technical cooperation project for supporting enhancement for adaptation to the impact of climate change in Yucatan Peninsula in Mexico was conducted from June 2009 to June 2010.

A technical cooperation project for Meteorology Training for Fiji and neighboring countries has been conducted since 2010. Along with this project, a training course on calibration, repair and maintenance of meteorological instruments was conducted in October 2010. To this training course, a staff member of RA-II Regional Instrument Center in Tsukuba was dispatched.

A technical cooperation project has been launched in Myanmar for developing early warning systems for Cyclone Nargis affected areas. In association with this project, two experts have been dispatched to the Department of Meteorology and Hydrology in Myanmar to investigate and analyze its capacity for disseminating cyclone advisories and warnings.

7 Plans for 2011

Instead of cash contribution to the VCP(F), "Japan Trust Fund for Global Frameworks" was established in order to facilitate the financial contribution of JMA to a broad range of WMO programmes and projects that support the establishment, implementation and strengthening of all components of the Global Framework for Climate Services, including disaster prevention, agriculture, and water resource management in the world.

In 2011, Japan will continue to support the improvement and enhancement of meteorological and hydrological services of NMHSs, particularly in developing countries through this new fund, and related activities including training/fellowship, in-kind contributions by private companies in Japan, and bilateral cooperation under the Official Development Assistance scheme.

New Zealand

ACTUAL	WMO VCP - NEW ZEALAND CONTRIBUTIONS

YEAR	2009/2010					
Currency	USD					
Donor Member	VCP (F)	via WMO	VCP (ES) Via Bilateral	Training	VCP (ES) Sub Total	Total Contributions
New Zealand			1,628,989	280,831	1,628,989	1,909,820

FORECAST	WMO VCP - NEW ZEALAND CONTRIBUTIONS

YEAR	2010/2011					
Currency	USD					
Donor Member	VCP (F)	via WMO	VCP (ES) Via Bilateral	Training	VCP (ES) Sub Total	Total Contributions
New Zealand		80,000	1,850,550	TBD	1,930,550	1,930,550

(a) 2010 Country Report

New Zealand (NZ) contributions to the WMO VCP (**US1,90,9820 (2009/10 FY) and US1,930,550 (2010/11 FY)** – see summary section for breakdown) are predominantly bilateral in nature via a mix of direct NZ government Overseas Development Assistance (ODA) programme and joint projects with other development partners, the US National Oceanic and Atmospheric Administration (NOAA) Global Climate Observing System (GCOS) Programme, US NOAA NWS International Affairs (IA), Met Office UK and the Australian Bureau of Meteorology (BoM) being the primary ones under the umbrella of WMO.

The goal of NZ and its partners' assistance is to further enhance the capacity of National Meteorological and Hydrological Services (NMHSs) of Small Island Developing States of the Pacific (Pacific SIDS) to operate and manage their own affairs.

Funding from NZ comes out of the NZ Ministry of Transport (MOT) contract, managed by MetService, the NZ Climate Change Development Fund (CCDF), managed by the NZ Ministry for the Environment (MfE) and NZ Overseas Development Assistance (ODA) programme, managed by NZ Ministry for Foreign Affairs and Trade (MFAT). Priority areas of assistance include;

- Ensuring the continuing quality and integrity of data gathered in Pacific SIDS are in accordance with the Global Observing System (GOS) of the World Weather Watch (WWW);
- Ensuring the continuing quality and integrity of climate data gathered in Pacific SIDS as part of the GCOS programme
- Providing facilities for the Global Telecommunications System (GTS) via maintaining a Regional Telecommunication Hub (RTH) on the GTS for the purpose of relaying observations to and from Australia and Pacific SIDS National Metrological Centres (NMCs) and other islands and relaying forecasts, analyses and other messages to and from Australia and the Pacific SIDS NMCs.
- Hosting and operating the HF/RANET Pacific Regional hub in Wellington
- Providing backup service to the Regional Specialised Meteorological Service (RSMC) Nadi/Fiji Meteorological Service (FMS) during the tropical cyclone seasons
- Hosting the WMO Severe Weather Forecast Disaster Risk Reduction Project (SWFDRR) for RA V (South Pacific)
- Implementing the NZ Climate Change Development (CCD) assistance programme
- Managing Trust Funds as agreed from time to time with other organisations funding Pacific SIDS weather and climate data acquisition, data management, and telecommunication systems.
- Climate monitoring and research in NZ and Pacific SIDS

<u>Highlights from 2009/10</u>

NZ Ministry for Foreign Affairs and Trade (MFAT) ODA - Natural Disasters and Environment Programme

- Weather forecasting service Pacific (MetService)
- Broadcasting Service, including severe weather and tropical cyclone warnings under the WMO RA V Tropical Cyclone Operational Plan (Radio NZ International (RNZI))
- Community-based DRR programme (FSPI) – community based DRR in PNG, Solomon Islands, Tonga and Vanuatu
- Disaster and Tsunami Readiness (with Ministry of Civil Defence and Emergency Management); strengthen disaster risk management in the Pacific (Samoa, Tonga, Cook Islands, Niue and Tokelau).
- Meteorological Services Pacific Review (SPREP)
- Island Climate Update (ICU) (SOPAC)
- Water demand management (SOPAC)
- Water Quality Monitoring (SOPAC)

NZ *M*inistry *O*f *T*ransport (MOT) contract

- Technical assistance and advice (GCSO stations inspections, calibrations and maintenance) via in-country visits and remotely were provided to Kiribati, Tuvalu, Samoa, Tokelau, Tonga, Niue and Cook Islands.
- MetService continued to assist Pacific SIDS maintain and upgrade Reporting Basic Synoptic Stations Network (RBSN) and monitor their performance on a daily basis.
- Backup to Regional Specialised Meteorological Centre (RSMC) Nadi, Fiji during the Tropical Cyclone Season.
- Lead RSMC for the WMO Severe Weather Forecast Disaster risk reduction Demonstration Project for RA V (SWFDDP).

NZ *C*limate *C*hange *D*evelopment *F*und (CCDF)

Assistance provided under this programme includes the following:

- Support for two workshops organised under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC); the first (held in Samoa) on the roles of regional centres and networks in assessing and planning for adaptation to climate change; and the second, a workshop for Small Island Developing States (held in the Seychelles) where participants shared experiences, lessons learned and good practices in developing and implementing climate change education, training and awareness activities and discussed opportunities for strengthening and expanding those activities.
- Assistance to the Asia Pacific Network (APN) for Global Change Research (APN) contributing to the CAPaBLE capacity development and enhancement programme that builds/enhances scientific capacity in developing countries in the Asia-Pacific region to improve their decision-making in target areas related to climate change, water and food security, and global change that are linked directly to their sustainable development.
- IPCC outreach in WMO Region V, involving holding meetings/workshops in several South East Asia centres and Fiji with the aim of improving the relevance, coverage and inclusion of material for this region in the IPCC fifth assessment (AR5), and to involve regional stakeholders in the review process and uptake of findings.

***P*acific Trust *F*und; a joint UK/NZ bilateral Project (PF)**

- NZ (MetService) and UK (Met Office) continued to assist Kiribati, Tuvalu and Cook Islands manage and operate their upper air stations at Tarawa, Funafuti and Rarotonga. Assistance includes provision of funding for day to day operation, procurement and supply of consumables, spare parts, financial management, reporting, remote support and incountry technical preventative and restorative maintenance visits. The project also provided telecommunication (HF/RANET) and computer systems to Tuvalu and Kiribati. Direct financial assistance to continue the upgrade and refurbishment of Tuvalu and Kiribati NMSs offices in Funafuti and Tarawa were provided under the PF.

***P*acific *I*slands *GCOS S*ystem *S*upport; a joint US/NZ bilateral *P*roject (PI GCOS SSP)**

- This joint collaboration between MetService (Wellington) and the US GCOS Programme (based at NOAA's Silver Spring, Maryland) is made possible under the New Zealand/US Climate Change Partnership bilateral agreement. The project involves the support of bilateral activities in three distinct areas: (1) Pacific Technical Support Project (TSP) support for maintaining regional climate observing networks; (2) Climate research and observational activities; and (3) Pacific Islands GCOS programmatic support for the region. The goal is to ensure a sustained long term continuity, quality and integrity of meteorological data gathered from Pacific Islands GCOS network for use in weather and climate monitoring, modelling and research. The main objectives are; (i) to oversee the operation, maintenance, and calibration of the region's GCOS Surface Network (GSN) and GCOS Upper Air Network (GUAN) stations to the agreed upon GCOS standards as documented by the GCOS Program

at http://www.wmo.int/pages/prog/gcos/ as documented in GCOS Publication 73, "Guide to the GCOS Surface and Upper-Air Networks: GSN and GUAN - *(Version 1.1)"*; (ii) to work towards continuing critical climate research and associated observations via the shipboard trace gas measurements project undertaken between New Zealand and Japan, publication of and research support associated with the monthly Island Climate Update (ICU) for regional south Pacific climate outlooks, South Pacific Rainfall Atlas (SPRAT) and preparation for the GCOS Reference Upper Air Network operations at the upper site in Lauder, New Zealand and (iii) to provide on-going support for the Pacific Islands GCOS regional coordinator based in SPREP, Apia, Samoa

(b) 2010/11 VCP Plan and related projects

New Zealand will continued its ongoing support to the projects funded in 2010. Funding is expected to remain static in 2010/11 fiscal year. The projects we expect to support in 2011 include:

- A continuation of the support NZ MFAT provides for Weather forecasting service Pacific (MetService), Broadcasting Service, including severe weather and tropical cyclone warnings under the WMO RA V Tropical Cyclone Operational Plan (Radio NZ International (RNZI)), Community-based DRR programme (FSPI) – community based DRR in PNG, Solomon Islands, Tonga and Vanuatu and Disaster & Tsunami Readiness (with Ministry of Civil Defence and Emergency Management); strengthen disaster risk management in the Pacific (Samoa, Tonga, Cook Islands, Niue and Tokelau).
- A continuation of the support NZ currently provides to Pacific SIDS (Kiribati, Tuvalu, Samoa, Tokelau Islands, Tonga, Niue and Cook Islands) under the New Zealand MOT Contract
- A continuation of the support NZ provides under the CCDF
- A continuation of the support NZ provides under the PI GCOS SSP
- In-country training and technical support will be provided to the observers and operators of the GSN, GUAN and RANET systems in selected Pacific SIDS.
- Restoration of the Niuatoputapu Meteorological Service' facilities destroyed by the September 29th Pacific tsunami. The project is a joint initiative by US NOAA International Affairs (IA) Division, WMO VCP, MetService and Tonga Meteorological Service (WMO, NOAA IA).
- Reinforcement of Meteorological Services in Tonga (jointly with JICA and Tonga Met Service)
- SWFDDP – further enhancement of Met Connect Pacific and follow up in-country trainings (with US NOAA NWS International Affairs and SWFDDP participating Pacific Islands NMSs and Global Producing Centres (GPC).
- Update of the Strategic Action Plan for the Development of Meteorology in the Pacific (SPDM), 2001-2009 (with SPREP, Finland, US NOAA NWS IA and Australian Bureau of Meteorology, WMO)
- Update of Pacific Meteorological Services Needs Analysis Project (PMSNAP) reports (with SPREP and SPREP members, WMO)
- Implementation of the recommendations of the SPREP led Review of Pacific Meteorological Services (SPREP and SPREP members, WMO)
- PI-GCOS Programmes (SPREP, NIWA and US NOAA GCOS)
- Pacific Climate Information System (PaCIS) (US NOAA, NIWA and BoM)
- Climate Hazards Project (with NIWA, MfE, NZAID)
- Implementation of WMO RA V SP/SOP, 2012-2015 – Pacific Islands' components (WMO and relevant development partners and agencies)

Republic of Korea

Contributions in 2010

1) Estimated Financial Value of Contribution of ROK in 2010:

VCP(F)	VCP(ES)	Bilateral		Total
		ES	E&TR	
USD30,000	Nil	1,263,100 USD	406,700 USD	1, 699,800 USD

2) Equipment and Services by Bilateral Arrangements:

The Korea Meteorological Administration (KMA) has been providing expertise support for the project – Establishment of Early Warning and Response System for Disaster Mitigation in the Metro Manila (Pasig-Marikina River Basin). This 3M USD project, funded by the Korea International Cooperation Agency (KOICA), is implemented from 2010 to 2012 in order to modernize the flood forecasting system and early warning system for the Metro Manila region. The contribution in 2010 was 1M USD.

KMA dispatched its experienced retirees to the National Hydro-Meteorological Service (NHMS) of Viet Nam, the National Agency for Meteorology and Environment Monitoring (NAMEM) of Mongolia and the Kenya Meteorological Department in 2010 through the World Friends Korea (WFK) program sponsored by the Ministry of Knowledge Economy to provide consultations for the modernization of meteorological services in the countries. The WFK program aims at providing support for the socioeconomic development of developing countries based on the exploration and planning of development projects, and the provision of technical and managerial consultation for the promotion of such projects. The contribution amounts to 202,200 USD.

KMA funded 60,900 USD for a joint research project with NHMS of Viet Nam to develop a typhoon forecast system using multi-model ensemble, which included:

- A three-month secondment for joint research at the National Typhoon Center of KMA by two NHMS experts;
- An one-week training for typhoon forecasters at KMA; and
- Funding NHMS for its system development.

3) Education and Training by Bilateral Arrangements:

In 2010, with the sponsorship of KOICA, KMA provided Training Courses on:

- Information and Communication Technologies for Meteorological Services (107,500 USD);
- COMS (Communication, Ocean and Meteorological Satellite) Data Analysis (USD 87,100 USD); and
- Improvement of Meteorological Disaster Responsiveness for African Countries (42,400 USD).

KMA co-organized with the Malaysian Meteorological Department (MMD) the Training Workshop on Mesoscale Numerical Weather Prediction (Phase I) in October 2010 for 20 participants from the 10 ASEAN NMHSs under the auspices of the ASEAN-ROK Special Fund. The contribution was 87,300 USD.

KMA invited two experts from the Thai Meteorological Department (TMD) and the MHMS of Viet Nam to KMA to provide an attachment training at the National Typhoon Center of KMA on typhoon analysis and forecast system (TAPS) in 2010 for three months within the framework of the 2010 Typhoon Committee Research Fellowship Scheme. The contribution was 12,200 USD.

KMA invited 7 Directors of NMHSs of the East Africa and the Director of the IGAD Climate prediction and Applications Center (ICPAC) to the Korea-Africa Leaders' Workshop on Meteorological Cooperation, which was held on 24-28 October 2010 in Seoul aiming to identify cooperative activities between KMA and the NHMSs of ICPAC Members. The contribution was 54,700 USD.

KMA organized the following short-term training events:

- On-the-job training for six NHMS (Viet Nam) experts for one week on forecast system, applied meteorological services and climate data rescue (10,800 USD);
- On-the-job training for two NHMS (Viet Nam) experts for two weeks on short-range NWP (4,700 USD)

Prospects for 2011

1) VCP(F)
KMA will contribute 30,000 USD to the VCP Fund in 2011.

2) Equipment and Services by Bilateral Arrangements:
KMA will continue implementing the KOICA Project - Establishment of Early Warning and Response System for Disaster Mitigation in the Metro Manila (Pasig-Marikina River Basin) – aiming at putting the system in operation by the end of the year.

Also, KMA plans to continue participating in the WFK program to dispatch experienced retirees to some NHMSs for consultations on the modernization of meteorological services. To this end, KMA is discussing with the NHMSs of Tanzania, Ethiopia, the Philippines, Uzbekistan and Malaysia.

KMA has developed another KOICA project for development of a COMS data receiving and analysis system in Sri Lanka (2011-2013/$2M), and is planning to expand such projects for other developing countries within the COMS service boundary.

3) Education and Training by Bilateral Arrangements:
In 2011 KMA will organize the following two KOICA training courses:

- Information and Communication Technologies for Meteorological Services; and
- Improvement of Meteorological Disaster Responsiveness for African Countries.

KMA will co-organize the Training Workshop on Mesoscale Numerical Weather Prediction (Phase II) with MMD in 2011 in Malaysia.

KMA will provide two NAMEM experts with a three-month training program on supercomputer and NWP in line with NAMEM’s plan to introduce high-performance computing system for the enhancement of its regional NWP system.

For contribution to capacity building in the field of climate prediction and application in the East Africa, KMA plans to organize the following activities in 2011:

- Attachment training at KMA in the field of climate modeling for an expert from Ethiopia for three month;
- A secondment program to KMA for joint research on climate for an expert from Africa for one year; and
- Invitation to 10 experts from Africa to a symposium on climate change adaptation in Seoul.

KMA will organize a training event on severe weather forecast for 10 NHMS (Viet Nam) experts in 2011.

Spain

Activities in 2010

In 2010 Spain contributed to two of the four specific Trust Funds that had been built within the WMO by Spain. Several multi-lateral or bi-lateral co-operation projects supported by WMO and related to the goals of VCP have been funded by means of these. Spain also mobilized resources in favour of development projects and technical assistance. Training activities for staff of NMHSs of other members also continued in 2010.

1. VCP Trust Fund

There were no direct contribution to the VCP, being all the activities managed through agreements with WMO and the receptor countries.

2. Multilateral activities in Regional Associations III and IV financed through bi-lateral agreements with WMO

Spain established in 2006 a Trust Fund in WMO to finance the activities of the "Program of Cooperation for Ibero American NHMSs" agreed with 20 NMHSs of Latin America and Portugal. The contribution to this fund was of **1.707.552 USD** in 2007, **1.740.803 USD** in 2008, and **345.466 USD** in 2010. The Trust Fund is kept at WMO for financing present and future activities.

