

WORLD METEOROLOGICAL ORGANIZATION

IPM/2013/Doc. 3

INFORMAL PLANNING MEETING OF THE  
VOLUNTARY COOPERATION PROGRAMME

ITEM:3.2

WILLEMSTAD, CURAÇAO  
19 - 20 APRIL 2013

Original: ENGLISH

## **REPORTED BILATERAL TECHNICAL COOPERATION ACTIVITIES IN 2012**

*(Submitted by WMO Members)*

---

### Summary and Purpose of Document

This document provides information on Member bilateral cooperation activities during 2012 including VCP Coordinated Programmes.

---

### ACTION PROPOSED

The meeting is invited to consider the information on the activities of the Members in bilateral cooperation during 2012 to inform and guide donor Members in planning their technical assistance support to VCP during 2013.

The reports provided vary significantly in detail in terms of activities and budget. The meeting may wish to consider establishing guidelines on reporting on cooperation activities and related financial investment reporting to facilitate tracking of trends over time.

## ARGENTINA

In 2012, Argentina continued its activities as a donor to the Spanish-speaking Countries of Regions III and IV.

Donor Member	VCP (F) (US\$)	VCP (ES)				Total Contribution (US\$)
		Equipment and Services through WMO	Equipment and Services by bilateral arrangements	Training / Fellowships	VCP (ES) including fellowships Sub-total	
Argentina				USD 8300.		

### **The following co-operation activities were carried out:**

- “VAAC Best Practice Seminar”, Montreal – Canada, 13 - 14 feb. - - 1 participant - USD 983
- WCRP Global Drought Information System Workshop. (Apr, Italy) – 1 participant - USD 470
- Second Vaac Best Practices Seminar, Second Meeting: Montreal – Canadá, 12 - 13 June. - 1 participant - USD 837
- 22nd GAWTEC Training Course: Munich, Zugspitze, Germany – June 24 to July 7 – 1 participant - USD 429
- Regional Training Seminar for National Instructors of AR III & AR IV .06-17 Aug, Lima Perú, 52 students from Barbados, Australia, Suiza, Paraguay, Bolivia, Perú, Ecuador, Venezuela, Costa Rica, Chile, Argentina) – 1 participant - USD 545
- 4º International Training Workshop of Climatic Change and Variability. 08/17 Aug, San José de Costa Rica , Costa Rica – 1 participant - USD 464
- South American Desk. Internship, 01Oct-31Jan, Washington D.C., U.S.A. – 1 participant - USD 2035
- E-Learning Course: “Satellite Meteorology applied to Hydrology” by DSA/CPTEC, National Space Investigation Institute. 30/Jul-01Aug, Cachoeira Paulista, Brasil – 2 participant - USD 1063
- 6º ICTP of theory and use of regionals climatic models workshop. May, Italy – USD 522
- The importance of the correct service and communication of products and services to farmers and extension service. (May, Brasil) – USD 532
- Climatic Variability and its problems: health impacts in latin-american cities. BS AS., CHILE, SALTO Y MANOS – USD 420
- South American Desk – Washington – USA: 1 - 31 January 2013 – 1 participant – USD 2035

### **Missions by Argentine experts to other NMHSs:**

- “Use of Agrometeorological Information and Risk management”: San Lorenzo – Rep. Del Paraguay, 18 -22 may, - 1 participant
- “3er WMO/WWRP International Symposium On Now casting And Very Short Range Forecasting”: Ciudad de Río de Janeiro, Brazil, 6- 10 august. – 1 participant
- WMO Technical Conference (TECO) and “Meeting of the Management Group of WMO Instruments and Observation Methods Comission: Bruselas –Belgium, 16-18 October 2012, - 1 participant

- 6th Meeting of the WMO/CGMS Virtual Laboratory (VLab) for Education and Training in Satellite Meteorology Management Group (VLMG-6). 8 -11 October San Jose Dos Campos – Brazil, 1 participant
- “Satellite Meteorology applied to Hydrology”. Distance learning Cachoeira Paulista, Brazil, 30-1 august, - 1 participant

### **Component II National Meteorological Service**

- Seminar of Geomagnetism and Space Climatology. (21-24 May, 32 students)
- 1º Capture, Processing, Analysis and Dissemination/Broadcasting of Geospatial Information Congress. (07-08 Jun, Buenos Aires, Argentina)
- Antarctic Observations Training Course. (15-16 Oct, 16 students)
- Introductory workshop to the evaluation of solar radiation. 19-22 Nov, 21 students
- E-learning course: “Quality Management System Applied to the Provision of Meteorological Services for Air Navigation – ISO Standards”.(29/10 al 2/11, 105 students)
- Conference: “RMTC – AR III Instructors and Educational Quality Standards: the 2013 OMM objectives” (06 Nov, 15 students)
- Contrast and calibration tasks of meteorological instruments for the Meteorological Service of Paraguay.
- Training on maintenance and care of the instruments for Inspectors (2) of the Meteorological Service of Paraguay.
- Climate Service is on the National Meteorological Service web since January, 2013.- The information received and processed by the Department of Teledetection and Environmental Applications (HRPT) is used by scientific researchers worldwide, and clients .

### **During 2013 the expected training activities, in RMTC Buenos Aires, are:**

- During 2012 the Training Department of SMN has been reorganized and new staff incorporated forming a team made up of 3 Meteorologists and trainers, 1 Professional expert in distant education (Moodle), 1 Tech Meteorologist, 3 Auxiliary Trainers
- March, 2013 Implementation of Meteorological Observer Course 2013 as distance learning on Moodle.
- We are ready to provide new activities which could be useful to other Members of Region III, particularly a training courses on Solar radiation and Energy Use, Earth’s Magnetic Field and Space Weather Interaction. We are preparing other courses on the following topics: Hydrology, Agrometeorology and Meteorological Data Management.
- Argentina along with Brazil are implementing the Regional Climate Centre (RCC) for South America. rcc is projected in a training area specific thematic

#### **2013 Courses:**

1. Surface Meteorological Observers (long term)
2. Radiosonde Observer (long term)
3. QualityManagement SystemApplied toMeteorologicalSrviciosSupplyfor Air Navigation- ISOStandards":
4. Geomagnetism and Space Weather ( short term)
5. Geomagnetic Operator (short term)
6. Introduction to Solar Radiation (short term).
7. Workshop “Meteorological Observation in Antarctica”:

**Annex - COMPONENT II - NATIONAL METEOROLOGICAL SERVICE - ARGENTINA**

**\* Student's participation in Education Programmes/Training courses delivered from 01 January 2012 to 31 December 2012 by RTCs**

<b>Title of the delivered Programme/Course</b>	<b>Expected Qualification</b>	<b>Target Audience</b>	<b>Start Date</b>	<b>End Date</b>	<b># of Local Students</b>	<b># of Foreign Students</b>	<b>Country of Origin</b>
Surface Meteorological Observer (regular)			Mar 19 / 2012	ongoing	60	0	-
Surface Meteorological Observer (intensive)			Mar 19 / 2012	Dec 18 / 2012	30	0	-
Seminar of Geomagnetism and Space Climatology		Graduated Surface Meteorological Observers	May 21 / 2012	May 24 / 2012	32	0	-
Introductory workshop to the evaluation of solar radiation		Graduated Surface Meteorological Observers	Nov 19 / 2012	Nov 22 / 2012	21	0	-
Antarctic Surface Observations Training Course	To increase qualifications about meteorological observations in Antarctica		Oct 15 / 2012	Oct 16 / 2012	16	0	-
Internship at the Instrumental Meteorological Laboratory	Calibration the barometers	For Technical	Nov 27/2012	Nov 30/2012		3	Paraguay
Regional Seminar for national instructors of AR III & AR IV	Aptitude evaluation	Meteorological Instructors	Aug 6 / 2012	Aug 17 / 2012	2	50	Barbados, Paraguay, Bolivia, Peru, Ecuador, Venezuela, Costa Rica, Chile / Instructors: Australia, Suiza