The highlights from activities implemented during 2010 were:

- Support and update of the contents of the web page of the Directors' Conference (www.meteo-iberoamericana.com)
- CLIBER ("*Clima Iberoamericano*", "Iberoamerican Climate") project for studies of current situation and development of NMHSs infrastructures. Presentation to the corresponding authorities of the Projects CLIBER-Colombia and CLIBER-Nicaragua.
- Pilot implementation of the hydrometeorological database administration system MCH in Costa Rican *Instituto Meteorológico Nacional*. MCH system is free-licensed and is common and available to all NMHSs interested.
- Holding of a meeting between Uruguayan and Paraguayan NMSs and end users.
- Continued support to practical learning pilot projects regarding the relationships between NMHSs and key sector users in Chile (salmon industry, transport and agriculture), Peru (health and agriculture) and Panama (agriculture).
- Organization of a Conference of NMHSs' Directors in Mexico City (July 5-7, 2010) dealing about the participation of NMHSs in the Global Framework for Climate Services.
- Organization of the 8th Meeting of the Iberoamerican NMHSs' Directors Conference in Santiago de Chile (November 17-19, 2010).
- Funding of the PROHIMET Network Conference about "Regional Hydrometeorological Observation Systems: exchange of information", held in July 19-23, 2010 in San José (Costa Rica).
- Workshop on coordination of NMHS Communication Offices, held in May 31-June 3, 2010 in San José (Costa Rica).
- Support of the climate forum in Central and South America.
- Support to horizontal cooperation between NMHSs (expert training, stays, etc.) about:
  - implementation of WIS in South America
  - instrument calibration
  - generation of climate change scenarios
- Funding of different training courses:
  - Workshop on Quality Management Systems for NMHSs. Santa Cruz de la Sierra (Bolivia), April 12-16, 2010.
  - 2nd Course on Introduction to Strategic Management for NMHSs (distance learning). April 5-June 6, 2010.

- Roving course on use and installation of automatic hydrometeorological stations. Costa Rica, July 19-30, 2010.
- 7th Course on Satellite Meteorology (partially funded by EUMETSAT). Antigua (Guatemala), August 30-September 10, 2010.
- 5th Course on use and interpretation of ECMWF products. Cartagena de Indias (Colombia), September 6-17, 2010.

The expenditure from the Trust Fund during 2010 can be estimated around **550.000 USD**. In addition, staff from AEMET and other Spanish institutions have been involved in all these activities.

3. Multilateral activities in Regional Association I (Africa) financed through bi-lateral agreements with WMO

As a consequence of the Las Palmas Action Scheme approved in 2007, Spain established in 2007 a Trust Fund in WMO to finance the activities of the "West Africa Co-operation Programme".

In 2008 Spain contributed to that Trust Fund with **2.249.100 USD**, although this amount was received by the WMO in January 2009, and in 2010 Spain contributed to that TF with **345.466 USD**. The Trust Fund is kept at WMO for financing present and future activities, specifically the activities programmed in the meetings of the Conference of Directors of West Africa NMHSs.

The highlights from the activities implemented in West Africa during 2010 were:

- Maintenance and update of the Forum of Directors of West Africa NHMSs webpage (www.afrimet.org): 3.597 USD
- Meetings and conferences: 207.235 USD
  - 3rd Conference of Directors of West Africa NMHSs. Banjul (The Gambia), February 1-5, 2010.
  - Coordination meeting AEMET-WMO. Seville (Spain), February 19, 2010.
  - Support to the 1st Conference of African Ministers Responsible for Meteorology. Nairobi (Kenya), April 12-16, 2010.
  - MARINEMET technical coordination meeting. September 29, 2010.
- Equipment: 519.493 USD
  - 6 marine weather radars (purchase, installation and maintenance): Mauritania, The Gambia, Senegal and Cape Verde.
  - Rain gauge manufacture and distribution
  - L-band use license
- Courses and seminars: 71.931 USD
  - Roving seminars and rain gauge distribution in Mauritania, Senegal, The Gambia, Cape Verde, Guinea-Bissau, Guinea-Conakry, Togo, Benin, Niger and Burkina Faso.

The expenditure from the Trust Fund in all these activities adds up to **802.256 USD**.

Although Spain made no contributions to the specific WMO Trust Fund for financing the African Centre of Meteorological Application for Development (ACMAD), dated January 1, 2010 there were **284.549 USD** in the TF that have been partially invested during 2010, particularly in capacity building, research and general operations.

4. Training Fellowships

During 2010 ten students from Iberian America continued their participation in the two-year international Course on Applied Meteorology organized by AEMET in Madrid. Costs of

fellowships granted to the students were **167.000 USD**. Training costs and overheads can be estimated around another **140.000 USD**.

5. Other technical activities

Spain contributed with **10.074 USD** to the *Institut Méditerraneen de l'Eau* (IME), a network of experts gathering institutional and technical scopes in the Mediterranean Basin on water issues.

The AEMET Izaña Atmospheric Research Centre went on its long term collaboration with the Argentinean NMS in the Ushuaia GAW station. AEMET provided 14 ozonesondes in 2010 with an estimated cost of **20.800 USD**. These observations are of prime importance due the shortage of this kind of data in the high latitudes of the Southern Hemisphere.

Also, staff from AEMET installed an AERONET-PHOTONS-RIMA station in Cairo (Egypt). The cost of the equipment (a Cimel Sun Photometer) was financed by the Spanish International Cooperation Agency for Development (AECID) through WMO (SDS-Africa Project) and developed by AEMET Izaña Atmospheric Research Centre, working closely with the Egyptian Meteorology Authority (EMA). This inversion added up to **55.492 USD**.

Outlook for 2011

During 2011 these activities are expected to continue. On 2011 there has been a contribution of **691.300 USD** to each of the Ibero American and the West African Trust Funds. Regardless of the difficult economic situation, and its low predictability, there are now more than **2 million USD** in each of the Trust Funds that guarantee the continuity of these schemes. At the time of writing, two Conferences of Directors are to be held in Cape Verde and in San José (Costa Rica) to decide the action plans for the immediate years. As an example, the 2011-2013 Meteorological Action Plan for Iberoamerica to be approved in San José plans to invest around 1.8 million USD in cooperation activities.

The training activities for staff of less developed Members will continue through the finalization of the current long term training (2009-2011). The collaboration of the Spanish International Cooperation Agency for Development (AECID) will also continue with the support from their Training Centers in Iberoamerica.

Regarding the AEMET Izaña Atmospheric Research Centre, two more photometers are to be installed in Morocco and Tunisia in 2011, aiming to reinforce atmospheric monitoring capacity of aerosols in Northern Africa, complementing the activities carried out by the Barcelona WMO Regional Centre of the SDS-WAS for Northern Africa, Middle East and Europe.

Annex: Summary of 2010

	2010	
	EURO	**US DOLLAR**
WMO voluntary contributions (to the TF)	**500.000 €**	**690.932 USD**
Iberoamerica Cooperation Program*	250.000 €	345.466 USD
West Africa Cooperation Program**	250.000 €	345.466 USD
Other Spanish donors	**40.000 €**	**55.492 USD**
International Cooperation Agency for Development (AECID)	40.000 €	55.492 USD
	540.000 €	**746.424 USD**

* The figures in the table refer to the AEMET contributions to this particular WMO Trust Fund in 2010. Actual expenditure from the Iberoamerican Fund in 2010 was around 550.000 USD (400.000 EUR)

** The figures in the table refer to the AEMET contributions to this particular WMO Trust Fund in 2010. Actual expenditure from the Western African Fund in 2010 was around 800.000 USD (577.000 EUR)

Other expenditure	2010	
	EURO	US DOLLAR
Equipment and services (Izaña A.R.C.)	15.000 €	20.800 USD
Training/Fellowships	220.000 €	307.000 USD
Contribution to I.M.E.	7.296 €	10.074 USD
	242.296 €	**337.874 USD**

United Kingdom

The main UK contribution to WMO VCP is funded as part of the UK Public Weather Service (PWS) which sets some priorities:

- Improved protection of life and property of British Citizens overseas through the provision of sustainable public weather services by developing country National Meteorological and Hydrological Services (NMHSs).
- Sustained, and optimally improved, levels of observation data available on the WMO Information System.
- Increased access to forecast and observational data by developing country NMHSs via the World Weather Information Service.
- Ensure the continued unrestricted exchange of data and products, and effective results of WMO Programmes.

In addition, we seek to mobilise resources from other donors, where possible.

Highlights from 2010

Observations

- Continued support was provided to the GUAN stations at Seychelles and Gough Island (mainly in the form of equipment supplies), as well as support to GUAN stations in the Pacific (including Funafuti, Tarawa and Rarotonga) through the 'Pacific Fund', managed by MetService New Zealand.
- Responsibility for the GUAN station at St Helena was assumed by UK VCP in April 2009 – 2010 has seen negotiations continue with the Government of St Helena, Ascension and Tristan da Cunha for a sustainable arrangement for this station.
- Following a VCP request to WMO, UK VCP assisted in providing Gan – Maldives - with a batch of 470 balloons and 400 radiosondes.
- During 2010, UK VCP has assisted with a GCOS funded project in Madagascar which aims to install 11 AWS across the country. An initial scoping study was carried out in November prior to continuation of this project in 2011.

Forecasting

- Support continued to be provided to the WMO SWFDP, including participation in the management teams for both RA-I and RA-V and the continued supply of MOGREPS products. Forecaster training was provided for SWFDP East-Africa in October, followed by a week of Public Weather Service training for attendees, designed and delivered by one of the Met Office 'PWS Advisors'.
- The annual Met Office WMO Aviation Seminar was developed and delivered to 25 delegates at IMTR, Kenya, in September, with logistical support provided by the Kenya Meteorological Department. The training was on the Tuition and Assessment Kit to support implementation of WMO-258 certification for forecasters, which was developed by CAeM with funding from UK VCP.
- GRIB data from the Africa LAM continues to be disseminated via the EUMETCAST system and by website as graphical products. Preparation continues for resolution of the Africa LAM to be increased to 12Km (due March 2011). In addition, the ATD Lightning data over Africa continues to be disseminated via website. It is now available from the

same website as the Africa LAM http://www.metoffice.gov.uk/weather/africa/lam/index.html .

- In July, support was provided to a Met Office college trainer to travel to the Caribbean Institute of Meteorology and Hydrology to conduct a training course in marine forecasting.

Climate Services

- Development of the Climsoft climate data management system – Version 3 - continued throughout 2010. A developers meeting was held at ACMAD in July.
- Funding was provided to develop the e-SIAC (Statistics In Applied Climatology) course with improved support for those for whom English is a third language, and the addition of tuition on temperature statistics and risk related to climate. As in previous years, UK VCP funded a number of students to participate in the e-SIAC course.
- The Climate Science Research Partnership between the Met Office Hadley Centre and DFID was launched at the beginning of the year working, in consultation with African stakeholders, to advance scientific understanding and bring new science into use. UK VCP has had the opportunity to provide assistance with this programme including helping with the development of the fellowship scheme which aims to strengthen the pool of in-country climate science researchers in Africa.

IT and communications

- The "localisation" project has continued in Uganda, implemented using Climsoft on second-user PCs supplied by Computer Aid International. Additional funding was supplied during 2010 to aid with the remaining rollout of computers and updates/ swaps where required. A workshop was also held to train further observers in using Climsoft and TDCF with additional participants from Rwanda attending. This workshop was run by Mr. Samuel Machua from Kenya Meteorological Department who provided additional assistance to Uganda DoM at that time including helping with their transition to Climsoft V3 and configuring Climsoft to receive AWS data.
- A similar "localisation" project in Zambia has been agreed and funded, again with matching funds from Computer Aid International. The equipment has been procured and delivered to Zambia and an initial 'Train-the-Trainer' workshop is due to be held in Lusaka in March 2011 prior to roll-out of the computers and training at provincial stations.

Service Delivery

- Support continued for TV weather presentation delivery by NMHSs. Hardware components were replaced a number of sites including Malawi, Guinea. Support continued for users of WeatherEye-PC, the TV weather graphics package provided free to developing country NMHSs.
- A successful WeatherEyePC workshop was organised and held in Dakar, hosted by DMN Senegal, for 2 weeks in April. 13 participants attended from Francophone NMHSs which had previously received media systems assistance, with trainers from Mali, Benin and Kenya.

Human Resources Development

- Our sponsored delegate from South Africa (co-funded with SAWS) successfully completed his Msc in Applied Meteorology at Reading University in September. A further delegate from The Gambia began a Masters at Reading in October.
- We continued to provide support for delegates from Uganda and Rwanda for their in-country MBA courses, as well as for another delegate from Rwanda for his distance-learning MSc in Climate Change and Sustainable Development.
- A further run of the online course - 'Management by e-Learning' - was completed in February, with participants from RAI, RAII and RAIV taking part. An evaluation of this course was undertaken during 2010 with recommendations and alterations to be taken forward before the next run of the course planned for the second half of 2011.

- A WMO workshop on global temperature series was hosted at the Met Office in Exeter UK in September; a number of participants from developing countries were supported to attend with funding from WMO and UK VCP.

Disaster Contingency/Others

- UK VCP were pleased to be able offer support to the Haiti Mission during 2010 through the provision of a Met Office forecaster to the forecasting desk set up in Martinique. Our forecaster originally worked in Martinique from July until September to provide support for the hurricane season, and has just returned to Martinique in December to provide additional support through to March 2011.
- During April, at the 'First Conference of Ministers Responsible for Meteorology in Africa', UK VCP had the opportunity – through an exhibition stand at the conference - to promote to the Ministers in attendance the capacity building work undertaken through VCP and the vital importance of investment in NMHSs.
- In addition, in April, Tom Butcher from the Met Office was seconded to the WMO Resource Mobilisation Office for a year's secondment.

Finance 2010

Contribution:	**Total GBP:**	**Total USD:**
VCP(F)		
Equipment and Services through WMO	**25,295**	**38,701**
Equipment and Services through bilateral agreement	**653,345**	**999,618**
Training and fellowships	**78,949**	**120,792**
Grand Total:	**£757,589**	**$1,159,111**

Using exchange rate of £1 = $1.53 (average over 2010)

UK VCP Plan for 2011

The UK will continue it's commitment to the targets outlined above; the overall funding available is expected to be similar to 2010. Projects we expect to support include:

Observations

- UK support will continue for the GUAN stations at St Helena (including possible replacement of the Hydrogen generator observing equipment); Gough Island (with SAWS); Seychelles, Funafuti, Tarawa and Rarotonga (with New Zealand MetService). In 2011 we will further review, with SAWS, the future of observations from Gough Island.
- UK VCP will continue to provide support and advice for the GCOS sponsored AWS installation currently taking place in Madagascar.
- The Met Office is working with NOAA, USA and other partners to continue the key GUAN and gas monitoring programmes at Ascension following a reduction in funding.

Forecasting

- Support to the SWFDP in Southern Africa and the Pacific will continue, including the operational supply of MOGREPS products and involvement on the management groups.
- Support will also continue for the SWFDP for East Africa through the supply of products, training, and involvement in the management group. This will include further NWP forecaster & PWS training in East Africa, and support for the regional guidance website.
- A project on Mobile Weather Alerts is being planned by WMO, linked to the SWFDP East Africa; UK VCP will support this by providing funding for observing activities, training and by implementing a 4Km NWP model over the Lake Victoria region.
- Complementing the SWFDP, the resolution of the Africa LAM is due to increase to 12km by March 2011, with BUFR dissemination via EUMETSAT (as well as planned dissemination of the ATD lightning products through EUMETSAT).

- The Met Office WMO Aviation Seminar will be delivered in Europe (location to be confirmed) in the autumn and will be focussed on the implementation of Aeronautical Met personnel competence standards.

Climate Services

- The Met Office / DFID Climate Science Research Partnership will continue to be supported by UK VCP through advice and complementary activities, particularly on climate data and applications.
- Climsoft will continue to be developed in association with WMO, ACMAD and the Statistical Services Centre at the University of Reading. Version 3 of the package will continue to be rolled out to the various country users and updated on the met e-learning website.
- Financial support will be provided to assist with an e-SIAC (Statistics in Applied Climatology) course being held in cooperation with CIMH in the Caribbean in the spring, with potential support for a follow-on face-to-face SIAC course in the summer.

IT and communications

- The Zambia localisation project will continue into 2011 as documented earlier. A review visit will be undertaken for both the Zambia and Uganda localisation projects.
- Follow-up activities to the project on localisation of data input and use in Uganda will be supported
- Support for plans to implement TDCF and WIS connectivity will be supported where possible although there are no specific plans at present. Software changes will be implemented to ensure that the supported upper air stations can transmit in BUFR.

Service Delivery

- Further training and maintenance support will be provided to the operators of the Media Weather Presentation Systems. The development of the WeatherEye-PC software package will continue, with a potential training course in Africa and the South Pacific, alongside the provision of advice, support and training materials.
- Work has begun on the implementation of a TV weather presentation system in the Comoros Islands, being undertaken in partnership with WMO VCP. Training and installation are expected in April 2011. An upgrade to the TV studio in Madagascar will be provided, and training for both Comoros and Madagascar will be done jointly.
- Some support will be provided to implement TV weather presentation in other countries - possibilities include Cape Verde, Sao Tome and Dominica.

Human Resources Development

- Improvements and updates will be made to the ‘Management by e-learning’ training course in 2011 following the outcomes from the evaluation last year. A further run of the course is expected to be undertaken in the second half of the year.
- During 2010, UK VCP has been working with Reading University on the development of a Masters Programme (extended from their existing MSc. In Applied Meteorology) which is targeted towards building skills in meteorology as well as climate science and applications. The course will also include a management training element. It is hoped that the course can be promoted through WMO ETR in February with the potential of around 5 fellowships being offered for suitable candidates from developing countries.
- Advisory services will be provided to a project funded by the Government of Rwanda on organisational transformation of Meteo-Rwanda.

Disasters

Our Met Office forecaster will continue her secondment to Martinique to support forecasting for Haiti, until the end of March. Other disaster assistance will be provided as required and where possible.

United States of America

The United States provided $2,050,000 to the WMO VCP in 2010. The U.S. contribution is coordinated by the National Oceanic and Atmospheric Administration, National Weather Service (NOAA/NWS).

Direct Financial Support
The United States provided $812,606 in direct financial support to the WMO VCP. This included funds to:

Promote tropical cyclone preparedness and disaster risk reduction:

- RA IV Hurricane Committee ($26,750)
- RA IV Hurricane Attachment ($42,800)
- Typhoon Committee, ESCAP ($25,680)
- RA IV DRR Pilot Project in El Salvador ($190,226)

Provide technical assistance and training to improve forecasting capabilities (see also "Training"):

- International Training Desk-Africa ($128,400)
- International Training Desk-Tropical and South America ($85,600)
- International Training Desk-Pacific ($74,900)
- Workshop on Societal Benefits (Communications) of Met Services ($133,750)
- International Workshop on Tropical Cyclones in La Reunion ($39,590)

Support observation and communication capacity building (see also "Infrastructure"):

- GEONETCast Satellite Receiving Stations in RA IV ($65,000)

Training
The United States provided $705,615 in VCP funds to support training and technical assistance to improve forecasting capabilities, including hands-on fellowships for meteorologists from Africa, Central America, the Caribbean, South America, and the Southwest Pacific at the NWS National Centers for Environmental Prediction and the NWS Pacific Region:

- Hydrology distance learning modules ($71,000)
- West Africa Workshop on Marine Forecasting ($21,000
- Aviation Meteorology distance learning module ($95,000)
- Translation of distance learning modules ($61,500)
- Tropical Meteorology On-line Degree Program ($90,500)
- Weather and Society Caribbean Workshop ($41,000)
- Tsunami Warning and Mitigation Systems Training ($44,385)
- Tsunami Preparedness in the Caribbean Educational Video ($14,000)
- International Training Desk-Africa ($114,000)
- International Training Desk-Tropical and South America ($18,500)
- International Training Desk-Pacific ($137,190)
- Translation of distance learning modules ($61,500)

Infrastructure
As noted above, the United States provided $65,000 to deploy GEONETCast Satellite Receiving Stations in Costa Rica, El Salvador, and Mexico.