<b>Australia</b>	
<b>2. Overall national contribution in 2012 (estimate in USD)</b>	<b>3. Overall estimated national contribution in 2013 (in USD)</b>
\$5.469M	\$6M
<b>4. List of Activities / Projects / Events in 2012 related to contribution</b>	<b>5. Sources of Funding</b>
Climate and Oceans Support Program for the Pacific (COSPPac), 4-year program (\$2.140M)	National Government – AusAID
Pacific-Australia Climate Change Science and Adaptation Planning Program (PACCSAP), final year of 4-year program (\$3.127M)	National Government – AusAID
VCP(F) (\$52.22K)	National Government – BoM funds
BMTC radar training, 3 month course for overseas students (\$16.06K)	National Government – BoM funds
BMTC Diploma of Meteorology course for overseas student (\$33.42K)	National Government – BoM funds
RANET support, annual contribution to NZ/UZ program (\$8.03K)	National Government – BoM funds
Tsunami training course for Pacific NMS (\$92.21K)	National Government – AusAID
<b>6. Challenges in Resource Mobilization for your Activities / Projects / Events</b>	<b>7. Opportunities for Increased Activity for your Activities / Projects / Events</b>
<p>Main challenge relates to activities funded directly from the Bureau of Meteorology's appropriation (core budget) which is under increasing pressure due to Whole of Government efficiency measures. On the other hand, Australia's overseas aid budget has grown, leading to historically high levels of aid funding for capacity development in the region, particularly in relation to climate (services, adaptation and climate change science).</p> <p>Another challenge is the difficulty of securing technical experts to undertake international projects whilst maintaining adequate staffing for existing domestic programs.</p>	<ul style="list-style-type: none"> <li>• In 2012, two major aid-funded programs commenced – COSPPac and PACCSAP. No <u>additional</u> activity in these areas is envisaged.</li> <li>• Two new AusAID funded initiatives are being delivered in 2013: (i) QMS-certification training for Pacific Islands met services (workshop, plus practical QMS audit exercise in BoM); (ii) WIS implementation training workshop for Pacific Islands met services</li> <li>• Other VCP support to be maintained at current levels (BMTC training courses, VCP(F))</li> </ul>
<b>8. Opportunities for more cooperation with other members / organisations</b>	
<p>Australia currently works closely with regional and national partner organisations, including SPREP, SOPAC and national meteorological services. Australia supports the initiative by SPREP to establish a Pacific Meteorological Desk Partnership at its headquarters in Apia, Samoa, which aims to strengthen institutional arrangements for coordination of meteorological activities in the region and to act as a focal point through which donors, partners and recipients can share information and harmonise their activities.</p>	

<b>CANADA</b>	
<b>2. Overall national contribution in 2012/2013</b>	<b>3. Overall estimated national contribution in 2013/2014 (in USD)</b>
4,397,500 USD	Canada's goal is to maintain the 2012/2013 national contribution.
<b>4. List of Activities / Projects / Events in 2012/2013 related to contribution</b>	<b>5. Source of Funding: Environment Canada (USD)</b>
<b>Project 1: Contributions to WMO Trust Funds to engage scientists and technologists from developing countries</b>	
Support for the WMO Secretariat for the Global Framework for Climate Services (GFCS)	200,000
Aircraft Meteorological Data Relay (AMDAR)	11,500
Executive Council Panel of Experts on Polar Observations, Research and Services (EC-PORS)  To support the implementation of PORS-led activities such as: the Global Cryosphere Watch (GCW), International Polar Initiative (IPI) and the Global Integrated Polar Prediction System (GIPPS).	50,000
Brewer Ozone Spectrophotometer	24,500
The Observing System Research and Predictability Experiment (THORPEX)	45,000 (TBC)
<b>Project 2: Group on Earth Observations (GEO) activities to engage scientists and technologists from developing countries</b>	
Funds to support the GEO Secretariat	88,000
<b>Project 3: Institutional Capacity Development for CNM (Haiti)</b>	
Haiti Weather System Program: Climate Services to Reduce Vulnerability in Haiti (6,500,000 over 5 years)	\$1,200,000 (Notional Figure)
Participation as a member of the Project Board for the "Haiti Weather System Program: Climate Services to Reduce Vulnerability in Haiti" Project	11,500
In-kind support for Canadian forecasters/manager to help Haiti with interim forecast services in Martinique	10,000
	18,000
Maintenance of Haiti National Meteorological	

Services' website	
<b>Project 4: Development of Quality Management Systems for NMHS with emphasis on aviation</b>	
Expert training provided at several workshops for Competency Assessment for Aeronautical Meteorological Personnel: Russia, South Africa & Israel	16,000
Expert training provided for CALMet.	8,000
Document and process development, coaching services, on-site training and audits, as well as follow-up coaching support for the implementation of QMS for developing countries (Bahamas-Curacao). Services provided by casual employee.	47,000
Support from MSC Quality Management Office for QMS implementation in the Bahamas. This included providing strategic approaches and tactical application to QMS implementation and coaching of QMS manager in Bahamas.	10,000
Provision of printed materials (ISO 9001:2008 implementation guides and Memory Joggers) for QMS implementation in the Bahamas.	1,000
<b>Miscellaneous</b>	
To implement GFCS at regional and national scales (6,138,000 over 4 years) <i>**note: explained in further detail under opportunities</i>	1,534,500 (Notional Figure)
ODA portion of WMO assessed contribution (4%)	88,000
Contribution to the IPCC Trust Fund directed toward supporting participants from DC/EIT countries to travel to IPCC meetings	150,000
The InterAmerican Institute for Global Change Research (IAI), which is an organization that supports global change research and capacity building in the Americas. Our contribution supports the operations and staff of the IAI Directorate.	175,000
2013 Canada-China Internship Programme's Orientation Session.	5,000
WMO GAW (Global Atmosphere Watch) Urban Research Meteorology and Environment (GURME) and Megacities program.	20,000
Co-operative program for Operational Meteorological Education and Training (COMET): develop education and training materials and courses.	368,500

Contribution to the World Climate Research Programme (WCRP)	16,000
Contribution to a training workshop in Nov 2012 on climate model analysis, applications and tools and through advancing the development of a weather and climate vigilance approach for the health sector in Niger under the IRIACC-FACE (International Research Initiative on Adaptation to Climate Change-Faire Face aux Changements Ensemble) project.	250,000
Global Integrated Polar Prediction System Trust Fund (GIPPS)	50,000 (TBC)
<b>6. Challenges in Resource Mobilization for your Activities / Projects / Events</b>	<b>7. Opportunities for Increased Activity for your Activities / Projects / Events</b>
<ul style="list-style-type: none"> <li>• Environment Canada does not have a mandate to provide overseas development assistance.</li> <li>• Environment Canada's relationship with the Canadian International Development Agency (CIDA), the federal department that has the mandate to provide overseas development assistance needs to be strengthened.</li> <li>• Due to the need to focus on domestic priorities, experts may have budget and time constraints.</li> <li>• Overall, resource mobilization is constrained by the Government of Canada's focus on deficit reduction.</li> <li>• Amount of time it takes to complete the paperwork and seek approval of grants and contributions.</li> </ul>	<ul style="list-style-type: none"> <li>• Environment Canada is exploring ways to improve our relationship with CIDA. This includes briefing them on capacity development opportunities in the WMO, having the WMO brief them on the files, or having other international development agencies provide background on why they are engaged with the WMO.</li> </ul>
<b>8. Opportunities for more cooperation with other Members / organizations</b>	
<p>Canada continues to advance long term approaches to capacity development;</p> <ul style="list-style-type: none"> <li>• Canada has engaged in a dialogue with the African Center of Meteorological Application for Development (ACMAD), a WMO funded Institute to explore opportunities of collaboration in the areas of risk communications and early notifications systems where there are opportunities to share best practices. ACMAD carries out its mission through capacity-building for the 53 National Meteorological Services (NMSs) of Africa in: weather prediction, climate monitoring (extreme events), transfer of technology (telecommunications, computing and rural communication) and in research.</li> </ul> <p>A Memorandum of Understanding (MOU) with the ACMAD was signed in December 2012 by D. Grimes. The MOU has the objective to create collaboration opportunities to develop and strengthen Climate Services and other related subjects such as the improvement and implementation of early notification systems and warnings applied to hydro-climatic variability and extremes. A proposition for was offered to ACMAD in January 2013 and would allow us to explore mutual expertise and experience in early notifications systems and risk communications in order to build capacity; ex. Gestion Intégrée du Risque Climatique en Afrique (ViGIRisC-Afrique) and MSC Vigilance approach under development.</p>	



- Canada has continued to engage in discussions with the AGRHYMET Regional Centre (a specialized institute of the Permanent Interstate Committee for Drought Control in the Sahel (CILSS) composed of nine member States) to advance the development of climate services. This dialogue follows a long standing relationship where EC contributed to develop a framework to analyze the vulnerabilities of the populations exposed to a changing climate (2002-2010).
- Canada has contributed 6.138 million over three years to implement the GFCS in four targeted regions (Arctic, Caribbean, South Asia including the 3<sup>rd</sup> Pole and South West Pacific) to increase capacity within social, economic and environmental systems to understand, anticipate, prepare for and cope with the negative impacts of natural hazards, to increase the resilience of the target regions to climate variability and change and to better enable decision makers to routinely use climate information and services for operations and planning purposes.

There will be opportunities for further cooperation in identifying how best to deploy these funds to advance the GFCS and improve climate services and frameworks in the four regions. In addition, outcomes of this initiative are expected to improve Global Action on Integrated Drought Management and support the World Weather Open Science Conference.

## Summary of China's Contribution Through WMO VCP Programme and Bilateral Arrangements in 2012

Items	Description of Projects	Amount (USD)
A	1 <sup>st</sup> China Study Trip and WMO Workshop on Human Resources Development for M&E in Developing Countries on 12 to 18 May 2012, for FAO English Speaking Region (A)	83070
	2 <sup>nd</sup> China Study Trip and WMO Workshop on Human Resources Development for M&E in Developing Countries on 7 to 17 August 2012 for FAO French Speaking Region (A)	12482
B	1 <sup>st</sup> National Training Seminar on Methods for Short-term Climate Prediction (Nanjing, 20 March to 7 April 2012)	6111
	1 <sup>st</sup> International Training Course of Agro-meteorology (Nanjing, 10 to 22 May 2012)	19322
	International Training Course on Rural Meteorology (Nanjing, 11 to 22 June 2012)	5391
	Training Course on Climate Change and Climate Information Service for Developing Countries (Nanjing, 28 August to 12 September 2012)	1402
	International Training Course on Weather Forecast (Nanjing, 17 to 29 September 2012)	2371
	Training Course on Meteorological Hazards Early Warning (Qinghai, 12 October to 1 November 2012)	11787
	Training Seminar on Meteorological Hazards and its Application in Disaster Prevention, Mitigation and Emergency Response (Tianjin, 2 to 22 November 2012)	17887
	Training Seminar on Meteorological Risk Management and Disaster Mitigation (Nanjing, 2 to 22 November 2012)	17021
	Annual International Training Course on the Use of Remote Sensing Application to Surface Meteorology (Beijing, 11 to 21 June 2012)	34921
	International Training Course on Forecasting Weather (Nanjing, 3 to 14 September 2012)	4361
	International Training Course on Regional People Monitoring and Forecasting and Climate Change Adaptation (Nanjing, 17 to 27 September 2012)	6689
	International Training Course on Application of Meteorological Satellite Data and Services in Weather Forecast and Urban Warning (Nanjing, 29 October to 2 November 2012)	60599
	Annual support to the WMO/ICM on Long Term Sociological studies	200992
	Pre-job training for New Weather Forecasters for the African continent (Nanjing, August to November 2012)	88758
	C	Donation of one automatic weather station and one automatic rain gauge to the Department of Meteorology and Hydrology of the People's Democratic Republic of Congo, including installation and on-site training
Donation of one automatic weather station to the State Hydrometeorological Administration of the People's Democratic Republic of Congo, including installation and on-site training		93129

Item	Description of Projects	Total cost (USD)
6	VCPB) VOP 0-2010-08 Travel Fund, WAO Travel Fund, WAO Travel Fund and TRAVEL Fund	11000
	Total	11000

In 2012, a total number of 282 foreign guests participated in the short-term training course organized by WAO Regional Training Center in Hanoi and Beijing. There were 63 WAO/China joint scholarship students staying in China.

**Annex 2:****Expected Contributions of China  
to the WMO VCP in 2013****(a) Study Tour**

- 1. 43<sup>rd</sup> China Study Tour will be organized for PFA or senior officials mainly from the NHHSs of Small Island Developing States and other developing countries in July/August 2013

**(b) Training and Fellowships**

1. International Training Seminar on Methods for Studying Climate Prediction (RTC-Nanjing, 1 to 10 April 2013)
2. Training Course on Climate Change and Climate Information Service (RTC-Nanjing, 26 April to 18 May 2013)
3. Training Course on Radar Meteorology (RTC-Nanjing, 17 May to 8 June 2013)
4. Training Seminar on Management for Meteorological Officials from Developing Countries (RTC-Nanjing, 11 June to 1 July 2013)
5. International Training Course on Meteorological Instruments (RTC-Beijing, 12 to 26 September 2013)
6. International Training Course on Tropical Cyclone Forecast (RTC-Beijing, 14 to 26 October 2013)
7. International Training Course on Agrometeorology (RTC-Nanjing, 28 October to 8 November 2013)
8. International Training Course on Agricultural Meteorology Service (Beijing Component of RTC-Nanjing, 9 to 16 April 2013)
9. International Training Course on Nowcasting (Beijing Component of RTC-Nanjing, 7 to 17 May 2013)
10. International Training Course on Satellite Meteorology (Beijing Component of RTC-Nanjing, September 2013)
11. International Training Course on Climate Prediction and Drought Monitoring and Early Warning (Beijing Component of RTC-Nanjing, October 2013)

A long-term Post Doctor scholarship will be offered to Pakistan Meteorological Department under bilateral agreement.

Provision of long-term scholarships will continue under the MoU between the Ministry of Education of China and WMO and MoU between RTC-Nanjing and YMO.

Support for graduated WMO scholarship students from RTC-Nanjing to participate

In the Pre-job Training Course for New Weather Forecasters organized by OCHA Training Centre (Beijing Component of RTC-Harjing) from August to November 2018, in consultation with their PRs and WHO Secretariat.