Expert Services
In addition to its direct financial support, the United States provided $234,396 in support of RA IV DRR pilot projects, including $100,000 for flood inundation mapping for the Rio Bravo/Rio Grande, $99,829 to help Mexico improve flood forecasting and warnings in Chiapas, and $34,567 to support the WMO DRR MHEWS Workshops in Costa Rica and Barbados. $83,030 was provided for data rescue services in Kenya, Malawi, Mozambique,

Niger, Senegal, Tanzania, Uruguay, Zambia, Dominican Republic and El Salvador, and $23,900 for maintenance and training for the Cooperative Hurricane Upper Air Stations. An additional $9,930 was provided to help assess communications requirements among RA IV and RA III NMHSs ($161,665 had been provided 2009.). The United States provided $40,000 to support developing country participation in the Satellite Direct Readout Conference. A small portion of VCP funds was used to facilitate Caribbean Hurricane Awareness Tour in Mexico, Bermuda, Antigua, and El Salvador ($3,410), to support the Hurricane Committee meeting ($6,490), and to support the Workshop on Societal Benefits ($7,523).

Secondments
None

Plans for 2011
The United States has not determined its level of commitment to the WMO VCP in 2011. For planning purposes NOAA/NWS has assumed that approximately $1,800,000 will be made available. Depending on the availability of funds, approximately $300,000 will be made available for activities in support of the Global Framework for Climate Services, $100,000 for tsunami warning programs, $500,000 for fellowships at the International Training Desks, $300,000 for distance learning programs, $400,000 for DRR MHEWS pilot projects in RA IV and the Tropical Cyclone Program.

ANNEX 5

Priorities Proposed by WMO Technical Programmes for 2011 and beyond

1. Introduction

This document outlines the issues and priorities for capacity building of the developing country Members for 2011 and beyond as offered by various WMO Technical Programmes: Observing and Information Systems (OBS), Weather and Disaster Risk Reduction Services (WDS), Global Climate Observing System (GCOS), Climate Database Management Systems (CDMSs) and Education and Training.

In view of the recent trends of WMO programme priorities and of requests for technical assistance from NMHSs, special attention should be given in 2011 to what as stated by Congress; the focus of the VCP shall comply with the WMO Strategic Plan 2008-2011 and contribute to all of the expected results areas, with particular focus on Expected Result 9 "Enhanced capabilities of NMHSs in developing countries, particularly LDCs, to fulfil their mandates" on weather, climate and water.

2. Observing and Information Systems (OBS)

2.1 Observing Systems Division (OSD)

CBS-Ext.(2010) agreed that more effort is needed to support developing countries, LDCs and SIDS, especially by providing technical guidelines and organizing training and capacity building events in the respective Regions.

CBS-Ext.(2010) agreed on the following guidelines for the allocation of priorities for technical cooperation activities for the integrated observing systems:

(a) Highest priority should be given to the projects aiming at improving and restoring the existing, and building the new upper-air observational capabilities, of the RBSN/RBCN with emphasis to the activation of silent upper-air stations and the improvement of coverage over data-sparse areas (in particular as regards the purchase of equipment and consumables, telecommunications and the training of staff);

(b) Highest priority should be given to extend AMDAR coverage to developing countries, LDCs and SIDS to supplement scarce upper-air observations or to provide a cost-effective alternative to countries that cannot afford costly upper-air sounding systems.

(c) High priority should be given to the projects related to the improvement of data quality, regularity and coverage of surface observations of the RBSN/RBCN with emphasis to the activation of silent stations and the improvement of coverage over data-sparse areas;

(d) High priority should be given to projects related to the introduction and/or use of new observing equipment and systems including, where cost-effective, surface-based AWSs, AMDAR, ASAP and drifting buoys;

(e) Medium priority should be given to the projects related to the improvement/upgrading of stations not included in RBSN/RBCN list of stations.

As far as the Instrument and Methods of Observation Programme is concerned, the following priorities should be observed:

(a) Highest priority should be given to projects aiming at improving and restoring the existing and building the new regional calibration laboratories, such as Regional Instrument Centers and Regional Radiation Centers;

(b) Highest priority should also be given to the projects aiming at improving and restoring the existing and building the new national calibration laboratories.

(c) High priority should be given to projects aiming at improving the traceability of instruments, such as the use of traveling standards, the calibration of instruments and support to trainees from national calibration laboratories to visit RICs for extended period of time to be trained in calibration procedures and practices.

2.2 Weather Information System/Global Telecommunication System (WIS/GTS)

Sixteenth Congress will urge Members and regional associations to sustain their commitment in continued improvement of the regional component of the GTS and to take effective actions to modernize their national and regional data-collection systems, especially to get as many as possible NMCs connected to GTS. Therefore top priority should be given to ensure full implementation of the GTS as targeted on the Manual on the GTS, to ensure that all NMHSs have the capability to inject data into the GTS and retrieve required data and products. In some cases, this may include national data collection system and satellite-based receiving systems.

There are several Members in RA I and RA II which are not connected to GTS, for example, Zambia, Iraq, Afghanistan, and Bhutan. It would be appreciated if VCP could help those Members to establish/restore their connections to GTS.

2.3 WMO Integrated Global Observation System (WIGOS)

Cg-XVI will urge Members and RAs to put significant attention to specialized education and training activities to be reflected in the regional, sub-regional and national WIGOS implementation plans, especially for NMHSs of LDCs, LLDCs and SIDS. Hence, capacity building is not to be limited to scientific and technological concerns, but also to strategic and management consideration including human resources development, resource mobilization and communications and outreach activities.

3. Global Climate Observing System (GCOS)

For GCOS, 2010 was a year of some successes but also some failures. Several station renovations were completed and some stations received supplies of radiosondes. Following our failure to establish a Technical Support Project (TSP) in Africa for the second time, a person in Africa was hired on a WMO SSA. He is providing some of the services we wanted to implement with the TSP. This is not a good long term solution but it helps to have someone “on the ground” in Africa.

The Technical Support Project (TSP) for the Americas has ended so that only the TSP in the Pacific continues to function. This TSP is part of a bi lateral agreement between New Zealand and the US.

The next coordination meeting/workshop of the 9 CBS Lead Centers for GCOS is scheduled for October 2011 in Hamburg, Germany. These Lead Centers are supposed to interact directly with member countries to improve the quality and quantity of the essential reports, the CLIMAT, SYNOP, and TEMP. Unfortunately not all of the Lead Centers contribute as much as others. This year only 3 of the 9 prepared an annual report of their activities, down from 5/9 last year. One of the topics we will cover at the next meeting will be some form of

performance measures or process in which the Lead Centers restate their interest and willingness to be a Lead Center on a periodic basis.

Regarding station maintenance / upgrades:

(a) Radiosondes are being provided to the GUAN stations at Dar es Salaam, Tanzania; Vacoas, Mauritius, and Khartoum, Sudan. These were funded by Switzerland.

(b) Support was provided to several GUAN stations that experienced equipment failures. Replacement parts and actual repair missions were provided to Vacoas, Mauritius and to Gan, Maldives.

(c) The upgrade of the 8 GSN stations in Angola was delayed somewhat after the Director was changed. The new Director could not agree to provide the Stephenson screens that the previous Director had agreed to furnish. The requisition of these units at the WMO has taken 6 months so far. This was funded by the Netherlands.

(d) The instruments were replaced at the high mountain GSN station at Aragats, Armenia. Subsequently a local contract was awarded to repair and renovate the observatory building itself. Work started last year but was then delayed when winter weather arrived.

(e) In cooperation with the WMO Development and Regional Activities Department, a replacement hydrogen generator was procured along with a new upper air system, radiosondes and balloons for Conakry, Guinea. Possibly this station will be added to the GUAN at some point in the future.

(f) A project to renovate 11 GSN stations in Madagascar has begun. The UKMO is managing the project and the funding is from the Netherlands.

Issues

(a) Continuing support for important GUAN stations is still a major issue. Almost all of the GUAN stations are capable of operating but several are silent because they lack consumables (balloons and radiosondes) It costs $50K-$60K USD per year to support the operation of an upper air station. Some of the most important stations such as those in Yerevan, Costa Rica, and PNG are silent because they simply lack supplies and cannot purchase for themselves. Usually we can obtain good consistent prices at the WMO, in fact often better than the country itself can obtain. But we need to find a way to address this continuing need in a systematic way.

(b) The GCOS donor board has determined that GUAN stations that are not likely to become self sufficient within a few years of receiving assistance should not receive additional support. Some of the stations that have received our support for several years will be informed that this support will not continue.

(c) Hydrogen generators are still a major problem as the first generation of units are now 30 years old and failing. There are few current suppliers and their units have had a poor performance record and they are technically difficult to support. In Africa, many of the support staff are apprehensive even after several bouts of training. Replacement parts are expensive also.

(d) As funds are less than in previous years GCOS is addressing surface station renovations more than upper air as they are much cheaper but do require much

more effort on the part of GCOS to define more detailed specifications and to evaluate more bids. Assistance from members in this regard by managing projects for us is therefore invaluable. Currently UKMO and NZ provide support in this way. [Ideally support could also come from US, Brazil, India, Russia, Japan, and China, as language and technical issues like manuals and equipment displays in these languages often pose problems to GCOS].

(e) The WMO procurement function has become even more problematic. It is very difficult to buy some items competitively, such as radiosondes for specific systems, support for name brand units, and equipment that is standard in a particular country. Our attempts to justifying sole source in such cases have generally failed.

Priorities

(a) The priorities for the coming year include the renovation of the upper air station at Luanda, Angola if funds can be found. This is the highest single priority assigned by the GCOS advisory board.

(b) Additional training/workshops including training on hydrogen safety and balloon handling is needed as is training on the preparation of the CLIMAT reports. These topics have apparently never been taught. Considering that there have been a few fatal accidents, instruction in the area of hydrogen safety this is an important area where WMO can help its Members and CIMO agrees.

4. Climate Data Management Systems (CDMSs)

4.1 Climate Data Management Systems

There has been an increased engagement of Members in implementing various aspects of climate data management and the increased assistance provided through WMO-VCP or bilateral collaboration to developing and least developed countries in acquiring and operating modern Climate Data Management Systems (CDMSs). However these activities still need further efforts by the Members to accelerate the modernization of Data Archiving systems and methods.

The Commission for climatology identified the future work on Climate Data Management Systems (CDMS) including the following main components:

(a) Provide guidance on Model of Description for CDMSs describing the main functions of the CDMSs based on existing database management standards and protocols to help the providers of these systems to adequately describe them to and the potential users to make an informed choice of the CDMSs;

(b) Produce a minimum set of functions that CDMSs should offer based on a new evaluation of the existing and future CDMSs;

(c) To conduct a comprehensive survey on the degree of operational use of the already installed CDMSs in the developing and Least Developed Countries (LDCs) which benefited from the various capacity building mechanisms e.g. training workshops, bilateral collaboration and the WMO Voluntary Cooperation Programme (VCP). The result of the survey should lead to revisit the ongoing capacity building strategy to ensure that the CDMS implementation should have a positive impact on producing CLIMAT reports and their exchange in addition to the improved historical data digitization in the countries.

VCP would help in hiring a consultant to carry out Survey Analysis and develop Guidance material for the NMHS on the new CDMS model description. The result of this survey will guide WMO to better plan for modernizing Climate Data Management Systems in the countries. Also VCP would help in assisting least developed countries in the installation and use of modern climate data management systems. The most urgent VCP needs would help in updating the existing CDMSs like Climsoft and Clidata as well as the migration from the obsolete systems such as CLICOM.

Expenditure	**Cost**
Consultancy	30 K CHF
Support LDC in the migration from old systems to new CDMSs	120 K CHF
	Total 150 K CHF

4.2 Climate Data Rescue

Congress, EC and the Commission for climatology considered that data rescue and digitization of old climate records is still a challenging topic for many NMHSs in developing and least developed countries and needs further attention by the Members. They requested Members to increase their support to safeguard the old climate records and make them available for research and applications in the digitized electronic format. They urged Members and the Secretariat to continue the support given to the developing and least developed countries to implement DARE.

VCP would help in buying DARE equipment and support expert field mission to 20 developing countries with an estimated cost of 3000 CHF per country and a total of **60K CH** as follow:

Region	Country	Number of countries / cost
Africa	Burundi, Cameroon, Central African, Republic of Congo, Democratic Republic of Congo, Uganda, Rwanda, Burundi	8 / 24K CHF
Central Asia	Afghanistan, Kazakhstan, Kyrgyzstan, Turkmenistan, Uzbekistan	5/ 15K CHF
Caucasus	Georgia, Armenia, Azerbaijan	3 / 9K CHF
South East Asia	Laos, Myanmar, Cambodia, Thailand	4 / 12K CHF
		Total 20 countries / 60 K CHF

4.3 Hands-on training seminars Climate Extremes

The Joint CCl/WCRP-Clivar/JCOMM Expert Team on climate change detection and indices developed a useful technical document '' Guidelines on the Analysis of extremes in a changing climate in support of informed decision for adaptation''. The Experts highlighted the importance of the results of the extremes analyses as it will support climate-policy related research at the local and national scales. Local authorities and national decision makers will be able to utilize the extremes analyses for their country as input for climate change assessments and the formulation of adaptation and mitigation strategies. Countries can also directly use the results for their "national communications on climate change policies", which are a written requirement for the Conference of the Parties of UNFCCC and include national GCOS implementation activities.

EC-LXII supported ETCCDI ongoing plans for organizing hands-on-seminars for climate extreme analysis as framed in the guidelines. The Objectives of these seminars are:

(a) Provide training on climate analysis using modern Climate Data Management Systems (CDMSs) and Statistical Analysis tool for climate extremes (RClimdex) which was developed by ETCCDI;

(b) Address in the regions scientifically important issues related to climate data, such as homogeneity, data gaps, cross-border data comparison regional climate data sets for climate change assessment, regional data bases for climate extremes, etc.

(c) To produce climate change indicators that enable NMHSs to make a scientifically sound contribution to the implementation of high value climate services as well as to contribute to upcoming IPCC AR5;

(d) To raise awareness on the need for Climate Data Rescue, Climate Metadata and data exchange;

(e) To enable participating climate experts, particularly from the developing world to producing peer-reviewed scientific publications with participation of international lead climate experts.

VCP would help in co-sponsoring with the African Centre for Meteorological Applications for Development (ACMAD) one ETCCDI seminars for West Africa and providing a full sponsoring for an ETCCDI seminar for Caucasus and Central Asia. The proposed ETCCDI seminars are one week period with the following participating countries:

Region	Recipient countries	Number of countries	Total estimated cost	VCP funds	Other funds
West Africa	Burkina Faso, Benin, Cape Verde, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Togo	16	60 K CHF	20 K CHF	ACMAD (CLIMDEV project) (40 K CHF)
Caucasus and Central Asia	Georgia, Armenia, Azerbaijan, Afghanistan, Kazakhstan, Kyrgyzstan, Turkmenistan, Uzbekistan	8	30 K CHF	-	-
				Total VCP funds required	**90 K CHF**

5. Weather and Disaster Risk Reduction Services (WDS)

5.1 Data-Processing and Forecasting System

According to CBS-Ext.(10), on support to building technical capacity to improve weather forecasts and warnings:

The Commission agreed on the following guidelines, in relation to Capacity Building, for the allocation of priorities for technical cooperation activities for the DPFS:

(a) Highest priority for establishing access at NMHSs to NWP/EPS products from advanced centres, for viewing and post-processing, and use as guidance for forecasting applications, in particular severe weather forecasting;
(b) Highest priority for automation of operational data-processing functions, including the processing of observations and post-processing of NWP outputs, for improvement of all weather forecasting applications, in particular for very short-range forecasting, including nowcasting;
(c) High priority for training on use of NWP products, in particular use of EPS products, and probabilistic forecasting methods, particularly in support of the SWFDP;
(d) High priority for training on operational data-processing, including on the implementation of post-processing of NWP products, running of a Limited Area Model, and NWP verification, where NMHS' capacity is insufficient.
(e) High priority for training in the use of LRF products issued by the GPCs.

The Severe Weather Forecasting Demonstration Project (SWFDP) is a project which focuses on capacity building for forecasting severe weather and for provision of warning services, for up to a 5-day lead-time, and is consistent with (a), (b), (c), and parts of (d), above. With the increasing number of regional projects, and increasing numbers of participating countries, IPM/VCP is requested to give SWFDP related activities its highest priority of consideration in 2011. The SWFDP contributes to disaster risk reduction goals.

Improved severe weather forecasting and warning services in developing countries and LDCs

The ever-increasing precision, reliability and lead-time provided by Numerical Weather Prediction (NWP) systems have led to increasingly skilful weather forecasting over the recent decades and will become ever more relevant in the future. They generally give accurate indication of developing extreme weather events, thereby being a very relevant component of routine and severe weather forecasting and warning programmes at NMHSs. It's in this context that the Severe Weather Forecasting Demonstration Project (SWFDP) initiative is intended, to further explore and enhance the application of existing NWP and Ensemble Prediction System (EPS)-based products from major NWP centres of the WMO's Global Data-Processing and Forecasting System (GDPFS) and satellite-based products, in the improvement of severe weather forecasting and delivery of warning services in countries where sophisticated tools and products are not currently used, or poorly used. PWS aspects have been integrated in SWFDP, which aimed at the improvement of delivery of products and services to various socio-economic sectors, thereby contributing significantly to reducing the risk of disasters from weather-related hazards. SWFDP as a planning concept, initially focus on strong winds and heavy precipitation, thereby also addressing some flooding aspects as a major impact. Flooding due to wind-induced waves and storm surges in coastal inundation-prone regions where the SWFDP had been implemented, has been or will be addressed by the SWFDP regional subprojects, thereby contributing to the Storm Surge Watch Scheme (SSWS).