**(c) Donation of Instruments and Equipment**

1. Donation of an Integrated OHAQast and MDCAP® system to Iran Meteorological Organization.
2. Donation of a weather radio to Guinean Meteorological Department
3. Installation of MDCAP® systems in the NHHSs of Togo and Côte d'Ivoire

**(d) Donation of fund**

1. CHF160,500 to GFCS INM Fund
2. USD10,000 to IPCO Trust Fund
3. USD10,000 to WHO Trust Fund for Voluntary Cooperation Program
4. USD12,000 to WHO THORPEX Fund
5. USD6,000 in WHO WFA Trust Fund

<b>FINLAND</b>	
<b>2. Overall national contribution in 2012 (estimate in USD)</b>	<b>3. Overall estimated national contribution in 2013 (in USD)</b>
\$2,123,675 (EUR 1,610,315)	\$ 2,800,000
<b>4. List of Activities / Projects / Events in 2012 related to contribution</b>	<b>5. Sources of Funding</b>
<b>Peru</b> , Aug 2009 – Apr 2012, Capacity Development to support modernization of the NMHS of Peru, total 500k€	Ministry for Foreign Affairs of Finland
<b>Nepal</b> , Feb 2010 – Dec 2012, Capacity Development to support modernization of observation networks and management of NMHS, total 500k€	Ministry for Foreign Affairs of Finland
<b>Kosovo</b> , Oct 2010 – Oct 2012, Air Quality monitoring	EU
<b>Central Asia</b> , Aug 2011 – Dec 2013, Regional cooperation through capacity development at the WMO RTC Tashkent, total 500k€	Ministry for Foreign Affairs of Finland
<b>Hindu Kush-Himalaya</b> , May 2012 – Jun 2013, Technical Assistance in quality management for the regional flood information project HKH-HY COS	ICIMOD
<b>Caribbean SIDS</b> , Jan 2011 – Dec 2012, Regional DRR planning and development & QMS with ACS, total 500k€	Ministry for Foreign Affairs of Finland
<b>Vietnam</b> , May 2010 – Dec 2012, Observation network, weather radar products and modernization of the NMHS, 500k€	Ministry for Foreign Affairs of Finland
<b>FYROM (Macedonia)</b> , Aug 2010 – Aug 2012, Air Quality monitoring network and legislation, total 2M€	EU
<b>Colombia</b> , Feb 2012 – Dec 2013, Observation network, weather radar products and modernization of the NMHS, 250k€	Ministry for Foreign Affairs of Finland
<b>Ecuador</b> , Feb 2012 – Dec 2013, Observation network, weather radar products and modernization of the NMHS, 250k€	Ministry for Foreign Affairs of Finland
<b>Pakistan</b> , Jun 2011 – Dec 2012, Restoration of 10 AWSs according to <b>VCP request</b> , 200k€	Ministry for Foreign Affairs of Finland
<b>Central Asia</b> , May 2011 – May 2012, GCOM downscaling for decision making in the water sector in Central Asia, total 40k€	Asian Development Bank
<b>Western Balkans</b> , Jun 2012 – May 2014, Project Management for EU DRR project with WMO/UNISDR, 180k€	EU
<b>Sudan</b> , Jul 2011 – Dec 2013, Institutional capacity development in Khartoum and Juba, establishment of Juba	Ministry for Foreign Affairs of

meteorological office, total 500k€	Finland
<b>6. Challenges in Resource Mobilization for your Activities / Projects / Events</b>	<b>7. Opportunities for Increased Activity for your Activities / Projects / Events</b>
<p>Support for the development activities in the weather, climate and water services sector remains strong despite the ongoing reduction of embassies and resources at the MFA Finland. Focus in 2012 has shifted to regional multilateral project with regional organizations such as ACS, SPREP and CIIFEN. The role of FMI in these projects is shifting from direct project implementing agency towards a technical assistance role where the regional partner takes overall responsibility.</p> <p>Cooperation with the Red Cross and the Red Cross Climate Centre has increased dramatically in 2012 and is expected to grow especially in Africa and the Pacific. The Red Cross has taken a keen interest in hydrometeorological services as a way to improve climate resilience of the end users and their own operations. Cooperation with the World Bank has increased and is expected to grow in 2013.</p>	<p>New funding opportunities lie with the World Bank and other global/regional funding mechanisms. The current level of MFA funding for our sector is at the maximum possible in the near future and we do not expect to grow further until next elections are held.</p>
<b>8. Opportunities for more cooperation with other members / organisations</b>	
<p>New initiatives in the Pacific, Caribbean, Andean region, Western Balkans, Central Asia and the Mekong river call for even greater coordination with other members. Especially the Andean region projects will benefit from improved cooperation with Switzerland and Spain. Cooperation with France, UK, USA, Australia and New Zealand are crucial for the success of the project in the Pacific.</p> <p>Finland remains committed to the Junior Professional Officer (JPO) programme and will fund a new JPO at the GFDRR department at the World Bank where Ms Lisa Haga from FMI will be appointed to work with the NMHSs for two years starting in Spring 2013. A new JPO will also be funded for WMO to replace Ms Salla Himberg who has returned to Finland and is currently employed by the Finnish Red Cross.</p> <p>FMI is also looking more into scientific work in development cooperation in weather, climate and water. FMI currently has two development research projects in implementation with funding from the Academy of Finland, one in Peru and the other in Malawi &amp; Zambia. Both project aim to provide research insight into improving early warning information from climate and severe weather events. A third proposal for Kenya for seasonal climate models is currently in appraisal.</p>	

FRANCE	
<b>2. Overall national contribution in 2012 (estimate in USD)</b>	<b>3. Overall estimated national contribution in 2013 (in USD)</b>
2,086,000USD (1,600,000 €)	Unknown
<b>4. List of Activities / Projects / Events in 2012 related to contribution</b>	<b>5. Sources of Funding</b>
<p><b>Equipment upgrade at Madagascar:</b>  Upgrade of CLYSIS Climate Data Management System installed in Madagascar since 2004:</p> <ul style="list-style-type: none"> <li>- Data rescue from the old hardware server in Toulouse</li> <li>- Delivery of a new hardware server and installation of a new version of Cylsis by MFI in November 2012</li> <li>- 10-day training on the use of the new system, carried out in Madagascar by 2 experts from the Météo-France Department of Climatology in November 2012.</li> </ul> <p>Cost for Météo-France:45 k€</p>	Météo-France/MFI/WMO
<p><b>Equipment upgrade for the countries of the Indian Ocean Commission:</b>  Upgrade of the meteorological telecommunication and forecasting systems in Madagascar, Mauritius, Seychelles and Comoros. Hardware delivery in 2012.</p> <p>Cost (266 k€) declared in 2011 contribution</p>	French Ministry of Foreign Affairs
<p><b>Support to the ACMAD Centre</b></p> <ul style="list-style-type: none"> <li>- Support to the executive management including the funding of a Technical Assistant and a contribution to the operating Budget</li> <li>- installation of a SYNERGIE forecasting workstation</li> </ul> <p>Cost for Ministry of Foreign Affairs: 160 k€  Cost for Météo-France: 20 k€</p>	French Ministry of Foreign Affairs/ Météo-France
<p><b>Training of Haitian meteorological Technicians</b>  In 2012, 7 Haitian forecasters worked on a roster basis with Météo-France forecasters in La Martinique in order to maintain their forecasting skills until the CNM infrastructure is rebuilt. The arrangements for the work of the 7 forecasters in La Martinique from January to June 2012 were funded by France during the first semester and by Canada during the second semester. Météo-France provided accommodation for the whole year.</p> <p>Cost: 21 k€</p>	French Ministry of Foreign Affairs
<p><b>SWIOCOF</b> (within ACClimate project)  1<sup>st</sup> South West Indian Ocean Climate Outlook forum held in La Réunion from 24 September to 2 October 2012. Main objectives:</p> <ul style="list-style-type: none"> <li>- capacity building of the climatologists in the region</li> <li>- dialogue between the users and providers of seasonal forecasts</li> </ul> <p>Cost for Météo-France: 60 k€  Cost for FFEM: 20k€</p>	Météo-France /FFEM/WMO