The SWFDP represents a systematic and practical approach for building capacity, and for transferring new knowledge and skills; and could well serve as a trialing environment for promising outputs from GIFS, and the implementation of new products from TIGGE. The SWFDP has been implemented successfully and is now being expanded to include all

sixteen countries of southern Africa and to span all seasons and a number of meteorological and related hazards (heavy rain, strong winds, large waves, cold temperatures, etc.). A second project is in implementation for four South Pacific Islands which addresses heavy rains, strong winds, and damaging waves. SWFDP subprojects in Southeast Asia and in Eastern Africa are in early stages of development, and others are also in consideration.

Based on the experience gained with the SWFDP, for example in southern Africa, a series of regional SWFDP subprojects, including training, especially focused on developing countries, LDCs and SIDSs, will be implemented in East/Central Africa, West Africa, Southeast Asia, South Asia-Bay of Bengal, Central Asia and the Caucases, South-eastern and Southern South America, Central America and the Caribbean, South East Europe, and Southwest Pacific Islands, depending upon donor capacity and support.

Detailed information on the phased approach for the each SWFDP subproject is presented in the SWFDP overall project plan, available at: http://www.wmo.int/pages/prog/www/CBS-Reports/DPFS-index.html).

5.2 Aeronautical Meteorology Programme

Twinning Partnership in Implementation of Quality Management Systems for LDCs & SIDS

By 15th November 2012, the implementation of a properly organized quality management system for the provision of aviation meteorological services to international air navigation is going to become an ICAO Annex 3 Standard and therefore mandatory to NMHSs providing such services. A lack of resources needed for hiring a commercial consultancy company to guide implementation has been a major obstacle to compliance for many Members especially in the developing and least developed countries.

In order to overcome this problem, the idea of forming “twinning partnerships” with Members already operating a mature QMS has been seen to a viable solution to Members willing to do so, especially LDCs and SIDS.

To do this it is important to firstly identify suitable Members with mature QMSs prepared to enter into a twinning partnership by region. Once the wish to enter into such a partnership has been declared by a DC or LDC Member, and a suitable partner has been identified either by the requesting Member or the WMO, the extent of support available (manpower/expertise, travel cost,) needs to be checked against any VCP commitment the Donor Member is able and willing to enter.

Once this is done, a comprehensive protocol for the respective engagement of partners has to be developed and documented, and the extent of further support by the WMO Secretariat that would be needed in completing the twinning project has to be established and authorized.

Another area where it is thought similar efforts could bear fruit is in the area of qualifications and training of meteorological personnel in aeronautical meteorology as stipulated in the WMO Technical regulation No. 49, *Vol. 1.* and WMO-No. 258 together with its Supplement No. 1 and respectively its successor publication which is nearing completion at this time.

The recently drafted Top-level competencies for operational aeronautical forecasters will be mandatory to all Member countries by 2016. A Competency Assessment Toolkit has been developed to facilitate the assessment of the competency of personnel, and the availability of external Experts (from donor Members) to carry out model assessments as a practical means of helping Developing Country Members to develop appropriate assessment methods.

Twinning arrangements with Members with the required competences and joint exercises using Competency Assessment Toolkits are expected to provide a significant support in capacity development in this field. The formal and practical arrangements would follow very closely the example given for the QMS implementation twinning exercise.

5.3 Disaster Risk Reduction Programme

Under the crosscutting framework of the WMO Disaster Risk Reduction (DRR) Programme, four cooperation initiatives are underway in Southeast Europe, Central America, the Caribbean and Southeast Asia for strengthening of meteorological, hydrological and climate services to support disaster risk reduction (DRR) with consideration for climate variability and change in these regions. These initiatives engage multiple national/regional/international stakeholders from various agencies and sectors to develop clear priorities based on gaps and needs identified by national and regional stakeholders, with national development components and strengthening regional cooperation. In these initiatives, in addition to WMO training and assessment workshops, the various regional meetings and platforms such as the tropical cyclone committees, Regional Association meetings, and DRR-related regional meetings and platforms (organized by other partners) are leveraged to bring together multi-stakeholders for identification, prioritization, development and sharing lessons learned from implementation of projects and activities. Regional Associations (and their various task teams), WMO Regional Specialized Centres (RSMC, RCC), other regional agencies and partners are engaged from early stages to leverage their contribution and engage them in a multi-stakeholder integrated approach for project implementation. A critical part of these initiatives are the identification and integration of various projects implemented through bi- and multi-lateral cooperation and by other agencies. The initiatives are developed within a long-term capacity development planning, implemented through phased projects.

These projects engage WMO technical programmes and commissions, operational components of GDPFS/WIS/WIGOS and external partners for development and implementation of proposals and project activities. Through these initiatives, a coordinated process engaging relevant national and regional stakeholders, technical programmes is being developed to leverage expertise, capacities and resources of WMO and partners in the implementation with a coordinated approach. Areas of focus include:

(a) Consideration of the NMHSs' institutional role, responsibilities and budgets within the disaster risk management (DRM) policies, legislations, budgeting, planning and coordination mechanisms at the national to local levels;
(b) Development of historical and real-time standardized hazard databases, metadata, statistical analysis and climate modelling of extreme events, and data exchange policies as critical input for risk assessment;
(c) Strengthening of observations, forecasting, communication and dissemination of warnings and development of Standard Operating Procedures (SOPs) with DRM stakeholders in Multi-Hazard Early Warning Systems (MHEWS) for reduction of mortality risks;
(d) Development of meteorological, hydrological and climate products and services to support:
    (i) Risk reduction through medium- to long-term sectoral planning and investments in land zoning, infrastructure and urban development, agricultural management, health, etc;
    (ii) Risk transfer through catastrophe and weather-indexed insurance and other financial tools.

To date contributions from VCP funds have been leveraged for initiatives in the Caribbean and Central America.

The meeting is invited to discuss opportunities for further leveraging of VCP funding to facilitate these coordinated DRR initiatives in these regions and expansion of the multi-stakeholder cooperation model to other sub-regions (e.g., Africa, Pacific).

Overview current and emerging major partnerships /regional development

Through coordinated DRR initiatives a network of partners (e.g., technical, development and donor) that contribute to implementation and funding of projects in these sub-regions have been identified and engaged. A number of primary partners are engaged in all initiatives, including United Nations Development Programme (UNDP), the World Bank, UN-International Strategy for Disaster Reduction (UN-ISDR), regional DRM agencies. Furthermore, all bi-lateral and multi-lateral activities are identified and engaged for enhance coordination. Other agencies such as UN and international partners such as UNESCO Intergovernmental Oceanographic Commission (UNESCO-IOC), FAO and WHO are engaged as relevant. Finally, donors and development agencies are engaged from early stage. Engagement of these partners and bilateral cooperation agencies in the coordinated initiatives in Southeast Europe, the Caribbean, Central America and Southeast Asia, has led to opportunities to identify existing projects and facilitating a forum for better integration across these initiatives as well as identification of gaps and priorities that need to be addressed through new proposals and projects. Furthermore, coordination with partners and stakeholders from beneficiary countries is facilitating achievement of regional agreed priorities for long-term cooperation and sustained capacity development in support of DRR, laying a clear roadmap for cooperation across various stakeholders.

5.4 Public Weather Services

Through the work of the Public Weather Services Programme (PWSP) over the years, much knowledge has been accumulated in various aspects of service delivery and spread to Members through conventional training methods such as workshops, conferences, and publication of guidelines. However, despite these efforts, some Members, particularly the developing countries and Least Developed Countries (LDCs), still face challenges in delivering services effectively due to lack of capacities and skills to establish efficient mechanisms for service delivery to users. To assist these Members in enhancing their PWS capabilities, the PWSP initiated a new thrust by embarking on Pilot Projects based on the "Learning Through Doing" (LTD) Project concept. The idea is that a pilot project is initiated to assist one or more National Meteorological and Hydrological Services (NMHSs) to improve their service delivery to specific social and economic sectors, through developing and delivering an improved range of products and services as required by the targeted user(s). The users include the health, transport, agriculture and fisheries sectors. LTD projects are currently under implementation in ten (10) countries. It is planned to spread them to other countries over the next four (4) years, hence the need for VCP funding. Below are examples of LTD projects under implementation:

Madagascar: The LTD pilot project is assisting the Madagascar Meteorological Service improve service delivery to the Ministry of Health (MoH). A joint Working Group formed to implement the project has completed several training activities and established a working mechanism between the two organizations, resulting in the delivery of improved products and services to the health sector in the fight against malaria, Rift Valley Fever and the plague. The impacts of the project include the following: The health sector is now experiencing improved access to weather and climate data and information from the NMHS; has acquired the capability to analyze and interpret data (epidemiological, meteorological and climatological); is able to properly articulate their needs for weather and climate information; and is using climate information for the prevention of malaria, Rift Valley Fever and plague epidemics. The project is being implemented in partnership with the World Health Organization (WHO), the International Research Institute for Climate and Society (IRI) and the Institut Pasteur de Madagascar.

Peru: The overall objective of the LTD project is to improve service delivery to the agricultural sector. The Project is introducing a range of meteorological products and services aimed at meeting the needs of the agricultural sector in the Ica Valley of Peru, specifically for grape and asparagus crops, for improving the monitoring of

agrometeorological conditions of crops and also for the short- and medium-term planning of agricultural activities.

Chile: The LTD pilot projects have focused on enhanced agriculture, fisheries, health and transport sectors. The projects include Weather Forecasting System for the mountainous Complex Los Libertadores; information system for the agriculture of Region VIII of Chile; and the information system for the salmon industry. The projects have resulted in the introduction of 22 new products and meteorological services, determined by the real needs of the users. These projects are also being implemented in partnership with Spanish Meteorological Service AEMET.

Panama: The LTD pilot project which was initiated in 2008 focuses on enhanced service delivery to the health sector, in combating Dengue Fever. The project is implemented in partnership with (AEMET).

Ethiopia: The project is based on the integration of weather and climate data with health data to forecast and respond to outbreaks of malaria. This is a joint project between WMO, WHO and the Climate and Health Working Group (CHWG) of Ethiopia of which the Ethiopia national meteorological service is a member. Funding for the project is provided by the Korean International Cooperation Agency (KOICA).

Burkina Faso, Mali, Mauritania, Niger and Nigeria: The project is focused on investigating the impact of weather and climate on malaria and meningitis under the auspices of the Conference of West African Directors (CDAO) and the Meningitis Environmental Risk Information Technologies (MERIT) Project Committee (CDAO-MERIT).

6. Education and Training

The goal of the Education and Training section is to support LDCs and developing countries to meet their needs in human resource development in NMHSs in a comprehensive manner through the VCP arrangement and other complementing schemes.

This long term goal could be translated to the following three immediate priority actions:

Priority Action 1: Encourage LDCs and developing countries to follow the Swaziland and Lesotho examples.

Priority Action 2: Explorer existing opportunities for placement of fellows as a way of complementing the current VCP arrangements.

Priority Action 3: Explore VCP resources in support of a potential WMO flagship activity, namely the GFCS

7. WMO Programme for the Least Developed Countries (LDCs)

The Least Developed Countries (LDCs), including those which are SIDS, are the most vulnerable countries to which the international community was prompted to extend special support measures beyond those available to other developing countries through successive ten-year Programmes of Action for LDCs. It is in support to the Brussels Programme of Action for the LDCs for the Decade 2001–2010 whose goals and targets are closely linked to the Millennium Development Goals (MDGs) that the WMO Programme for the Least Developed Countries was established with the main objective of enhancing and strengthening the capacities of the National Meteorological and Hydrological Services concerned to contribute efficiently and in a timely manner to the sustainable development of these countries.

Considering the cross-cutting nature of the WMO Programme for the LDCs, its implementation was made as follows:

(a) All the scientific and technical programmes gave higher priority to meeting LDCs needs and requirements in assistance provided to developing countries as evidenced under the relevant programme activities on strengthening the infrastructure and operational capabilities of NMHSs;

b) Specific value-added and dedicated activities were undertaken to develop the institutional, human resource and advocacy capacity of a number of LDCs for:

  (i) Integration of NMHSs activities and products into socio-economic development frameworks, strategies and priorities at national and regional level through the preparation of their development plans and the formulation and execution of demonstration/ pilot projects adapted to LDCs on socio-economic benefits valuation of weather, water and climate information and services in specific sectors, thereby raising their profile;

  (ii) Enhancing the service delivery and the beneficial use of weather, water and climate information and services in support to LDCs productive capacity in key sectors, particularly agriculture, food security and rural development; health; disaster risk reduction; transport; energy; environment; water resources; tourism; and managing climate change.

  (iii) Supporting LDCs participation in special meetings and training events;

  (iv) Preparation of a brochure on the “Role of WMO and NMHSs in achieving the MDGs” to be used by NMHS Staff in their interaction with policy makers and development partners.

The Fourth United Nations Conference on the LDCs to be held in May 2011 in Istanbul, Turkey, will adopt a new ten-year Programme of Action for the LDCs. The WMO Programme for LDCs needs to contribute to the following strategic and specific areas of the Programme of Action for the LDCs for the Decade 2011-2020:

(a) Building viable national productive capacity, particularly in climate sensitive sectors;

(b) Halving the proportion of people living in poverty and suffering from hunger by 2015 as contained in the Millennium Declaration;

(c) Promoting agriculture, rural development and national food security strategies that strengthen support for smallholder farmers and contribute to poverty eradication;

(d) Investing in basic services for health, education, water and sanitation;

(e) Enhancing national resilience of LDCs to economic, social and environmental vulnerabilities including climate change and natural hazards, building capacities for crises management, and climate change adaptation;

(f) Promoting science and technology for peaceful and development purposes;

(g) Strengthening global partnership for inclusive economic growth and sustainable development of LDCs and providing support to LDCs to attain the MDGs.

ANNEX 6

REPORT OF THE LAST EC- CB MEETING IN 2010

1. OPENING OF THE MEETING

The meeting was opened by the Chair of EC CB, Mr Tyrone Sutherland, 2nd Vice President of the WMO, who commented, that the Working Group has so far not achieved as much as he would have hoped. Noting however, that the Working Group's membership has changed substantially since the previous meeting and considering that, as the group has very little time left before Congress to provide some guidance, he encouraged Working Group members to use this opportunity and meeting to better define the role and function of the WG with a view to the operations of the EC CB or its successor in the next financial period.

The Assistant Secretary General welcomed the participants and stated that this group has a key role to play as it is essential to mainstream capacity building throughout WMO activities. She also stated that the focus is no longer merely on technical capacity building but rather on overall Capacity Development. Capacity development being one of the major WMO priorities for the next financial period.

The list of participants is given in **Annex 1.**

2. ADOPTION OF AGENDA

The agenda was adopted with one addition: The members of the Working Group requested to be briefed on WMO Post Disaster Assistance in Haiti and in Pakistan. The approved agenda is attached as **Annex 2**.

3. REVIEW OF EC-CB

3.1 Terms of Reference

Given the number of new members, the Working Group considered the ToRs. It was emphasized that the group was an Advisory Group and not an implementing body as such, there to give guidance and direction to WMO Capacity Development activities. EC-CB members have wide experience that could be used in sub-groups and task teams on specific focus areas to be determined here. It was recognised that EC CB should no longer focus on limited technical cooperation but that a strategy needed to be elaborated to consider the full spectrum of Capacity Development. TOR of the EC CB is provided at **Annex 3**.

Members of the Working Group noted that EC-CB should work more closely with the technical commissions and with a view to increased coordination in the planning and activities of technical assistance.

3.2 Report of previous EC-CB meeting and completion of actions

The meeting was provided with a brief overview of the history and progress of the EC-CB to date for the benefit of new members: the priority areas identified for the attention of the group at previous meetings since the inception of the group at EC-LIX post Congress in 2007; and, progress to date on these issues **(Annex 4).**

4. DEVELOPMENT COOPERATION ACTIVITIES

4.1 Resource Mobilization and Strategic Partnerships

An overview of major partnerships and projects under direct management of WMO were presented to give an example of the work done in various regions and areas. The working group members discussed new strategies for mobilizing resources, such as how to attract new partners, how to benefit best from current partnerships and entering partnerships with non-traditional partners. For example, the working group noted that with sources of funding available such as European Union and the Adaptation Fund, the availability of funds is not necessarily the problem but rather how members can access those funds. The group acknowledged with appreciation that WMO was continuing to build relationships with the EU, the Adaptation Fund and other facilities, recognizing that major funds from these sources requires significant effort to secure and maintain.

The need to capitalise on local partnerships at national levels was also discussed and how WMO could help with the approach to these. It was also noted that the interest in climate and the environment is greater than ever before and that advantage should be taken of this to tackle some key areas, especially such as ACP-funding, South-South cooperation, etc. It was cautioned that development banks can be a difficult financing partner, as they are more geared to providing loans rather than grants. The insurance industry is a potential target, eager for the availability of reliable weather and climate products. The EC-CB members agreed that funding of disaster risk reduction, food security and climate change adaptation remain priority areas for a number of development partners. However, as the funds are often allocated through the Ministry of Finance of the respective countries, the Meteorological Services will have to understand and engage in the processes of allocation at the national level.

The involvement of development partners already present and active in-country was discussed and the question was raised as to how WMO could help National Meteorological Services to benefit from such opportunities. Currently, the WMO is involved with partners such as UNDP, World Bank, European Union and other Regional Development Banks on a regional scale but at the national level the NMHS are not always aware of these types of partnership opportunities involving their governments and are therefore not necessarily taking advantage of such opportunities. It was also questioned how Members themselves could better link to other regional activities on a technical level and the need for dynamic partnerships was stressed to develop the Meteorological Services. These partnerships would need to link across departments, offices and agencies, e.g. in the health sector. The working group suggested that this enhanced coordination could best be lead by the WMO Regional Offices.

Action: The Resource Mobilization Office should continue to place emphasis on finding new strategic partnerships. WMO and DRA especially will need to build greater awareness at national levels and within the UN system of WMO role and activities. EC-CB members were encouraged to help in these efforts.

Action: The Secretariat should consider how better to assist at sub-regional and national levels to engage development partners such as through sub-regional workshops with potential financing partners. This should include the further development of the mandate of the WMO Regional Offices with due consideration given to staffing implications.

4.2 Voluntary Cooperation Programme

An overview of the VCP was presented as being a long existing and important WMO programme, which was often seen as a major “life line” by many LDCs. The importance of maintaining and strengthening the VCP was stressed by all. Further details can be found in the website: http://www.wmo.int/pages/prog/dra/vcp/IPM2010.php

4.2.1 Statement from the Chair of the IPM

The meeting heard from the Chair on the role of the IPM as a mechanism to coordinate between the various WMO donor members, where synergies may be found and collaborative actions considered. The various donor/partners allocate their support with regard to their national agendas, as some focus more on technical support, such as equipment and some more on training and CD. There is a need to find coherence between the requirements of the region, the knowledge of the partner/donor and what the members would like to fund. The Regional Strategic Plans and defined regional needs need to be taken into account in projects and funding. More, and different, funding opportunities are needed, even though national commitments are the most stable ones. The IPM was also recognized as a good pool of expertise to draw from, e.g. how to secure funding. It was stressed that the IPM does not have an official role but is often asked for recommendations by EC or EC-CB or other WGs, etc.

4.2.2 Review of Overhead Cost Policy

The Overhead Cost Policy was considered (See **Appendix II**) and some changes were suggested to adapt the document to current needs. It has not been amended since its inception at EC-LVI [RESOLUTION 19 (EC-LVI) (2004)].

Action: Secretariat was requested to take this amended document to next EC for consideration

5. BUILDING CAPACITY IN DEVELOPING AND LEAST DEVELOPED COUNTRIES

5.1 Global Framework for Climate Services

The Working Group was informed on the GFCS and on the progress made by the High Level Task Team towards the development of the GFCS.

The Meeting noted that the GFCS, if broadly endorsed by Congress in May 2011, would provide National Meteorological Services with a range of opportunities. It was further stressed that the NMHSs have always been, and should continue to be the national authoritative voices on, and source of weather and climate information and services in the countries, hence the NMHSs should play the focal point for the implementation of the GFCS. As the NMHSs are the technical, operational agencies in their countries in weather and climate services they are therefore the most appropriate entities to play the focal and pivotal role in the implementation of the GFCS.

5.2 Service Delivery

The meeting considered the matter of improved service delivery within the WMO community using the draft WMO Strategy for Service Delivery as a starting point. This 3-point plan suggests that a strong service delivery process needs to be put in place, a user centered culture needs to be introduced, and the work force skills and capabilities enhanced. For good service delivery, a clear agreement between users, suppliers, providers and partners is needed. The Working Group members requested the Education and Training Office to include management training courses for middle management to educate staff on service delivery. NMHSs need to become more customer oriented, applying standards and measurements, not only to technical delivery of products but also to service delivery. The Working Group called for information on the needs of specific sectors (agriculture, fisheries, tourism, etc) to be provided to meteorological services to help them be able to reach out to potential customers. To achieve good service delivery, better communication is essential and a good quality management system should be put in place. The ultimate goal should be to deliver every time, on time. The EC-CB supported the draft WMO Strategy for Service

Delivery and suggested general guiding principles on how to implement the policy be developed.

5.3 Assistance to LDCs and SIDS

The meeting was informed on the programme activities and actions undertaken for the LDCs and SIDS, including:

- Support to LDCs participation in special meetings and training events;
- Focus and high priority on needs and requirements of NMHSs of LDCs and SIDS by all scientific and technical programmes;
- Implementation of specific capacity building and advocacy activities under DRA/LDCR, particularly assistance provided to LDCs and SIDS in the preparation of the development plans of their NMHSs and in the formulation and execution of small pilot projects on socio-economic benefits valuation of NMHS's services to sectors such as agriculture and rural development, hydro-electric power generation and marine and port services;

The meeting was provided with the outline of a brochure on "WMO and the Millenium Development Goals (MDGs) " to be published in order to help WMO and NMHS staff in their interaction with policy makers and development partners and to highlight the contribution of WMO and NMHSs to the achievement of the MDGs, particularly in the LDCs.

The meeting was informed on the preparatory process of the Fourth United Nations Conference on LDCs (UN-LDC IV) to be held in June 2011 in Turkey and was reminded of the Executive Council request for an active participation of WMO in this important conference.

The meeting recalled the cross-cutting nature of the WMO Programme for the LDCs and stressed the need for more coordination with other ongoing programmes and projects. It further recognized the need for:

- Additional assistance to implement NMHSs Development Plans prepared for LDCs and SIDS
- Training of NMHSs Senior Staff on the contribution of WMO and NMHSs to achieving the MDGs
- WMO active participation in UN-LDC IV preparatory process and the Conference itself, for GFCS to meet the special needs of LDCs and SIDS as requested in the TOR of HLTF

5.4 Expert Panel on Education and Training

The Working Group was informed of: the Terms of Reference for the EC Panel of Experts on Education and Training; composition and activities for 2008 – 2011; and, activities planned for 2012 to 2015. The EC-CB noted the requirement of having experts in the field serve on the Panel and echoed the general comments within EC-LXII on the success of the Panel over the recent past. The EC-CB agreed with the planned activities for 2012 to 2015: support to Members to implement the qualification and competency standards; develop a framework for Human Resource Development activities; support the five WMO high priority areas; and, increase the use of distance learning.

The use of Distance Learning was discussed at length by the Working Group with all agreeing on its potential for Continuous Professional Development. Some members of the Working Group noted that the educational authorities in their, or neighboring countries, did not accept online courses for the basic qualifications such as degrees and identified this as an area that the WMO community may be able to address in the future.

The Working Group identified a number of areas where the EC-CB could assist the EC Panel address the education and training needs of Members by: advocating for additional funding and resources for the Education and Training Programme through the Regular Budget and also through the Regional Associations in advocating with banks, foreign aid bodies, private philanthropists etc for further support to the fellowship activities; through the Regional Associations Presidents and Management Groups better identifying the training needs of their members; and, by the Regional Associations actively promoting Members to use, support and develop the education and training facilities in their Region.

5.5 WMO Post Disaster Assistance: Haiti and Pakistan

The WMO Secretariat briefed the Working Group on the progress made with post disaster assistance in Haiti and Pakistan.

The members of the Working Group thanked the Secretariat for the excellent coordination of immediate emergency assistance to Haiti and acknowledged that emergency assistance is an important part of WMO's capacity building efforts. However, members recalled that sustainability of the assistance needs to be addressed in future, both in the case of Haiti and also in other emergency assistance operations.

Action: The Working Group agreed that the DRR programme in cooperation with Technical Commissions should:

- Develop guidelines for Directors of NMHS for self-assessment of their core capacities post disaster (Post Disaster Needs Assessment – PDNA);
- In cooperation with Members, identify a roster of experts from NMHS that can support WMO for post-disaster missions, proposal development and system design (OBS, TEL, Forecast, HR, partnership);
- Identify a network of RSMCs and RTCs that can specialize in provision of regional hydrological, meteorological and climate product and services for NMHSs in the region post disaster;
- Propose the establishment of task teams that identify requirements of DRR stakeholders.

6. WMO CAPACITY DEVELOPMENT STRATEGY

Capacity Building is a cross cutting activity, impacting upon, and part of all WMO Programmes. The creation of the Development and Regional Activities Department (DRA) in the WMO Secretariat has provided a focus for the coordination and cooperation of technical assistance among Members, the Secretariat and WMO Programmes. Development of a crossing-cutting Strategy for Capacity Development will provide further focus for WMO's efforts in this regard. The cross cutting nature of capacity development is evident as the AgMP, HWRP, PWS, AMP and DRR Programmes will all focus on increasing capacity through human resource, technical and infrastructure development in NMHSs to support climate change adaptation in their countries. The WIS and WIGOS initiatives also have a significant component of capacity development that will primarily be overseen by the World Weather Watch Programme or its successor. It can be anticipated that in all of these Programmes it will be necessary to balance the needs of long term, large (multi-Member) high impact projects with activities of a short duration, low cost and medium potential impact with regard to number of beneficiaries, with approaches such as training of trainers, roving seminars and distance and blended learning to be principally pursued, resorting to regional or global face-to-face courses only when it is proven to be the most practical, or sole solution. Closer collaboration with ETR, greater involvement of Regional Training Centres (RTCs) in capacity building in climate- and water-related matters and joint capacity building activities between CCl, CHy, CAgM, CBS, CAeM and external partners will be integral to this strategy.

The Secretariat presented a concept for a WMO-wide Strategy for Capacity Development. The session noted that the development assistance has evolved from the 1970s where capacity building (at that time Technical Cooperation) was focused on training and provision of equipment to capacity building in the 1990's and early 2000's where assistance was more complete but did not necessarily include sustainability or incorporate local skills, expertise and existing infrastructure and institutional management.

Use of the term "Capacity Development", rather than "Capacity Building" is indicative of a more comprehensive approach to technical assistance. Starting with an assessment of stakeholders needs, the approach would consider existing capabilities in the preparation of development projects at the regional and national level including improved feedback mechanisms. Greater emphasis needs to be placed on national management of the process of development. While technical assistance in specific programmatic areas would continue, the Strategy is intended to provide an umbrella for the Capacity Development activities already identified under the five priority areas for the next Financial Period such as GFCS, DRR, WIS/WIGOS, qualifications and competencies for aeronautical meteorological personnel, and general capacity development of NMHSs and their personnel (particularly in Least Developed and Developing Countries and SIDSs).

The session decided that, given the need to respond to increasing demand for enhanced capacity of NMHSs, it may be beneficial to consider changes in the current WMO Programme structures related to capacity development to streamline the planning, implementation and monitoring of the activities inline with the new priorities.

Action: The Working Group members supported the creation of a WMO Strategy for Capacity Development and recommended this be taken to Congress.

7. VOLUNTEERISM WITHIN THE WMO COMMUNITY AS A MEANS OF SUPPORTING DEVELOPING COUNTRIES AND EMERGENCY ASSISTANCE

The WMO Secretariat introduced to the Working Group a Concept Note for a new initiative of the WMO Community that would place skilled volunteers in developing and least developed countries, as well as offering rapid expert support in emergency situations (Annex 5).

The EC-CB agreed that volunteerism could be an excellent instrument to support developing countries requiring assistance under normal and emergency situations and that the Secretariat should explore this idea wider. Volunteerism is already an existing value in the WMO Community, which could be further strengthened by institutionalizing this instrument through a more formal process.

Action: The Secretariat was asked to provide a concrete proposal on the development of a Volunteer Programme within the WMO Community by World Meteorological Congress XVI.

Some members of the working group underlined that even though they support the initiative, it should not replace other capacity development activities in the Member countries. The members of the Working Group also recommended that WMO should explore possibilities to collaborate with already existing volunteer programs and try to find synergies and support.

8. COUNTRY PROFILE DATABASE

The WMO Secretariat informed the meeting of the progress made on the development of the Country Profile Database. The Working Group was also reminded that the maintenance of the Country Profile Database is not just a responsibility of the

Secretariat, and since the database will be a strongly member driven tool, participation from the Member countries is crucial.

9. FUTURE ORGANISATION AND WORK OF THE EC-CB

The Working Group discussed how to move forward the Capacity Development Strategy within WMO and the future organization and workings of the EC-CB in supporting articulation of a CD Strategy within WMO that brings together the various related areas and programmes (Least Developed Countries, Regional Coordination, Education and Training, Resource Mobilization and Regional Offices) in more coordinated and comprehensive manner.

10. ANY OTHER BUSINESS

No additional items were raised.

11. CLOSURE OF THE MEETING

The Chairman expressed appreciation on behalf of all participants to the staff of the WMO Secretariat for the organization and facilities which were made available in support of the meeting.

The Meeting closed at 18h00 on Tuesday 12 October 2010.

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ANNEX 1

LIST OF PARTICIPANTS
EC Working Group on Capacity Building

Geneva, Switzerland 11-12 October 2010

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Mr Jeff Wilson (D/ETR, DRA)
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Mr Geoffrey Love (D/WDS)
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ANNEX 2

WORLD METEOROLOGICAL ORGANIZATION

THIRD MEETING
EC WORKING GROUP ON CAPACITY BUILDING

GENEVA, SWITZERLAND
11-12 OCTOBER 2010

AGENDA

1. OPENING OF THE MEETING

2. ADOPTION OF THE AGENDA

3. REVIEW OF EC CB

3.1 Terms of Reference
3.2 Report of previous EC-CB Meeting and completion of actions agreed.

4. WMO VOLUNTARY COOPERATION PROGRAMME

4.1 Resource Mobilization and strategic partnerships
4.2 Voluntary Cooperation Programme
4.2.1 Brief Statement from Chair of Informal Planning Meeting of the VCP
4.2.2 Review of Overhead Cost Policy

5. BUILDING CAPACITY IN DEVELOPING AND LEAST DEVELOPED COUNTRIES

5.1 Global Framework for Climate Services
5.2 Service Delivery
5.3 Assistance to LDCs and SIDS
5.4 Expert Panel on Education and Training
5.5 WMO Post Disaster Assistance: Haiti and Pakistan

6. VOLUNTEERISM WITHIN THE WMO COMMUNITY AS A MEANS OF SUPPORTING DEVELOPING COUNTRIES AND EMERGENCY ASSISTANCE

7. COUNTRY PROFILE DATABASE

8. FUTURE ORGANIZATION AND WORK OF THE EC-CB

9. ANY OTHER BUSINESS

10. CLOSURE OF THE MEETING

ANNEX 3

Resolution 10 (EC-LX)

EXECUTIVE COUNCIL WORKING GROUP ON CAPACITY-BUILDING

THE EXECUTIVE COUNCIL,

Noting:

(1) Resolution 1 (EC-LV) – Executive Council Advisory Group of Experts on Technical Cooperation,
(2) Resolution 24 (Cg-XV) – The WMO Voluntary Cooperation Programme,
(3) Resolution 4 (EC-LIX) – Executive Council Working Group on Capacity-Building,

Considering the need for a continued mechanism to review on a regular basis issues related to capacity of members in respect of:

Expected result 7: Enhanced capabilities of Members to provide and use weather, climate, water and environmental applications and services, and

Expected result 9: Enhanced capabilities of National Meteorological and Hydrological Services in developing countries, particularly least developed countries, to fulfil their mandates,

Decides:

(1) To revise the terms of reference of the Executive Council Working Group on Capacity-Building established by Resolution 4 (EC-LIX) to address all aspects of assistance provided by WMO and its partners to developing and least developed Members, and to request the Working Group on Capacity-Building to provide advice and pursue a coherent approach towards:

(a) Improving capacity in least developed countries and small island developing States;
(b) Advocating socio-economic benefits of products and services of National Meteorological and Hydrological Services, including their achievement of the United Nations Millennium Development Goals;
(c) Developing strategic partnerships with external stakeholders;
(d) Mobilizing resources in support of the above;

(2) To achieve these objectives the Working Group shall:

(a) Consider priority items as outlined in the WMO Strategic Plan, Regional Strategic Plans and Technical Commission Operating Plans;
(b) Consider matters which the Executive Council may specifically request to assist in managing risk;
(c) Provide guidance on the coordination of the Voluntary Cooperation Programme and Trust Funds to the Informal Planning Meeting;
(d) Strengthen the interface between technical and human resource development including the establishment of appropriate coordination with the Executive Council Panel of Experts on Education and Training;
(e) Strengthen the interface between WMO and relevant organizations such as the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization, the Food and Agriculture Organization of the United Nations, the International Strategy for Disaster Reduction and the Group on Earth Observations;

(f) Invite relevant funding and development agencies including the World Bank and the European Commission to participate in the work of the Working Group;

(g) Invite interested Members to designate experts in capacity-building to participate in the work of the Working Group and attend sessions of the Group at their own expense;

Authorizes the Working Group to establish sub-groups and task teams as and when required;

Requests the Secretary-General to promote partnerships between the WMO departments leading to externally funded development projects and take relevant actions to support the Working Group's activities;

Requests the Chairperson in consultation with Working Group members, the Secretary-General, relevant technical commissions, regional associations and WMO departments to refine the terms of reference of the Group as required.

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Note: This resolution replaces Resolution 4 (EC-LIX), which is no longer in force.

ANNEX 4

REPORT
EC Working Group on Capacity Building (EC-CB)
Meeting on the margins of the EC-LXII

June 8th 2010, 13.15 to 14:30, Press room, WMO Headquarters Geneva

1. The Chair, Mr Tyrone Sutherland opened the meeting noting that there have been several changes to EC-CB membership in the past year due to changes of EC Membership with 5 positions changing. Therefore this short side meeting was intended to reconfirm the focus of the EC-CB and identify key priority areas for the further attention of the WG to December 2011 and also to report results of the WG to the next Congress.

2. The Chair advised that it is intended to convene a full meeting of the EC-CB in the late 3rd early 4th quarter 2010 (mid Sept/mid Oct) to determine the work plan for the remaining financial period. Further dialogue will be held by email as appropriate to further define priority areas for the attention of the WG in the interim. The Chair noted that the EC-CB has not been as active is it could be in terms of active participation in the work of the group and urged members to commit to more active engagement for the remainder of the financial period.

3. The meeting was provided with a brief overview of the history and progress of the EC-EC to date for the benefit of new members: the priority areas identified for the attention of the group at previous meetings since the inception of the group at EC-LIX post Congress in 2007 (See Annex I) and progress to date on these issues. It was noted that progress tended to occur due to Secretariat interaction with individual members of the group rather than concerted effort of the group per se and while this progress was welcome it would be desirable to have also some concerted effort by the group as a whole on some key priority areas.

4. The Chair invited the group to consider what should be the focus of the group for the remainder of the financial period.

5. The meeting proposed that one significant area for the attention of the EC CB would be that of operationalizing of Regional Strategic Plans being adopted in many regions and in particular regarding the funding for implementation. WMO could be called upon to assist with development of Operational Plans and also mobilizing of resources.

6. The question of the UN Climate Change Adaptation Fund was raised in terms of what the Secretariat was currently doing vis a vis the Adaptation Fund. The Secretariat advised that application had been made to the Fund for accreditation of WMO as Multilateral Implementing Agency (MIA) to the Fund. The review process is currently ongoing. Additionally an approach had been made to the Global Environment Facility for accreditation also. In this regard, lobbying by national governments with representation on the relevant decision making bodies of these mechanisms in favour of WMO accreditation may assist. The Secretariat undertook to investigate this further.

7. The Chair cautioned that the EC-CB needs to take a broader view beyond that of funding when considering capacity building as a whole. Funding, while a critical component, is also a means to an end and should not be the driving factor. Rather, we the EC-CB needs to focus on priorities at regional and sub-regional levels and then consider funding requirements noting that many financing institutions seem to prefer projects with regional approaches.