<p><b>ViGIRisc</b>  Support to the implementation of Early Warning Systems against climatic hazards in African countries:  - 5 studies have been submitted in summer 2012  - identification of demonstration projects based upon these studies  ViGIRisc will be extended for 1 year. 3 new projects related to: a) storm surge in coastal area in central Africa, b) food security in eastern Africa and c) Extreme or high impact events in western Africa should be launched.</p> <p>Cost: 650 000 € (FFEM) + 150 000 € (Ministry of Foreign Affairs)</p>	<p>FFEM/ French Ministry of Foreign Affairs</p>
<p><b>Training in Vanuatu, Solomon, Samoa on aeronautical meteorology:</b>  Audits and training events on quality management systems</p> <p>Cost for Météo-France: 9 k€</p>	<p>WMO/Météo-France</p>
<p><b>Experts Service and Fellowships through bilateral cooperation</b>  - several training seminars at the Ecole Nationale de la Meteorology (ex: satellite meteorology, climate services, ...) and the Centre Nationale de Recherche Météorologique (CNRM)  - training on now casting in Moroccan NMS  - training on commercial activities in Moroccan NMS</p> <p><b>Highlights on a training course: “Climatology, a step towards climate services”</b>  This 2-week training session aims to update the knowledge to carry out various operational tasks of a national climate office in a context of climate change. The topics covered in this course follow the guidelines of the WMO with a focus on climate data management (acquisition, control, generation).</p> <p>Cost for Météo-France/French Embassies: 465 k€</p>	<p>Météo-France/WMO/French Embassies</p>
<p><b>6. Challenges in Resource Mobilization for your Activities / Projects / Events</b></p>	<p><b>7. Opportunities for Increased Activity for your Activities / Projects / Events</b></p>
<p>General budgetary reductions will impact the level of investment of France in WMO VCP.</p> <p>The Green climate Fund is affected by global economic crisis.</p>	<p>SHERPA project in the Caribbean region</p>
<p><b>8. Opportunities for more cooperation with other members / organisations</b></p>	
<p>1/ The 1<sup>st</sup> SWIOCOF has reached all its objectives. It offers the following perspectives:  - implementation of models designed to respond to specific needs from the health, agriculture or DRR sectors. Contacts have been made with ARS, CIRAD, TEREOS, Red Cross, EDF)  - possible implantation of a project funded by the European Union and Région Réunion (~10M€) to support the COF, implement a portal for climate services within COI and strengthen the means of meteorological services in the region  - contribution to implement the GFCS in the region</p>	

2/ Implementation of Severe Weather Forecast Demonstration Projects in la Réunion, French West Indies and New Caledonia: NWS from neighbour countries can access, through dedicated websites, to products related to tropical cyclone, intense rainfall and strong wind forecast.

3/ COF in eastern Europe, Africa and Asia in 2013.

## GERMANY

<b>1. Country</b>	
Germany	
<b>2. Overall national contribution in 2012 (estimate in USD)</b>	
Total: 3,353,500 \$	
Equip&Services through WMO: 38,700 \$	
Equip&Services bilat: 2,799,960 \$	
Fellowships & Training: 514,840 \$	
<b>3. Overall estimated national contribution in 2013 (in USD)</b>	
[unknown]	
<b>4. List of Activities / Projects / Events in 2012 related to contribution</b>	
<b>5. Sources of Funding (*)</b>	
In order to support NMHSs of developing countries in the introduction of regional numerical weather prediction, the DWD carried out once again a two-week Regional <b>NWP</b> Training Workshop in July 2012. The DWD supported 23 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. [ongoing] 121,000 \$	DWD
Establishment of an additional <b>academic post</b> at DWD [2011-2013] for providing technical assistance to NMHSs (especially in developing countries) in the field of regional numerical weather prediction. 63,000 \$	DWD
For all seminars held at the DWD Meteorological Training and Conference Centre or at the DWD headquarters, <b>accommodation expenses</b> are reduced for participants from developing countries and countries with economies in transition. [ongoing]. 40,000 \$	DWD
DWD continued to offer <b>training programmes/fellowships at DWD</b> offices or abroad for staff members of NMHSs of developing countries. [ongoing].	DWD
Provision of <b>Hg barometers</b> to Latin American and Caribbean NMHSs	DWD (with WMO)
<b>Project „Data and Information Management for Adaptation to Climate Change” (DATACLIM) [2011 – 2013]</b> Objective: To significantly improve the climate services of the Indonesian NMS BMKG in the field of adaptation to climate change through the introduction of a web-based information system: <ul style="list-style-type: none"> <li>• Recovery and digitalization of historical climate data and establishing of a metadata system for the management of meteorological stations</li> <li>• Establishment of IT-based data workflows for historical and real time data input including a helpdesk</li> <li>• Establishment of a web-based climate information system for adaptation planning</li> <li>• Capacity development for climate analysis. 982,000 \$</li> </ul>	DWD/GIZ (BMU)
<b>GIZ project "Adaptation of agriculture and agricultural water use to climate change in the Andes":</b> The project was part of the International Leadership Training (ILT) programme of the GIZ. From May to December, eleven scientists from Bolivia, Colombia, Ecuador and Peru received theoretical and practical training at the DWD particularly in the area of Agrometeorology [2012]	DWD / GIZ (BMZ)

<p>Germany continued to support the <b>WMO RA VI Regional Dobson Calibration</b> Centre at Hohenpeißenberg. Germany contributed to the continuous quality assurance program of the WMO by supporting the <b>GAWTEC</b> (Global Atmosphere Watch Training and Education Centre), [ongoing]. Two courses were financed during 2012 to provide technical assistance and training to station personnel and central facilities. (Most trainees came from countries in the WMO regions Africa, Asia and South America.) 146,000 \$</p>	<p>DWD</p> <p>BMU / DWD / StMUG</p>
<p><b>Project SASSCAL:</b> The DWD was involved in the preparation of the German Initiative SASSCAL (“Southern African Science Service Centre for Climate Change and Adaptive Land Management”). SASSCAL is a joint initiative of Angola, Botswana, Namibia, South Africa, Zambia and Germany in response to the challenges of global change. The aim of SASSCAL is to conduct problem-oriented research in the area of adaptation to climate change and sustainable land management and provide evidence-based advice for all decision-makers and stakeholders to improve the livelihoods of people in the region and to contribute to the creation of an African knowledge-based society.[2012 - 2016]</p>	<p>DWD / BMBF</p>
<p><b>Trilateral Cooperation Programme Brazil-Mozambique-Germany [2011-2012]</b></p> <p>Implementation of an automated early warning system for disaster risk reduction in the Búzi and Save River Basins.</p> <p>Important partners of the project: the German Meteorological Service (DWD), the Mozambican National Institute for Meteorology (INAM) and the Brazilian Institute for Meteorology (INMET)</p> <p>Support to INAM for improvement of hydro-meteorological services (regional weather forecasts for early warning and agriculture, wave and storm forecasts for coastal regions);</p> <p>In 18 workshops, technical staff members from INAM and other institutes were trained in the collection, processing and use of new data sources as well as in the installation and maintenance of the equipment.</p> <p>Installation of 5 additional climate stations in Central Mozambique with the assistance of Cologne University for Applied Sciences, reaching a total of 13 stations at the end of 2012 (8 stations had been installed in 2011).</p> <p>Simultaneous setting up of data server and telemetric systems for the climate stations (at present, data are measured fully automatically every 10 min.).</p> <p>Calibration of the systems on the advice of Cologne University for Applied Sciences. First models were developed on the basis of automatic data collection in order to compare the results of new data sources with manually collected data. 735,000 \$</p> <p>Germany also supported the next phase of the establishment of a simple flood warning system for the rivers Rio Save and Búzi in Mozambique; in 2012, the system was handed over to local government authorities. (National ownership.)</p> <p>Construction of a simple flood warning system for the city of Beira, Mozambique: "Early Warning in Urban Areas". 258,000 \$</p>	<p>GIZ (BMZ) / Cologne Uni. of Applied Sciences / DWD</p> <p>Munich Re foundation</p>
<p><b>KfW project Ecuador:</b> The Program includes a component for the establishment of hydrological and meteorological stations in the province. In the field of data recording and periodical evaluation the Provincial Government cooperates with the national meteorological institute (INAMH). 323,000 \$</p>	<p>KfW</p>
<p><b>GIZ project Uganda:</b> Collaboration with the Department of Meteorology - Ministry of Water and Environment (UNMA) in the field of adaptation to climate change and improvement of monitoring systems. 129,000 \$</p>	<p>GIZ / BMZ</p>
<p><b>CAWa Project [2008-2013]:</b> “Research Network Water in Central Asia (CAWa)”. Two training courses on “Use of Remote Sensing Techniques in Hydrometeorology” and “Use of GIS Techniques in Natural Resources Management” for specialists of Central Asian NMHSs and Afghan institutions. Three additional automated hydrometeorological monitoring stations have</p>	

<p>been installed in Tajikistan (Dupuli and Ayvaj) and Uzbekistan (Maidanak) as part of the regional hydrometeorological monitoring network. At the end of 2012, a total of 9 stations were in operation as part of the CAWa monitoring network and provide standard meteorological data.</p>	<p>GFZ (AA)</p> <p>213,000 \$</p>
<p><b>6. Challenges in Resource Mobilization for your Activities / Projects / Events</b></p>	<p><b>7. Opportunities for Increased Activity for your Activities / Projects / Events</b></p>
<ul style="list-style-type: none"> <li>- Closer collaboration of DWD with GIZ as a development cooperation organization of the Federal Republic of Germany; use of mutual benefits, common projects in several countries.</li> <li>- Implementation of activities and projects through several organisations; communication between national donor organisations in need of improvement.</li> <li>- Lack of human resources in donor NMHS makes technical cooperation activities such as expert assignments in developing countries more and more difficult.</li> <li>- Lack of awareness by some national donors of the importance of strengthening the capacity of NMHSs in developing countries to provide the necessary weather and climate services in their country. Lack of understanding of the necessity of an efficient meteorological infrastructure for successful implementation of service provision projects.</li> <li>- Project proposals must receive sufficient support from the recipient side (NMHS, government).</li> </ul>	<p>In general, there are opportunities for increased activity through making use of the increased investments in climate change-related projects by combining them with cooperation projects for the NMHS of developing countries.</p> <p>Concretely, closer collaboration of DWD with GIZ as a development cooperation organization of the Federal Republic of Germany; use of mutual benefits, common projects in several countries.</p> <p>→ <i>DWD and GIZ intend to continue their collaboration with BMKG Indonesia - Establishment of a climate information system.</i></p> <p>→ <i>DWD and GIZ plan to support the Modernization Project (MoMet) of the NMS Mexico SMN with their expertise and training (in NWP and use of climate information for adaptation/climate services).</i></p> <p><b>Activities in 2013 will mostly cover the same areas and involve the same amounts as in 2012, <u>increased activity is possible in the following areas:</u></b></p> <ul style="list-style-type: none"> <li>- SASSCAL: During the first tranche of funding of BMBF in 2013, DWD will support the NMHSs in their climate data management activities and climate data rescue. Additional capacity development activities have been proposed (climate monitoring products and capacity building in the application of satellite products).</li> <li>- Zambia: [2013 – 2017] Climate Monitoring and Early Warning System for Weather-related Disasters: German Development Cooperation has been requested by the Government of Zambia to support the establishment of an Integrated Water Resources Management Information System (IWRMIS). Funds will come from the German Energy and Climate fund (BMU and BMZ). Measures: modernization and extension of rain gauging network to around 500 stations, data transmission facilities at meteorological stations, training, digitalization and quality control of historical met. data (ZMD is involved).</li> </ul>
<p><b>8. Opportunities for more cooperation with other members / organizations</b></p>	

- With other members: identification of similar activities in one area by exchange of information and analysis of the Activity reports (e.g. evaluation of the Activity report templates by supported country). Establishment of contacts with stakeholders in order to take advantage of synergies.
- With other organizations: regular national round table discussions with several donor institutions to identify projects and activities and discuss possible cooperation.

## HONG KONG, CHINA

<b>1. Country</b>	
Hong Kong, China	
<b>2. Overall national contribution in 2012 (estimate in USD)</b>	
30,800.00 USD	
<b>3. Overall estimated national contribution in 2013 (in USD)</b>	
30,000.00 USD	
<b>4. List of Activities / Projects / Events in 2012 related to contribution</b>	
(I) Training Workshop on the Latest Developments on the Use and Interpretation of Numerical Weather Prediction (NWP) Models, 3-7 December 2012, as part of the RA II pilot project to develop support for NMHSs in numerical weather prediction.	<b>5. Sources of Funding</b> Government of Hong Kong Special Administrative Region (HKSA RG)
(II) Assisted in preparing guidelines on participation of NMHSs in the World Weather Information Service (WWIS).	
(III) Proposed three pilot projects for RAII to : (a) Develop Support for NMHSs in the Collection and Application of Aircraft Meteorological Data Relay (AMDAR) Data; (b) Sustain and Enhance the Capacity of NMHSs in the Provision of Official Weather Forecasts for the Medium Range; and (c) Enhance the Seamless Provision of Regional Severe Weather Warnings and Advisories.	
<b>6. Challenges in Resource Mobilization for your Activities / Projects / Events</b>	
<b>7. Opportunities for Increased Activity for your Activities / Projects / Events</b>	

Hong Kong, China will continue its contribution to VCP. We welcome collaboration with the Resource Mobilization Office of WMO to seek additional funding for assisting members in participating in the pilot projects, if required, including the VCP courses on the Design and Operation of Meteorological Warning Systems, Automated Weather Station Network and Marine Services in the next few years.

Hong Kong, China will continue to take forward pilot projects and relevant training/workshops to assist developing countries.

**8. Opportunities for more cooperation with other members / organisations**

Hong Kong, China welcomes greater participation of other members in the pilot projects, WWIS and Severe Weather Information Centre (SWIC) to develop the capacity of members in need in the provision of public weather services.



Annex I

2012

No	Events	Date	Place	Form of support
1.	International Training Course on Satellite and Radar Data Interpretation (ASEAN), cooperation between BMKG and Eumetsat	21-25 May 2012	Regional Training Center, Citeko	<ul style="list-style-type: none"> <li>- RAV Participants Travel Cost (Timor Leste and Phillipine) : ~ US\$2400</li> <li>- Other costs for holding the training: US\$ 37640</li> </ul>
2.	Seventh Tropical Cyclone RSMC/TCWC Technical Coordination Meeting	12-16 November 2012	Regional Training Center, Citeko	Total cost to hold the meeting: US\$ 30905

2013

No	Events	Date	Place	Form of support
1.	WMO Regional Seminar Training for National Trainers of RA II and RA V	26 February 2012 – 7 March 2013	Regional Training Center, Citeko	<ul style="list-style-type: none"> <li>- Travel Cost for participants from RA-V (Fiji, Solomon, Cook Island, and Philippines): US\$ 2640</li> <li>- Other costs to support the holding of the meeting: US\$ 61811</li> </ul>
2.	Workshop International Expert on Volcanic Ash Modeling	11-15 March 2013	Regional Training Center, Citeko	Total cost to hold the meeting: US\$ 103018

## JAPAN

### 1. Overall Japan's Contribution

In 2012, through the Japan Trust Fund for Global Frameworks established in 2010 as Japan's financial contribution to a broad range of WMO programmes and projects, Japan made a cash contribution of US\$ 280,832 (after deducting 10% as WMO support cost), including US\$50,000 to the VCP (F). Also, Japan provided training courses/workshops and fellowships equivalent to US\$ 284,440 and several types of in-kind support by a Japanese manufacturer during the year. In addition, Japan's bilateral ODA projects for National Meteorological and Hydrological Services (NMHSs) of developing countries were implemented, mainly in Southeast Asia and Pacific islands.