8. The Secretariat also reminded the meeting that Capacity Building was one of the 4 major initiatives put forward in the Budget for the next financial period, noting that the other initiative areas (DRR, WIS/WIGOS and GFCS) all had oversight bodies of some type and that perhaps the group could also consider its role relative to the Capacity Building initiative into the next financial period.

9. Participants proposed that the WG really should define what it really wants to achieve and what kind of progress it wants to see over the next 18 months, settling on one or two items from the focus areas identified by EC (Appendix – Res 10 EC-LX). The WG needs to support the Secretariat rather than task the Secretariat in this regard. While the Secretariat can develop ways it can assist Members, input and guidance as well as active involvement of the members of the EC-CB is needed to achieve maximum success.

10. It was suggested that the WG could look into the matter of better cooperation within and between RAs in terms of capacity building and the benefits that might accrue there. Some success stories can already be found there in terms of actions already initiated that could benefit from additional support to bring them to full fruition, especially Regional Centres (e.g. Regional Climate Centres).

11. On the issue of financing support for regional initiatives, it was proposed that greater engagement at regional levels with funding mechanisms, such as Development Banks, EU Commission, GEF and other such mechanisms should be pursued through advocacy and other interventions. This would sensitize the regional and national focal points to the role of NMHS in development and the need to improve NMHS capacity at all levels based on national and regional strategic plans. This might be carried out through a series of regional and sub-regional engagements and information and advocacy sessions. Additionally we could look at models that would assist the national authorities to approach these major donors.

12. Additionally, the meeting proposed that the Secretariat should consider creating the post of economist to undertake and publish widely further case studies that clearly demonstrate the socio-economic benefits of weather and climate services to the national economy。

13. In summing up, it was explained that this meeting was almost an introductory session given the number of new members to the WG and considering the above, that the group should in advance of the full meeting:

- give serious consideration to regional/sub regional focus for actions, including workshops involving regionally active funding institutions/partners.
- consider how the EC-CB can advise the Secretariat and assist WMO Members reach out to the leading funding institutions with specific projects, requirements and approaches.
- consider a possible focus on strengthening of the regional climate centres especially Regional Climate Centres
- place emphasis on providing stronger advice to the EC, as well oversight and partnerships in capacity building over the next few years and in preparation for the next financial period.

14. The participant list is attached at Appendix 1.

Appendix I

Background to EC Working Group on Capacity Building (EC-CB)

Congress and EC LIX (2007)
EC LX & EC-CB (2008)
EC LXI EC-CB (2009)

Resolution 4 of EC-LIX (2007) established the Executive Council Working Group on Capacity Building and requested it to: address all aspects of development cooperation, in particular, resource mobilization, socio-economic benefit studies, and strategic partnerships with external stakeholders, with the project proposals.

Resolution 10 of EC-LX (2008) further revised the TOR and requested the EC-CB to focus on the following:

(a) Improving capacity in least developed countries and Small Island developing States;
(b) Advocating socio-economic benefits of products and services of National Meteorological and Hydrological Services, including their achievement of the United Nations MDGs
(c) Developing strategic partnerships with external stakeholders;
(d) Mobilizing resources in support of the above;

To achieve these objectives the working group shall:

(a) Consider priority items as outlined in WMO's Strategic Plan, Regional Strategic Plans and Technical Commission Operating Plans;
(b) Consider matters which the Executive Council may specifically request to assist in managing risk;
(c) Provide guidance on the coordination of VCP and Trust Funds to the Informal Planning Meeting;
(d) Strengthen the interface between technical and human resource development including the establishment of appropriate coordination with the EC Panel of Experts on Education and Training;
(e) Strengthen the interface between WMO and relevant Organizations (e.g. UNESCO-IOC, FAO, ISDR, GEO);
(f) Invite relevant funding and development agencies including the World Bank and European Commission to participate in the work of the Group; and
(g) Invite interested Members to designate experts in capacity building to participate in the work of the Group and attend sessions of the Group at their own expense;

EC-LX & EC-CB 2008

a) Develop an advocacy strategy aimed at increasing the political profile of the WMO Community and the awareness of the socio-economic value of the products and services delivered by NMHSs
   - International Conference on Technical Cooperation
   - Side session on technical cooperation at the WMO "Technical Conference on Meteorological and Environmental Instruments and Methods of Observation" and the "Exhibition of Meteorological Instruments, Related Equipment, and Services" (METEOREX)

b) Assist with donor engagement to enhance the level of externally funded development projects in Member countries, by:
   - Establishing at least one new public or private partnership relationship leading to successful applications for funding; and
   - Developing one fully-costed proposal to assist in mobilizing resources for the National Meteorological and Hydrological Services (NMHSs) of the LDCs and SIDS;

c) Develop a strategy to derive benefits to Members from the World Climate Conference – 3, including funding support for LDC participation.

d) Support extension of the Severe Weather Demonstration Project within RA I and to RA V.

e) Assist with donor engagement to enhance the level of externally funded development projects in Member countries, by:
   - establishing at least one new public or private partnership relationship leading to successful applications for funding; and
   - developing one fully-costed proposal to assist in mobilizing resources for the National Meteorological and Hydrological Services (NMHSs) of the LDCs and SIDS.

f) Prepare a policy statement on WMO/NMHS role in mitigating the food crisis

EC LXI & EC CB 2009

a) Demonstration Projects for LDCs – to demonstration what is entailed in the migration to and full participation in WMO Integrated Global Observing System and WMO Information System (WIGOS & WIS) including implementation plans at country / regional scale

b) With CBS and its relevant bodies develop a mechanism e.g. group of experts to help evaluate specifications and procurement of goods and services through the VCP (F), Emergency Assistance or Trust Fund projects.

c) Focus on NMHS development plans and stress greater emphasis on management training for staff of developing country NMHSs.

Appendix II

(ABRIDGED FINAL REPORT OF THE FIFTY-SIXTH SESSION OF THE EXECUTIVE COUNCIL)

RESOLUTION 19 (EC-LVI) **(2004)**

WMO PROGRAMME-SUPPORT COST POLICY

THE EXECUTIVE COUNCIL,

NOTING:

(1) The decisions of Fourteenth Congress contained in the *Abridged Final Report with Resolutions of the Fourteenth World Meteorological Congress* (WMO-No. 960), general summary paragraph 10.1.14,
(2) The report of the Joint Inspection Unit on Support Costs Related to Extrabudgetary Activities in Organizations of the United Nations System (JIU/REP/2002/3),

CONSIDERING that:

(1) The findings of the cost measurement exercise carried out by the Secretariat indicated that less and less donors complied with the standard programme-support cost rate of 14 per cent for the recovery of such costs incurred for the management of extrabudgetary activities,
(2) Regular budget resources increasingly supported the management of extrabudgetary activities during the thirteenth financial period (2000-2003),

NOTING that the cost measurement methodology used highlighted the following:

(1) Programme-support costs are classified under two categories, namely, variable and fixed,
(2) Variable costs are incremental costs that would not be incurred if the Organization did not administer extrabudgetary funding including the work effort directly affected by transaction volume,
(3) Fixed costs are a share of the Organization's fixed expenditures for infrastructure attributed to extrabudgetary funding on the basis of the work measurement, and
(4) Only variable costs should be recovered through the programme-support cost arrangement,

TAKE INTO ACCOUNT that the above cost measure- ment methodology and the review of the WMO programme-support cost arrangement are in line with the latest outcome of the United Nations system-wide review of the programme-support cost issue;

DECIDES:

(1) To Establish a programme-support cost recovery rate of 13 per cent for technical cooperation projects, including VCP projects, for which the following flexibility might be granted, even cumulatively where applicable:

    (a) In the case where the recipient government is the donor and the recipient/donor assumes responsibilities for certain functions which could otherwise be performed by the WMO Secretariat, a reduction in the rate by up to 2 per cent shall be granted, which corresponds to the amount of savings resulting from the assumption of the responsibilities by the recipient government;

(b) In the case where the technical cooperation project consists only of the procurement of equipment, supplies or materials, a rate of 9 per cent shall be applied instead of 13 per cent;
(c) In the case where the donor accepts simplified reporting with a narrative report describing the use of funds and the results achieved, the reduction in the rate by 1 per cent shall be granted, on the understanding that the financial performance will be reported within the framework of the statutory biennial closure of accounts;

(2) To establish a rate of 7 per cent for funds-intrust which finance those normative activities which supplement regular budget programmes with no component of technical cooperation activities;
(3) To confirm the 12 per cent rate for support costs for the management of the funds for Junior Professional Officers ;
(4) To agree that the rates for UNDP projects should be those set by the UNDP Executive Board;

REQUESTS the Secretary-General**:**

(1) To take measures to apply the WMO new programme-support cost policy to future agreements with donors for extrabudgetary activities as of January 2005;
(2) To take measures with a view to compensating for the costs of incremental (variable) services provided by the WMO Secretariat for administering the funds-in trust for GCOS, IPCC and JCRF, consistent with any agreements in place with WMO's partners in these activities;
(3) To revise the presentation of the budget and financial statements for GCOS, IPCC and JCRF to include not only the cash income and expenditures in the funds-in-trust, but also the staff and services contributed through the WMO regular budget, including provisions for office space and financial administration, and any similar contributions of staff or resources made by other sponsors;
(4) To establish appropriate procedures to protect WMO from the currency risk caused by changes in the relationship between the Swiss franc in which programme-support costs are incurred, and other currencies (in particular the United States dollar) in which the programme-support cost income is credited to WMO;
(5) To ensure that the following charges are included as direct costs when concluding agreements with donors and designing terms of reference for funds-in-trust: (*a*) telephone and postage costs; (*b*) staff travel for specific technical cooperation project operations, monitoring and evaluation; and *(c)* costs of technical services such as project appraisal, technical monitoring and evaluation;
(6) To monitor the implementation of the new programme-support cost policy during the 2004-2005 biennium; and
(7) To report to the fifty-eighth session of the Executive Council in 2006 on the progress made in the implementation of this resolution.

ANNEX 7

VOLUNTEERISM IN THE WMO COMMUNITY

EXPLORATORY CONCEPT NOTE

RATIONALE

The role of the National Meteorological and Hydrological Services (NMHS) has been changing steadily from one of basic hydromet data provision to an increased involvement in decision support – especially with regards to issues surrounding food security, disaster risk reduction and management and climate change adaptation. In the 1990s alone, impacts of natural disasters of a meteorological or hydrologic origin cost more than US$500 billion globally and hundreds of thousands of lives were lost. Consequently, with this expanded mandate, the roles of the NMHSs are changing significantly with additional needs, requirements, social demands, and responsibilities being levied on these services by their government agencies, the public, and the commercial sector. The NMHSs need to be able to collect more and better hydrometeorological data; improve the accuracy, timeliness and dissemination of warnings; improve early warning capabilities; undertake risk assessments and generally provide more and improved weather and climate information products and services. There is also a continuing need to improve weather, climate and hydrologic forecasting capabilities (as an important component to early warning) and build capacity at all levels.

Most NMHSs realize the need to expand or improve their services to their users but many do not have the resources or capacity to do so. In addition, some NMHSs struggle to even adequately maintain existing operations due to budgetary restrictions and human resource constraints.

One possible solution to providing additional support to NMHSs in developing countries is to provide expertise and technical support through volunteerism. Volunteerism is not a new concept within the WMO system. The work of “volunteers” within the various working groups of Constituent Bodies and the expert services provided through the Voluntary Contributions programme (VCP) is well recognised and appreciated by the WMO Community as a whole. However, it could be possible to further capitalise on this culture of volunteerism within WMO and provide direct assistance to individual countries by developing a more formalized approach for providing support through a cadre of volunteer meteorologists and hydrologists with appropriate skills. Additionally such volunteers could further support development projects and Voluntary Cooperation Programme.

This issue has been discussed at both the Commission for Basic Systems and Executive Council in 2010. This paper is aimed at progressing the discussion towards putting forward a specific recommendation to Congress regarding the establishment of the WMO Volunteer Programme and the public launch of this programme during International Year of Volunteering (IYV 11) in association with UN Volunteers.

WMO VOLUNTEERS

WMO would like to utilise skilled volunteers to support initiatives in developing and least developed countries, as well as offer timely support in emergency situations. These volunteers will work with the National HydroMeteorological Services (NMHSs) to share knowledge, develop sustainable skills and build institutional capacity. The volunteer assignment can vary from a few weeks to two years depending on the needs of the host organization and the availability of the volunteers.

WMO Volunteers will contribute to enhance the technical cooperation between National HydroMeteorological Services and Disaster Management Agencies and related institutions in WMO Member countries and support development projects in the of relevance to the Hydromet sector. Actions will be closely coupled with activities of other UN organizations, international, regional and national agencies and programmes that contribute to modernization of NMHSs to improve delivery of weather and climate services that support a

wide range of economic sectors (agriculture, transport, health, energy, etc), and humanitarian and civil protection processes.

AIMS AND OBJECTIVES

1. Engage WMO Members, their NMHS and related organisations and in particular their current and retired staff in meaningful volunteerism.
2. Work in close collaboration with United Nations Volunteers (UN-V).
3. Engage volunteer programmes of Overseas Development Agencies for financial support to WVI such as UK VSO, AUSAID, JICA, Peace Corp etc.
4. Improve all aspects of weather, water and climate services in developing countries.
5. Enhance information service delivery to specific sectors and in particular including Public Safety, Food, Water and Health Security, Disaster Risk Reduction and Climate Change Adaptation.

SCOPE OF VOLUNTEER ENGAGEMENT

The WMO Volunteers could be on four key types of engagement

1. In-country Post Event support to humanitarian and disaster relief activities (specifications; procurement; advice on new technology) following hydrometeorological disasters;
2. In-country short-term engagement for capacity development in NMHS in developing and least developed countries: on the job training, transfer of skills and expertise, training workshops, expert advice to development projects (proposal development, infrastructure);
3. In-country long-term placement (6 months to 2 years) to support development of institutional and human capacity of NMS and expansion of service and product delivery to key sectors;
4. Online volunteering: donating your time and skills (Advice by phone or e-mail, distance training courses, helping with writing and updating a website, etc).

Focus on the following professional areas:

- Institutional Development and Management and Political Advocacy.
- Sectoral Needs Analysis
- Weather Forecasting and Climate Prediction
- Hydrometeorological Equipment maintenance and repair
- Numerical modeling
- Met/hydro data collection and processing
- Communications/web page development
- HydroMet Early Warning Systems
- Warning product development and transmission for hydrometeorological hazards
- Radio/television broadcast
- Information and Communication Technologies

VOLUNTEER NETWORK & PROFILE

Recognising the specialised and technical nature of the focus areas of the programme, the potential pool of qualified volunteers is by nature slightly restricted. Below is the list of potential volunteer profiles and organisations where they can be found:

- Retirees of the WMO Secretariat;
- Retirees and current employees[4] of NMHS in developed countries;
- Retirees and current employees of Regional Forecasting Centres;
- Meteorological Societies in developed countries;

[4] Current employees can be seconded. A special agreement will need to be in place with the volunteer's organisation.

- Candidates with related skills (IT, Web Page Design and Operation, Project Management).

Potential volunteers from the above organisation must also meet the following criteria:

- A university degree or higher technical diploma or equivalent work experience;
- A minimum of five years working experience in relevant field (or focus area):
- Good working knowledge in at least one of three UN working languages (English, French, Spanish). Knowledge of an additional UN language or specific local languages is considered an advantage.

In addition, volunteers must be able to demonstrate:

- A strong commitment to the values an principles of volunteerism;
- The ability to work in a multi-cultural environment;
- The ability to adjust to difficult working and living conditions;
- Strong interpersonal and organisational skills;
- Prior volunteering and / or working experience in a developing country is an asset.

HOW DOES IT WORK?

The requesting country defines the need for a volunteer (specific project, training, etc) and submits a request to WMO. After the request is approved and depending on the nature of the needs, WMO will identify a suitable volunteer through the established networks. Once the volunteer has been deployed, WMO will monitor the project in various stages to ensure the success of the assignment.

PROPOSED PROGRAM MANAGEMENT

The proposal is to initially develop a program within the Resource Mobilizatiion Office that would be based on MOU with the various agencies who support Volunteer placements UNV, UK VSO, AUSAID, JICA, Peace Corp and others**.**

ANNEX 8

WMO AND THE ADAPTATION FUND

Adaptation Fund: WMO Briefing Paper

What is the Adaptation Fund?
The Adaptation Fund was established by the Parties to the Kyoto Protocol of the UN Framework Convention on Climate Change (UNFCCC) to finance concrete adaptation projects and programmes in developing countries that are Parties to the Kyoto Protocol. The Fund is financed with 2% of the Certified Emission Reduction (CERs) issued for projects of the Clean Development Mechanism (CDM) and other sources of funding.

WMO became accredited to the Adaptation Fund as a Multilateral Implementing Entity in December 2010. This will allow WMO to work with members in developing countries to put together projects, aligned with National Adaptation Plans, and submit these for funding through the Adaptation Fund.

What sort of projects and programmes can WMO implement under the Adaptation Fund?
The AF has been established to finance: *"Concrete adaptation projects and programmes that are country driven and are based on the needs, views and priorities of eligible parties".*

This means that all projects proposed should be consistent with national sustainable development strategies, such as:

- development plans
- poverty reduction strategies
- National Communications
- National Adaptation Programmes of Action
- Strategies of national delivery agencies (such as NMSs)

The Adaptation Fund documentation also refers to "Decision 5/CP.7" of the Conference of the Parties which identifies priorities for adaptation including:

- National level research into climate variability and change
- Strengthening early warning systems for extreme weather events.
- Strengthening observation networks

Note:

– Accreditation to the Adaptation Fund does not automatically mean access to the funds.
– Projects need to be signed off at a National Level by a Designated Authority (DA) that is officially recognized by the Fund.
– Projects can be on a national, or sub-regional level. Involving more countries increases the complexity of getting initiatives signed off by the individual country designated authorities.
– Adaptation Fund is not set up to support regional or international programmes or regular activities.
–

Who else is accredited to the fund?
National Implementing Entities are accredited in Senegal, Jamaica and Uruguay.

As well as WMO, Multilateral Implementing Entities include: African Development Bank, International Fund for Agricultural Development (IFAD), United Nations Development Programme (UNDP), United Nations Environment Programme, World Food Programme and the World Bank.

What types of projects might WMO propose under the fund?
WMO can propose projects on behalf of Members that are consistent with furthering our mission of capacity development to deliver sustainable observing, forecast and warning services in Weather, Climate and Water. In this way we will help national governments, through their National Meteorological and Hydrological Services, reduce the risks to the most vulnerable communities from future climate change and existing climate variability.

Types of projects might include development of climate services for agricultural or health applications; or improving disaster forecast and warning services so that vulnerable communities are better prepared for both climate variability and climate change.

In all cases proposals will lean heavily towards GFCS taking an "end to end" approach is to strengthening the weather and climate (and hydrology) services and early warning systems. This can include:

- Large scale strengthening of observations for both climate monitoring and real time weather monitoring (this could include surface, marine, upper air, radar, etc)
- Development and installation of forecasting tools
- Training of forecasting staff
- Sustainable establishment of new products and delivery channels: including new services delivered to end-users through television, radio, internet and mobile phone.
- Close engagement with end user community groups.
- Wider scale training on project management, leadership, customer engagement, etc.

All projects will be based on the premise of "no regrets scenario" in that reducing vulnerability to current weather and climate impacts is an adaptation strategy for both future climate change and existing climate variability.

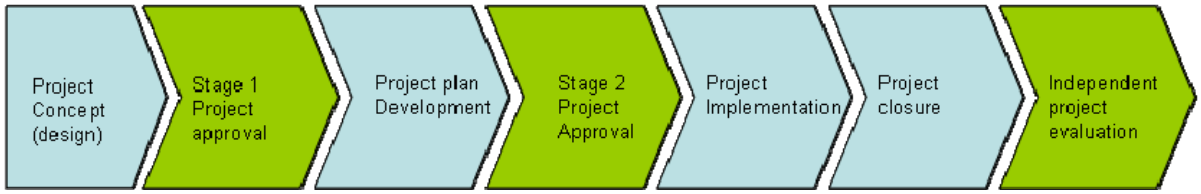
How can Members access the AF through WMO?
WMO will establish a project appraisal committee to submissions from WMO Technical Programmes on behalf of Members or from Members directly for Adaptation Fund support.

The WMO project appraisal committee will assess and prioritise project outlines submitted and advise on whether a project concept meets the requirements of the fund. The appraisal committee will be led by the Director DRA and membership will draw on WMO and independent experts from members. RMO will manage the interaction with the Fund in all cases.

As the resource within the DRA office to help develop project concepts is limited only the highest scoring project proposals will be taken forward to full project concept development and submitted to the fund. All project proposals will be developed in collaboration with the RMO office and relevant Technical Departments of WMO – as well as the NMHSs and stakeholder groups within the benefiting countries. All final proposals must be submitted through the Director, RMO to ensure consistent quality and that WMO have the resources in place to deliver the proposed initiatives.

A Project Management Unit will need to be established to support this process.

What is the process for project development?
The project cycle for WMO projects submitted to the Adaptation Fund is shown in the diagram below.



For projects whose value is greater than $1M a two stage approval process is recommended. This means that both a project concept and project proposal are submitted to the board for approval.

Full details of the project management process required for Adaptation Fund Projects is given in “Project Management Framework: for projects implemented by the World Meteorological Organization on behalf of the Adaptation Fund”

Where can further information be obtained?
Mary Power, Director Resource Mobilisation Office, is the Adaptation Fund focal point within WMO.

The Adaptation Fund website has full details of the project application process and publishes approved proposals which are useful examples for project design: www.adaptation-fund.org

ANNEX 9

OVERVIEW CURRENT AND EMERGING MAJOR PARTNERSHIPS / REGIONAL HYDROMET DEVELOPMENT PROJECTS

Strategic Partnerships

1. The Resource Mobilization Office is focusing strongly on establishment of strategic partnerships with key organizations such as World Bank (WB), various Directorates of the European Commission, UN System Partners in particular UNISDR, FAO, WFP, and UNDP, Rockefeller Foundation and Regional Economic Groupings and also with WMO Members for delivery of regional scale development programmes and projects.

2. Significant work is being undertaken in respect of regional programmes for capacity enhancement of NMHS in West Africa, South Eastern Europe, Central Asia, Pacific and the Americas. This capacity enhancement is in cooperation with WMO Members and with the major partners mentioned above, noting that more than US$40 million was directed to development programmes during the period from 2007 to 2010 through various modalities and partnerships

3. The regional and partnership oriented approach to development assistance for improvement of weather, water and climate services will continue as it has proven to be an effective approach encouraging other WMO members to consider supporting such regional development projects through the WMO and or bi-lateral or other mechanisms.

4. A significant achievement in 2010, was the accreditation of WMO as Multilateral Implementing Entity by the Adaptation Fund, which opens an excellent opportunity for funding projects and programmes in the field of adaptation to climate change in support and with participation of NMHSs.

Summary Major Programmes / Projects Below – Others in Appendix 1

RA I (Africa)

5. The Spanish Programme of Cooperation for West African countries has continued its implementation. The focus of activities is on marine meteorology, agricultural meteorology, health and climate, development financing for countries emerging from conflict or disasters (Sierra Leone, Liberia, Guinea, Guinea Bissau, Togo and Ivory Coast), capacity building in political advocacy and resource mobilization and other activities as agreed between participant countries and the donor. The Programme is managed jointly by the Regional Office for Africa and AEMET.

6. The Korea ODA Agency (KOICA) project[5] commenced in 2009 and has also already resulted in increased support to IGAD Region and ICPAC with the recent signing at the African Ministerial Conference of an MOU between ICPAC and KMA for an ongoing programme of expertise and technology transfer to develop ICPAC further as a Regional Climate Centre. This MOU was signed between ICPAC, KMA and the PRs of IGAD countries (Uganda, Tanzania, Eritrea and Ethiopia). Phase II of this project is now under discussion with KOICA.

[5] "Regional Climate Framework in Eastern Africa to Support Adaptation to Climate Change" and "Weather and Climate Impact on Community Health and Public Health Services".

7. The World Bank is supporting a 3 year programme for Lake Victoria Region (Uganda, Kenya and Tanzania) "Weather and Climate Service Delivery in the Lake Victoria Region. The focus is on agricultural meteorology and improved early warnings for maritime safety (fishers) as the fatality rate on the lake amongst fishing community is disastrously high (6-8,000 per year). This is predominantly seed funding for the SWFDP for Lake Victoria. This project links to plans for development of a Maritime Communications Centre and Search and Research Service on the Lake.

8. Regarding the above and more generally WMO is working closely with Ericsson Communications and MTN to develop applications for weather and climate information to be carried over mobile networks targeting farmers and fishers. This is being piloted in Uganda as a demonstration of how innovations in communications technology can in reality make weather information readily available to everyone, even in remote communities. Tanzania will also likely participate. The Govt of Norway recently approved a 500,000 USD Grant for this activity.

9. The Rockefeller Foundation is supporting a programme (350,000) to improve integration of weather information in agricultural extension services in Ethiopia. This is their first engagement with WMO but will hopefully be the commencement of a strong partnership as RF has very active programme in East Africa in support of agricultural development and Risk Index Insurance for farmers.

10. An Agreement was singed between Government of Greece and WMO in New York at the UNGA in support of a 2M€ package to support Climate Change Adaptation and Improved Climate Services in Sub-Saharan Africa. The first million has been transferred to the WMO Secretariat and ongoing arrangements are being made to start the implementation of this regional project with the support from the CLW Department.

11. AECID (Spain) is supporting the SDS and GAW projects in Northern Africa and indicated interest in supporting projects on disaster risk management and climate change in the Americas and West Africa regions. AEMET, Spain is actively involved in discussions with AECID are underway seeking support to projects of NMHSs of countries in West Africa and the Americas region.

12. US NWS continued its capacity building programme through WMO covering a range of existing and new activities; Training Desks; Fellowships; support to WIS; Socio-economic benefit areas; Climate Data Recovery programmes etc.

RA III and IV (Americas)

13. The Spanish support to the Programme of Cooperation for the NMHSs of Ibero American countries has continued. In the last meeting of Directors held in Chile in 2010the programme was reviewed and an Action Plan for 2011-2013 was approved with an allocation of about 2.0 million US$. The action plan includes four strategic lines: Institutional strengthening and resource mobilization for NMHS, Development of Climate Services, Education and training, and Development of virtual centres for prevention and of extreme events.

14. The National Meteorological Service (NMS) of Mexico began in 2010 the execution of a Strategic Plan aimed at modernizing the NMS in a 10-year implementation plan based on an assessment made with the assistance of WMO in 2009.Furthermore, in order to take advantange of WMO programmes added value to the implementation of the Strategic Plan, the NMS of Mexico and WMO signed an agreement of cooperation to strengthen the support form WMO to this project. The Plan includes four strategic lines of action: *1) institutional development; 2) strengthening of meteorological observing networks; 3) development of products and meteorological services; and 4) development of infrastructure for climate services*. The Strategic

Plan includes an implementation plan with an estimated budget of 100 USD million. The Government of Mexico is supporting the implementation of the Plan recommended by WMO with an initial allocation of 14 USD million in 2010.

15. A new Capacity Building project in support to NMHSs of the Caribbean in partnership with the Association of Caribbean States is ongoing with support of Finland.

RA VI (South-eastern Europe)

16. The 1st Phase of the joint initiative with World Bank / UNISDR / WMO (with support of Finland) for S. Eastern Europe was completed in 2008 with the publication of a series of assessment reports on: Disaster Risk in SEE, Risk Insurance Markets, and Status and Investment Plan of Hydrometeorological Services (www.wmo.ch/pages/prog/rp/RegionalActivitiesRAVI.html) Based on these assessments several countries directed WB Loans to investment in HydroMet (Albania, Croatia, Montenegro, Moldova, and Macedonia). WMO-RMO Office successfully submitted a proposal to European Commission DG Enlargement. This project is implemented by Office for Europe in partnership with UNDP (each responsible for 1M€ of funds). The project was completed in April 2011. RMO and ROE are now working closely with DGE regarding funding for Phase II of this project.

RA II and V (Asia and SW Pacific)

17. Similarly like in SEE, a Phase 1 Assessment was completed for Central Asia and Caucuses Region funded by the WB Global Facility for DRR. WB and Finland Foreign Affairs has already committed to some investments in the region pending these assessments. UNDP has initiated a 6M Climate Risk Management Programme in the Region and WMO will partner on this. WMO is working with the countries on a proposal to the Adaptation Fund.

18. Along the above lines a similar partnership programme and assessment activity is underway for South East Asia WB SE Asia Office. This Assessment and Investment Plan should be available by end of 2011.

19. Finland continues to support NMHS Development Activities. The Pacific Capacity Building is being implemented with WMO and SPREP as partners.

In the Pipeline

20. Development projects for the NMHSs of Panama, Costa Rica and El Salvador prepared under the Programme of Cooperation for Iberoamerican NMHSs were submitted for consideration to national and international funding agencies based in these countries. Panama would support its own project and El Salvador. AECID and NOAA have considered some support to the project in Costa Rica. Development projects were also prepared for the NMHS of Colombia, Dominican Republic, Honduras, Nicaragua, Ecuador, Paraguay and Uruguay. WMO/AEMET missions were organized to these countries in 2008, 2009 and 2010 seeking support from international agencies and national governments for the implementation of these projects. The Spanish International Development Agency for Cooperation (AECID) has been contacted and has offered to consider support to some projects, while the Inter-American Development Bank (IDB) and the hydroelectric Centrals of Itaipú and Yacyretá offered support to the project in Paraguay.

21. A WMO team carried out the assessment mission to Haiti (April 2010) and developed a project proposal to address medium-term capacity development needs with an estimated cost of USD $ 2.7 million. The proposal has been submitted for consideration to potential partners (Canada and Finland) and through UNDP to the Haiti Reconstruction Fund. Assistance from WMO Members has provided Haiti with

the means to provide forecasts and warnings for the 2010 hurricane season and similar is planned for 2011 season. Contributions amounted a total of USD $ 700,000.

REGIONAL DEVELOPMENT PROJECTS (2007-2010)

Development Projects Funded					
Activity/Project	**Beneficiary Country/Region**	**Amount**	**Equivalent in CHF**	**Funding Agency**	**Remarks**
1. *Pilot Project for the Implementation of an Early Warning System to contributes to disaster risk reduction in Bolivia*	Bolivia	415,000 €	560,000	AECID	Funds secured by RMO transferred to to SENAMHI and Min. of Planning provided by AECID. Administered by UNDP Bolivia.
2. *Regional Cooperation in South Eastern Europe for meteorological, hydrological and climate data management and exchange to support Disaster Risk Reduction*	Croatia, Turkey FYR Macedonia, Albania, Bosnia and Herzegovina, Montenegro, Serbia	2,000,000€	2,700,000	EU-COM DG-Enlargement	2M € committed. Two components at 1M € each. 1M€ to be implemented by WMO and 1M€ by UNDP.
3. *Rehabilitation of the Iraqi Meteorological Organization*	Iraq	5,285,000€	7,135,000	Government of Italy	5M€ Soft Loan to Iraqi government. 285,000€ to WMO for Tech Support
4. *Global Atmospheric Watch in the Magreb-Sahara Region*	Magreb-Sahara Region	340,000 €	460,000	AECID	Funds provided by AECID to WMO. Project under implementation by ARE
5. *Sand and dust Storm (SDS) Early Warning System in the Magreb Region*	Magreb Region	184,000 €	248,000	AECID	Funds provided by AECID to WMO. Project under implementation by ARE
6. *Food Security project in Africa- Flood and Drought*	Mali	300,000 €	405,000	Government of Italy	Funds transferred to WMO. Project under implementation by AGM
7. *Review of Delivery of Weather and Climate Services and Related Warning Services in the Area Served by the Fiji Meteorological Service*	Pacific Region	80,000 AU	80,000	AUSAID	
8. *Understanding the Findings of the IPCC Fourth Assessment Report "Climate Change 2007" – Integrating Climate Change Adaptation and Mitigation in Development Planning*	Africa	1,000,000€	1,350,000	EU-COM DG Environment	Implemented by IPCC-WMO
10. *Operational Observing and Forecasting System in the Caspian Sea for the Protection of Infrastructures and the Environment-Preparatory Phase*	Caspian Sea	45,000 €	60,750	NATO	In association with Ente per le Nuove tecnologie, l'Energia e l'Ambiente – ENEA. Dpt ACS, Spezia Italy
11. *Regional Climate Centres and Climate and*				KOICA	Projects under implementation.

Development Projects Funded					
Activity/Project	**Beneficiary Country/Region**	**Amount**	**Equivalent in CHF**	**Funding Agency**	**Remarks**
Health	East Africa	600,000 USD	600,000	Korea Int.	Second phase is being negotiated.
12. Assessment of NMHS Capacity in Central Asia and Caucuses meteorological, hydrological and climate data management and exchange to support Disaster Risk Reduction	Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan, Armenia, Azerbaijan, and Georgia	150,00 €	202,500	GFDRR / UNISDR / Finland	
13. Development of Hydrometeorological Services in Pacific Islands Region	Pacific Islands	500,000 €	675,000	Gov. Finland	FMI/ SPREP/WMO
14. Strategic Plan for development of the National Meteorological Service of Mexico	Mexico	14,000,000 USD	14,000,000	Gov. of Mexico	A Cooperation Agreement was signed between Mexico and WMO to assist the NMS in the implementation of the ten year Strategic Plan
15. Development of the early warning system for disaster risk reduction of hydrometeorological events in El Salvador	El Salvador	4,300,000 USD	4,300,000	Gov. of El Salvador	Project under implementation by SNET using national funds
16. Strengthening hydrometeorological operations and services in the Caribbean SIDS (SHOCS)	Caribbean NMHSs	500,000 Euros	675,000	Gov. of Finland	FMI/ACS/WMO
17. Institutional development of the NMS for improvement of the meteorological services and information in support of socioeconomic sectors of Uruguay	Uruguay	500,000 USD	500,000	Gov. of Uruguay	Funds provided by Gov. of Uruguay to NMS to implement part of project. Rest being sought with AECID.
18. Regional Framework for Weather and Climate Services for food aid, food security, maritime transport safety contributing to disaster risk reduction In Lake Victoria region	Uganda, Tanzania, Kenya	750,000 USD	750,000	World Bank	
19. Development of Meteorological and Hydrological services in Haiti. Short term needs.	Haiti	700,000 USD	700,000	Various WMO Members	Members that have supported Haiti include: Canada, France, Japan, USA and Dominican Republic
20. Climate Change Adaptation and Improved Climate Services in Sub-Saharan Africa	Sudan, Niger, Burkina Faso, Uganda, Mali	1,000,000 €	1,350,000	Gov. of Greece	
Total			**38,197,430**		

Projects in Pipeline

ACTIVITY/PROJECT	**Beneficiary country/region**	**Estimated budget**	**Potential funding agency**	**Remarks**
19. Early warning system for the Andean Region	Bolivia, Colombia, Ecuador, Peru	2,000,000 €	Gov. of Finland	Project under preparation with technical assistance from WMO. After approval project will be implemented by the Andean Community and the NMHSs of participant countries
20. Establishment of a Hydro meteorological Early Warning System in Dominican Republic	Dominican Republic	3,800,000 USD	AECID and national funds	Project being implemented partially with national funds. AECID support is being sought.
21. Development of Meteorological and Hydrological Services in Haiti in support of Social and Economic Sectors. Project proposal for Medium Term Needs	Haiti	2, 700,000 USD	Gov. of Finland CIDA, Canada AECID	A WMO mission assessed the short and medium term needs after the earthquake in Haiti and formulated a project proposal for development of the NMHS of Haiti..
22. Improvement of the early warning system for disaster risk reduction and climate change impact in Costa Rica	Costa Rica	3,500,000 USD	AECID, NOAA	Project presented to national authorities and funding agencies in Costa Rica. Under discussion.
23. Development of INETER in support to disaster risk reduction and impacts of climate change in Nicaragua	Nicaragua	2,300,000 USD	National funds, World Bank, IDB	Project presented to Nicaragua NMS and government and funding and development agencies in Nov. 2010
24. Development of the NMS in support to the integrated disaster risk reduction and climate change in Honduras	Honduras	2,000,000 USD	CIDA, IDB	Project to be presented to the NMS and new government (pending).
25. Development Project for enhancing the Capacity Building of SENAMHI contributing to Disaster Risk Reduction in Bolivia	Bolivia	500,000 USD	World Bank, AECID	Negotiations with WB in Bolivia. Funds in process of approval.
26. Strengthening and Modernization of the NMHS of Panama	Panama	3,200,000 USD	Gov. of Panama	Project will be funded mostly by national funds.
27. Institutional development of the NMS for improvement of the meteorological services and information in support of socioeconomic sectors of Uruguay	Uruguay	2,000,000 USD	AECID Gov. of Uruguay	Government of Uruguay approved an initial allocation of 500,000 USD for the project. Rest being sought with AECID, Spain.
28. Institutional strengthening of the NMHS to support the socioeconomic development of Paraguay	Paraguay	3,000,000 USD	IDB, National funds from Energy sector	Project submitted to Ministry of Planning. IDB offered support to some project components. Hydroelectric Itaipu and Yacireta have also offered support.
29. Early warning system for Maritime and Coastal Areas West Africa	**Gambia, Senegal, Mauritania, Cape verde**	10,000,000	Adaptation Fund	
30. Climate Change Adaptation in Water and Agricultural sectors in Central Asia	Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan	12,000,000	Adaptation Fund	

ANNEX 10

WMO CAPACITY DEVELOPMENT STRATEGY

11.2 Capacity Development Strategy (CDS) *(agenda item 11.2)*

Background

11.2.1 Recognizing the importance of capacity-building activities in a wide range of WMO programmes (Resolutions 2, 5, 8, 12, 13, 18, 19, 20, 21, 25 and 32 (Cg-XV)), Congress noted that a coordinated and cohesive approach for capacity development would be needed to enhance capabilities of NMHS in developing countries, particularly those in transition, Least Developed Countries and Small Island Developing States, to meet growing Societal Needs at different levels. Congress recalled that capacity development activities included assisting Members with advocacy to national, regional and global leadership, resource mobilization efforts, management and institutional change processes and education and training.