### 2. Training Issues

#### 2.1 Organization of Training Courses/Workshops

- In March 2012, the Japan Meteorological Agency (JMA) hosted *the 4th GRUAN Implementation and Coordination Meeting (ICM-4)*, and *the third Meeting of the Regional Steering Group of WMO SDS-WAS Region for Asia*.
- Also in March 2012, JMA hosted a training course *Seminar on Meteorological Services for Disaster-prevention and Crisis-management Operations after the Great East Japan Earthquake on March 2011* with funding support from the Japan International Cooperation Agency (JICA). The training course aimed at sharing lessons learnt from JMA's emergency response to the Great East Japan Earthquake in 2011, highlighting the importance of multi-hazard risk management. Senior staff members from NMHSs of 11 countries (Bangladesh; Cambodia; Fiji; Indonesia; Lao P.D.R.; Malaysia; Myanmar; Sri Lanka; Thailand; the Philippines and Vietnam) participated in this course.
- In July 2012, on-the-job training for typhoon forecasters, funded by the Typhoon Committee (TC), was offered to two forecasters from the Philippines and Vietnam at RSMC Tokyo - Typhoon Centre.
- From September to December 2012, JMA conducted a three-month Group Training Course *Reinforcement of Meteorological Services* with funding support from JICA. The course was attended by eight participants from seven countries (Fiji, Lao P.D.R.; Myanmar; Republic of Ghana; Republic of Mauritius; Republic of Zimbabwe; Sri Lanka and Tonga). This course aimed at reinforcement of meteorological services of the participating NMHSs by applying meteorological data/products such as numerical weather prediction, satellite images, and climate information to their services.
- In October 2012, *JMA Workshop on WMO Information System (WIS) Implementation* was organized by the Global Information System Centre (GISC) Tokyo operated by JMA at JMA Headquarters in Tokyo for effective implementation of WIS through capacity development of NMHSs of developing countries. It was attended by 16 participants from eight NMHSs in Bangladesh, Cambodia, Laos, Myanmar, the Philippines, Sri Lanka, Thailand and Viet Nam.
- In November 2012, *JMA Tokyo Climate Centre (TCC) Training Seminar on Climate Analysis Information* was held by Tokyo Climate Centre to improve skills in climate system monitoring and to prepare climate analysis information on extreme climate events. It was attended by 13 participants from 13 Members (Bangladesh; Cambodia; Hong Kong, China; Indonesia; Lao P.D.R.; Malaysia; Mongolia; Myanmar; Pakistan; the Philippines; Sri Lanka; Thailand and Viet Nam).
- Also in November 2012, JMA held a training course for two experts from Thailand Meteorological Department as part of the activities of the project, Development of Regional Radar Network endorsed during the 44th TC session in November 2011.

- In November 2012, Regional Instrument Centre (RIC) Tsukuba operated by JMA conducted a comparison study and calibration of BMKG standard equipments.

## 2.2 Fellowship

In 2012, Kyoto University offered WMO short-term fellowship opportunities to two staff members from the Department of Meteorology and Hydrology, Myanmar, and the Tanzania Meteorological Agency, as part of the Kyoto University's Global Centres of Excellence (GCOE) programme on *Sustainability/Survivability Science for a Resilient Society Adaptable to Extreme Weather Conditions*. It provided the two participating fellows with coursework trainings as well as intensive research opportunities under the supervision of the GCOE faculty of Kyoto University from July 2012 to January 2013.

## 2.3 Expert Missions

In 2012, JMA organized the following expert missions to NMHSs of developing countries for technology transfer and/or capacity development.

- Expert mission to Vietnam to give lectures on Interactive Tool for Analysis of the Climate System (ITACS) for climate services in March 2012, and NWP techniques and typhoon analysis using a software SATAID in June 2012.
- Expert mission to Lao P.D.R. to give lectures on typhoon analysis using SATAID and ITACS for climate services in March 2012.

## 3. Japan's Official Development Assistance (ODA)

### 3.1 Grant Aid Projects

- Grant Aid Project (total: US\$29 million) was launched in November 2009 in the Philippines for the improvement of the meteorological radar system. Three radar systems at Vlrac, Aparri and Guiuan and data satellite communication system are being installed under this project.
- Grant Aid Project (total: US\$25 million) was launched in 2011 in Vietnam for the enhancement of flood forecasting skills and thus strengthening disaster prevention measures implemented by the Government of Vietnam. The project provides Vietnam with two Doppler radars and other meteorological equipments in the northern part of the country.

### 3.2 Technical Cooperation Projects

- Technical Cooperation Project in Bangladesh on development of human capacity on operation of weather analysis and forecasting was launched in 2009 as follow-up activities to the Grant Aid Projects for the improvement of the meteorological radar system. In 2012, as part of this project, Bangladesh Meteorological Department (BMD) experts visited JMA including RIC Tsukuba and the Meteorological Research Institute.
- Technical Cooperation Project titled *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.
- Technical Cooperation Project was implemented at the Department of Meteorology and Hydrology in Myanmar from 2009 to 2012 for developing early warning systems for Cyclone Nargis affected areas. Under this project, two technical missions by JMA experts were conducted in January and March 2011, to enhance its capacity for disseminating cyclone advisories and warnings as well as storm surge and wave forecasting.

- Technical Cooperation Project for Meteorology Training for Fiji and neighboring countries was launched in 2009. In August 2012, a training course on meteorological instrument maintenance and calibration was conducted in Fiji by JICA and a JMA expert from RIC Tsukuba.

#### 4. Contributions of Private Sector

In January 2012, the WMO VCP expert mission, consisting of experts from Oriental Electronics, Inc. Japan, NHK (Japan Broadcasting Corporation) and JMA, to Bangladesh was carried out to assess the current status of meteorological services in Bangladesh and to make recommendations for BMD to strengthen its capacity for accessing data and products via GTS, weather analysis including use of tool software such as SATAID, and TV weather program production and presentation.

#### 5. Plans for 2013

In 2013, in addition to the direct financial contribution to WMO activities through the Japan Trust Fund for Global Frameworks, JMA will make contribution to capacity developments of developing countries' NMHSs, through organizing trainings/workshops and expert missions including JMA/WMO training workshop on calibration and maintenance of meteorological instruments in RA II held in February 2013, as well as the Group Training Course *Reinforcement of Meteorological Services* in cooperation with JICA to be held from September to December 2013. Several expert missions to investigate feasibility and/or to develop Japan's ODA (Grant Aid or Technical Cooperation) Projects for developing countries' NMHSs are being planned or planned to be implemented not only in Southeast/South Asia and Pacific islands, but also in Africa. The second JICA-JMA-WMO meeting (the first one was held in March 2012) was held to share relevant information and exchange views at the working level for the enhancement of synergies between Japan's ODA projects and WMO activities.