11.2.2 Congress noted that capacity building is a crosscutting activity and contributes to all Expected Results (ER), especially ER 6 and Strategic Thrust 3 of the 2012 to 2015 Strategic Plan.

11.2.3 Congress noted that the third meeting of the Executive Council Working Group on Capacity Building (EC-WG/CB) in October 2010 discussed the advancement of a Capacity Development Strategy (CDS) and possible mechanisms to support articulation of a CDS within WMO.

11.2.4 Congress further noted the report by the Task Group on WMO Reform stressing that the bodies associated with implementing capacity building activities within WMO should be oriented to direct and support the strategic thrusts of the WMO Strategic Plan in a holistic and sustainable manner rather than by way of a number of uncoordinated, one-off activities.

11.2.5 Congress was of the view that the preparation and implementation of a Capacity Development Strategy would greatly assist WMO in the coordination and priority setting of capacity development activities arising from the global high priority areas as well as requirements of the Regional Associations and the Technical Commissions.

Overall objective

11.2.6 Congress agreed that the overall objective of WMO capacity development should be to facilitate sustainable development of NMHSs to support the needs of its Members in relation to the Strategic Thrusts and Expected Results in the Strategic Plan. The Congress supported the elements of “capacity development” described in the annex to Resolution 11.2/1 as being representative of WMO goals and future direction for its capacity development efforts.

11.2.7 Congress agreed that the CDS should address how WMO governance and coordination of capacity building could be enhanced to ensure appropriate strategic guidance and comprehensive delivery of development assistance to Members.

11.2.8 Congress expected that, given the co-dependence of neighbouring NMHSs to meet their respective mandates, all Members would benefit from the successful implementation of the CDS.

General Considerations

11.2.9 Congress noted that the CDS would build upon and contributes to the implementation of major international initiatives, including MDGs, the 4th UNLDC Conference, GFCS and regional programmes. Congress further noted that the CDS would fulfil the purposes of the Organization listed in Article 2 (a, b, d, and f) of the Organization's Convention.

11.2.10 Recognizing the importance of continuing the capacity building efforts under each WMO Programme, especially, LDCP, TCOP, VCP, ETRP and Regional Programmes; Congress noted that the CDS should promote improvements in coordination between these programmes and thus better contribute to building the fundamental capacities and capabilities of NMHSs in developing countries, in particular those in transition, LDCs and SIDSs.

11.2.11 Congress further noted that the CDS should facilitate stronger national political ownership, development of relevant policies and legal frameworks, and enhance sustainability by linking regional, sub-regional and national planning processes.

11.2.12 Congress stressed that to successfully deliver the Expected Results would require improved internal collaboration and consistency of the development efforts within the Organization, including Regional Associations (RAs), Technical Commissions (TCs), WMO and WMO co-sponsored Programmes, and across all Departments within the Secretariat. The CDS would provide such a framework.

11.2.13 Congress noted the importance of providing guidance and oversight during the development and subsequent implementation of the CDS and noted that the Executive Council could play such a role. Building on the work of the EC-WG/CB, Congress requested the Council to consider governance mechanisms to oversee and further harmonize capacity building activities of the WMO.

11.2.14 Congress requested that the following areas be considered in the development of the Capacity Development Strategy:

- How to assess the capabilities of Members to accurately identify existing gaps, non-compliance to WMO standards and assist in the long-term monitoring of the success of the Capacity Development Strategy. Congress considered that this could be part of the Country Profile Database.

- How to improve compliance to WMO standards and to maintain political support for the development of NMHSs. Stronger advocacy by WMO bodies and officers to encourage compliance and support may be an important aspect of the CDS.

- How to ensure national ownership as part of the development process and ensure that NMHS development plans are consistent with National Adaptation Programmes of Action (NAPAs), where applicable, and with the respective WMO Regional Association Strategic Plan.

- How to ensure that tailored NMHS products and services would be relevant for national decision-makers, development agencies, civil society and the general public. Congress noted that the WMO Service Delivery Strategy identified that early consultation with stakeholders in the development process was an important aspect of achieving national buy-in of new products and services.

- How to evaluate sustainability and impact of project outputs and outcomes.

- How to ensure that capacity development activities are scalable, based on the level of

voluntary contributions from Members and support from other sources such as aid organizations.

- How to include global priority areas of the WMO in the use of the CDS to support decision-making on the setting priorities for the use resources. For the 2012 to 2015 financial period, these priority areas are the development of the GFCS, Aviation, WIGOS/WIS and DRR activities.

- How to recognize the key roles of RAs, TCs, WMO co-sponsored Programmes and Regional Offices (ROs) in integrating the requirements of the region, provision of advice from technical perspectives and realization of stronger regional presence through coordination and advocacy activities.

- How to provide and encourage volunteerism and bilateral cooperation in work of the WMO to developing countries.

11.2.15 Recognising the importance of strategic partnerships and shared execution of capacity development activities, Congress stressed that the facilitative role of the Organization should be enhanced under the Strategy. Congress urged the Secretary-General to play an active coordinating role in Strategic Planning, Advocacy, Pilot Projects and especially Resource Mobilization because the development effort will require external resources.

11.2.16 Congress adopted Resolution 11.2/1 (Cg-XVI) – WMO Strategy for Capacity Development.

DRAFT RESOLUTION

Resolution 11.2/1 (Cg-XVI)
WMO STRATEGY FOR CAPACITY DEVELOPMENT

THE CONGRESS,

Noting:

(1) Article 2 (a), (b), (d), (f) of the Convention of the World Meteorological Organization which relates to capacity development;

(2) Resolution 8.1/1 (Cg-XVI) WMO Strategic Plan;

(3) Resolution 30 (Cg-XI) Development of National Meteorological and Hydrological Services;

(4) Strategic Thrusts of the WMO Strategic Plan 2012-2015 calling for enhancing capabilities of Members and NMHSs, strengthening partnerships and cooperation and good governance;

(5) Paragraph 4.9.11 of the Abridged Final Report of the Fifteenth Session of Regional Association VI requesting the Secretary-General to look at innovative ways to strengthen the capacity-building activities with a view to presenting a new concept of effective development assistance to the Sixteenth World Meteorological Congress in 2011;

Noting further:

(1) The definitions of capacity development in bilateral and multilateral development organizations such as the Organisation for Economic Co-operation and Development/Development Assistance Committee (OECD/DAC), which defines capacity development as “the process whereby people, organisations and society as a whole unleash, strengthen, create, adapt and maintain capacity over time”;

(2) That capacity building is an element of all WMO Programmes, most notably the Least Developed Countries, Technical Cooperation, Voluntary Cooperation, Education and Training, and Regional Programmes; and,

Recognizing:

That capacity development is a comprehensive approach to enhancing capacity and includes the consideration of stakeholder requirements and existing capabilities in the preparation of development projects as well as the establishment of improved implementation and feedback mechanisms at regional, sub-regional and national levels;

Considering:

(1) That the ability of a National Meteorological and Hydrological Service to fulfil its mandates not only depends on the strength of its own service, and the support provided to it by its national government , but also on the observations and technical contributions of neighbouring National Meteorological and Hydrological Services, and therefore, capacity development for the less developed National Meteorological and Hydrological Services ultimately benefits all WMO Members;

(2) That capacity development is crosscutting and that the success of this activity will impact all WMO Programmes; and,

(3) That capacity development activities need to be better coordinated to fulfil the purposes of the Organization;

Decides that:

A Capacity Development Strategy should be prepared taking into account the Elements of a WMO Capacity Development Strategy as set out in the Annex to this resolution;

Requests the Executive Council to:

(1) Take the lead in preparing a crosscutting Capacity Development Strategy, which will provide further focus for WMO’s efforts in the coordination and cooperation of technical assistance among Members, Regional Associations, Technical Commissions, WMO Programmes and the WMO Secretariat;

(2) Establish a mechanism leading to approval of the above mentioned Capacity Development Strategy by the Executive Council; and

(3) Submit a report to the Seventeenth Congress on the application of the Capacity Development Strategy during the sixteenth financial period.

Requests Members, Regional Associations, Technical Commissions and WMO co-sponsored Programmes to**:**

Support the creation of a Capacity Development Strategy;

Requests the Secretary-General to:

(1) Provide the necessary support to the Executive Council to develop a Capacity Development Strategy;

(2) Further promote partnerships and coordination among WMO departments and programmes to effectively and efficiently implement capacity development activities of the WMO;

(3) Further cultivate relationships in the regional, sub regional and national levels to ensure that capacity development projects and activities supported by the WMO meet the specific user needs of each Member; and,

(4) Ensure coordinated and streamlined capacity development activities within the WMO.

Annex to Resolution 11.2/1

Elements of a WMO Strategy for Capacity Development

Definition of Capacity Development

1) Capacity is defined as the ability of individuals, organizations and society as a whole to perform, sustain itself, and self renew.

2) Capacity development is defined as the process of strengthening the abilities or capacities of individuals, organizations and societies to solve problems and meet their objectives on a sustainable basis which:

a) Is an on-going continuous improvement process with feedback mechanisms rather than a short-term intervention;
b) Aims to augment capacity in a manner conducive to sustained growth;
c) Includes the activities, approaches, strategies, and methodologies which help organizations, groups and individuals improve their performance, and generate development benefits;
d) Is an endogenous process driven by national mechanisms and facilitated by complementing external agencies; and
e) Should be evaluated based on growth as a whole and over time.

3) In the WMO context, this definition puts emphasis on a **holistic approach to building competencies and capabilities of NMHSs.** Also it promotes the role of the NMHS in all aspects of development rather than multiple parallel efforts to improve an NMHS's capacity in a non-cohesive manner.

4) The definition also implies NMHSs should have strong linkages to national, sub-regional and regional planning and political processes to ensure sustainability as well as coordination and cooperation with related capacity development activities.

5) Capacity development recognizes that two types of capacities, **technical capacities** and **management capacities** are needed to sustain capacity development. These two types of capacities are distinct, yet inter-related. While technical capacities are straightforward and have been well addressed during the long history of technical cooperation of WMO, management capacities are also required in the formulation of institutional arrangements and leadership to implement and review policies, strategies, programmes and projects. These include the capacity to:

a) Engage with stakeholders to identify, and create consensus around development issues, as well as related policies, regulations and laws;
b) Articulate the mandate of the NMHS or to envision the desired course of the organization;
c) Develop a strategy, translate it into an actionable plan and prepare a budget; and
d) Implement a programme or policy and to monitor its implementation and evaluate results.

6) These core management capacities are fundamental to all organizations, institutions and societies needed to be effective and function well; without which technical capabilities cannot be maintained over time.

Capacity Development Process

1) The capacity development process should be a continuous process that comprises of at least five steps rather than a "one-off" intervention. The basic five steps of the capacity development process are:

a) Engage Stakeholders
The first step is to identify and engage stakeholders. To ensure an effective and sustainable capacity development process, political commitment and ownership is essential and therefore NMHSs need to embed their capacity development plans in National, Sub Regional and Regional Development Plans is required.

b) Assess capacity assets and needs
The level of existing capacity and desired future capacity needs to be assessed to gather critical information and knowledge on capacity assets and needs. Such assessment helps to formulate capacity development responses and to prioritize capacity development investments.

c) Formulate a capacity development response
UNDP uses the term capacity development response to refer to an integrated set of deliberate and sequenced actions that are embedded in the programme or project. Strategies proposed in capacity development response are usually including elements related to management capacities such as institutional arrangements, leadership, knowledge and performance.

d) Implement a capacity development response
To successfully implement capacity development response, initiatives for change must be owned at the national or local level. Implementation of capacity development response is a part of the programme or project implementation and should be part of the national development plan. During implementation, efforts should also be made to best align the existing system and capacity to the response.

e) Evaluate capacity development
Evaluation focuses on how outputs contribute to the achievement of overall goals. Evaluation should address whether capacity development response has helped to build, enhance and retain capacities of the NMHS. It should also include institutional arrangements, leadership, knowledge and performance, individuals, organisation, and society levels. Reporting on the results achieved for Members is critical for the capacity development process. This evaluation will increase the effective involvement of Members in the implementation of the CDS

2) Although establishing baselines is a necessity, it should also be noted that some aspects of capacity development are difficult to measure quantitatively because aspects like behaviour change cannot be fully captured by any quantitative scales. In addition, effects of capacity development response may be seen only some years later thus it is not appropriate to assess only after a short period of time. Therefore, for evaluation to capture overall

progress, both qualitative and quantitative analyses on information from subjective and objective sources need to be utilized.

Towards a Strategy for WMO Capacity Development

1) A WMO Capacity Development Strategy should be used to infuse the definitions and processes described above across all WMO RAs, TCs, and Programmes. The creation of the Development and Regional Activities Department (DRA) within the WMO Secretariat has provided a focus for the coordination and cooperation of technical assistance among Members, the Secretariat, RAs, TCs and WMO Programmes. Development of a crosscutting strategy for capacity development will provide further focus for WMO's capacity building programmes (ETRP, LDCRP, TCOP, and ROs) as well as add measures to strengthen the long-term viability of capacity assistance offered by other WMO programmes.

2) The crosscutting nature of capacity development is evident as the AgM, HWR, PWS, AM and DRR Programmes all seek to build the capacity of WMO Members through human resource, technical and infrastructure development to support climate change adaptation in their countries. The WIS and WIGOS initiatives also have a significant component of capacity development that will primarily be overseen by the World Weather Watch Programme or its successor. While technical assistance in specific programmatic areas would continue, the CDS should provide an umbrella for the capacity development activities already identified under the five Strategic Thrusts for the 16th Financial Period; GFCS, DRR, WIS/WIGOS, qualifications and competencies for aeronautical meteorological personnel, and general capacity development of NMHSs and their personnel in developing countries, particularly those in transition, LDCs and SIDSs.

3) Closer programme collaboration with ETR, greater involvement of Regional Training Centres (RTCs) in capacity building in weather-, climate- and water-related matters and joint capacity building activities among CCl, CHy, CAgM, CBS, CAeM, WMO co-sponsored Programmes and external partners should be integral to the CDS.

4) It can be anticipated that in all of these programmes it will be necessary to balance the needs of long-term, large (multi-Member) high-impact projects with activities of a short duration, lower cost and medium potential impact with regard to number of beneficiaries, with approaches such as training-of-trainers, roving seminars and distance and blended learning to be principally pursued, resorting to regional or global face-to-face courses only when it is proven to be the most practical, or sole solution.

Considerations

1) A number of considerations on the role of the WMO and its organs are important to the formulation of the CDS

a) Capacity development is an endogenous process as stated earlier and it cannot be forced from outside. For successful capacity development implementation, therefore, WMO's role should be to facilitate the development of technical and management capacities as well as through assisting Members conduct the 5-step capacity development process.

b) For institutional arrangements to be more effective, considerations should also be given to building on major international initiatives and commitments including Millennium Development Goals, the 4th UNLDC conference (UN-LDC IV) follow-up, GFCS and regional initiatives and to contribute to their implementation; forging new strategic partnerships with shared execution when practical.

c) While facilitating stronger national political ownership, WMO can assist in the development of relevant policies and legal frameworks, and enhancing sustainability by linking regional, sub-regional and national planning processes. Development of

management capacities should result in stronger advocacy at the national and international level to improve compliance to WMO standards, and maintain political support for development of NMHS. Enhancing the Country Profile Database may provide some of the tools needed to better determine member needs and progress.

d) Regional Associations, Technical Commissions and Regional Offices all have key roles, which could be clarified and enhanced. For example, Regional Association focus on integration of the requirements of the region should lead to the identification of specific actions and outcomes that build the capacity of the region; TCs with the help of WMO co-sponsored Programmes provide advice from scientific and technical perspectives offering standards and guidance on how these activities could be carried out effectively, and ROs working with the RA could focus more on coordination of projects, assisting regionally organized initiatives and advocacy activities using its regional presence to foster development. The CDS should also consider how to respond to requests by Members for a stronger WMO regional presence and more frequent missions to Members to assist in advocacy and resource mobilization and to complement the information in the database.

e) Project oversight and management should be reinvigorated including: improved pre- and post-evaluation of projects and partnerships for their relevance and potential to assist Members. Streamlined procurement and reporting mechanisms to improve delivery time of projects while ensuring accountability, stronger project tracking at senior levels, as well as increased information for donors/stakeholders is needed, especially in light of voluntary funding.

f) To strategically mobilize resources under the CDS, it would be helpful to establish a compliance database and systematic monitoring of performance of NMHS to be used in better understanding and addressing existing gaps. Updated guidelines are also necessary when applied as a dynamic tool in affording a clear sense of direction and progress. Such information would lead to the establishment of reference points, a baseline situation and to the development of Metrics to show progress. It is noted that Country Profile Database could be useful to develop such tools.

g) Also important would be the establishment of mechanisms to improve internal collaboration, coordination and synergy with WMO Secretariat Programmes to minimise duplication of effort and establishing a consistent approach across all development efforts of the WMO.