<b>1. Country</b>		
Japan		
<b>2. Overall national contribution in 2012 (estimate in US\$)</b>		<b>3. Overall estimated national contribution in 2012 (in US\$)</b>
VCP(F)	<b>US\$ 50,000</b>	Unknown
VCP(ES)	<b>US\$ 524,472</b>	
VCP(ES)	Bilateral arrangement <b>unknown</b>	
<b>4. List of Activities / Projects / Events in 2012 related to contribution</b>		<b>5. Sources of Funding</b>
Voluntary Cooperation Program Fund	<b>CHF 50,000 (US\$ 50,000)</b>	Japan Trust Fund for Global Frameworks
RA II Activities(e.g. Technical Conference)	<b>CHF 30,000 (US\$ 30,000)</b>	Japan Trust Fund for Global Frameworks
The third session of South Asia Climate Outlook Forum (SASCOF-3)	<b>CHF 10,000 (US\$ 10,000)</b>	Japan Trust Fund for Global Frameworks
RSMC meeting and training activities for SWFDP in South-east Asia	<b>CHF 20,000 (US\$ 20,000)</b>	Japan Trust Fund for Global Frameworks
WMO ESCAP Typhoon Committee Trust Fund		Japan Trust Fund for Global

<b>US\$ 12,000</b>	Frameworks
GCOS Cooperation Mechanism <b>CHF 150,000 (US\$ 150,000)</b>	Japan Trust Fund for Global Frameworks
Emergency Assistance Fund <b>CHF 8,832 (US\$ 8,832)</b>	Japan Trust Fund for Global Frameworks
Group Training Course: Reinforcement of Meteorological Services (Fiji, Lao P.D.R.; Myanmar; Republic of Ghana; Republic of Mauritius; Republic of Zimbabwe; Sri Lanka and Tonga), Tokyo, Japan, September to December 2012 <b>JPY 10,554,000 (US\$ 105,540)</b>	JICA
A training course on lessons learnt from JMA's emergency response to the Great East Japan Earthquake in 2011 (Bangladesh; Cambodia; Fiji; Indonesia; Lao P.D.R.; Malaysia; Myanmar; Sri Lanka; Thailand; the Philippines and Vietnam), Sendai and Tokyo, Japan, March 2012 <b>JPY 3,848,000 (US\$ 38,480)</b>	JICA
On-the-job training for typhoon forecasters, 2 weeks, (Vietnam and the Philippines), Tokyo, Japan, July 2012	World Meteorological Organization
JMA Tokyo Climate Centre (TCC) Training Seminar on Climate Analysis Information (Bangladesh; Cambodia; Hong Kong, China; Indonesia; Lao P.D.R. ; Malaysia; Mongolia; Myanmar; Pakistan; the Philippines; Sri Lanka; Thailand and Viet Nam), Tokyo, Japan, November 2012 <b>JPY 3,770,000 (US\$ 37,700)</b>	JMA
JMA Workshop on WMO Information System Implementation (Bangladesh; Cambodia; Laos; Myanmar; the Philippines; Sri Lanka; Thailand and Viet Nam), Tokyo, Japan, October 2012 <b>JPY 4,500,000 (US\$ 45,000)</b>	JMA
4th GRUAN Implementation and Coordination Meeting (ICM-4), Tokyo, Japan, March 2012 <b>JPY 1,250,000 (US\$ 12,500)</b>	JMA
Third Meeting of the Regional Steering Group, WMO SDS-WAS Region for Asia, Tokyo, Japan, March 2012 <b>JPY 1,650,000 (US\$ 16,500)</b>	JMA
A training course on radar composite map for Thailand Meteorological Department under ESCAP/WMO Typhoon Committee, Tokyo, Japan, November 2012	ESCAP/WMO Typhoon Committee
WMO/Kyoto University short-term fellowship (Myanmar and Tanzania) <b>JPY 2,872,000 (US\$ 28,720)</b>	Kyoto University
Grant Aid Project for improvement of the meteorological radar system, 2009-2014, the Philippines	JICA
Grant Aid Project for improving the weather forecasting system and meteorological warning facilities, 2010-, Vietnam	JICA
Technical Cooperation Project on development of human capacity on operation of weather analysis and forecasting, 2009-2013, Bangladesh	JICA
Technical Cooperation Project, <i>Disaster Management Capacity Enhancement Project Adaptable to Climate Change</i> , 2010-2013, Sri Lanka	JICA
Technical Cooperation Project for Meteorology training for Fiji and neighboring countries, 2010-2012, Fiji (training workshop on meteorological instrument and calibration was conducted in 2012)	JICA
Technical Cooperation Project for Developing Early Warning	JICA

Systems for Cyclone Nargis affected areas, 2009-2012, Myanmar	
VCP Expert Mission to Bangladesh (Oriental Electronics, Inc. Japan, NHK and JMA) <b>JPY 920,000 (US\$ 9,200)</b>	WMO and Japan
<b>6. Challenges in Resource Mobilization for your Activities / Projects / Events</b>	<b>7. Opportunities for Increased Activity for your Activities / Projects / Events</b>
<ul style="list-style-type: none"> <li>- Insufficient available experts to dispatch developing countries' NMHSs for implementation of ODA technical cooperation projects</li> <li>- Need more regular communication between JMA and the donor agency to develop effective and efficient ODA projects</li> <li>- Need mechanisms to share information on developing countries' NMHSs between JMA and the donor agency</li> <li>- Need more communication with recipient NMHSs to identify their needs</li> </ul>	<p>JMA will</p> <ul style="list-style-type: none"> <li>- organize trainings/workshops regularly, and</li> <li>- promote informal discussion with the donor agency to enhance synergies between JMA's activities, ODA projects and WMO activities.</li> </ul>
<b>8. Opportunities for more cooperation with other members / organizations</b>	
<p>IPM could be a good opportunity to explore possible cooperation with other Members/organizations if more funding agencies can participate in IPM to share their activities with WMO and developed countries' NMHSs.</p>	

(1 US\$ = 1 CHF = 100 JPY)

## KOREA

<b>1. Country</b>	
KOREA	
<b>2. Overall national contribution in 2012 (estimate in USD)</b>	<b>3. Overall estimated national contribution in 2013 (in USD)</b>
1,685,094.00 USD	5,120,000.00 USD
<b>4. List of Activities / Projects / Events in 2012 related to contribution</b>	<b>5. Sources of Funding</b>
Establishment of Early Warning and Response System for Disaster Mitigation, 2011-2012, 3M USD	KOICA, ROK
Real-time Receiving and Analysis System of COMS Satellite, 2011-2012, 2M USD	KOICA, ROK
Feasibility study in 6 projects, 2012, 210,000 USD	KMA, ROK
Establishment of COMS data receiving system through WMO, 2012, 335,000 USD	KMA, ROK
International Training Course on Weather Radar Operation and Data Utilization, 2012, 90,000 USD	KMA, ROK
Dispatch experienced retirees to NHMSs, 2012, 77,000 USD	WFK, ROK
Information and Communication Technologies for Meteorological Services, 2012, 100,000 USD	KOICA, ROK
Improvement of Meteorological Disaster Responsiveness for African Countries, 2012, 100,000 USD	KOICA, ROK
Advanced Analysis of COMS Data, 2012, 100,000 USD	KOICA, ROK
<b>6. Challenges in Resource Mobilization for your Activities / Projects / Events</b>	<b>7. Opportunities for Increased Activity for your Activities / Projects / Events</b>
Difficulty of secure the budget from KOICA, Government of Korea.  Collaboration of development countries	Cooperation with a meteorology business cop.
<b>8. Opportunities for more cooperation with other members / organisations</b>	
WMO, WB etc.	

## NEW ZEALAND

<b>1. Country</b>	
New Zealand	
<b>2. Overall national contribution in 2012 (estimate in USD)</b>	<b>3. Overall estimated national contribution in 2013 (in USD)</b>
<p><b>333,000 USD</b></p> <p>In this report, the identification of activities that constitute a New Zealand national VCP contribution are based on criteria that differ from those used in previous years. The criteria are somewhat more restrictive, resulting in a total national contribution that is significantly lower than that reported for 2011. This is simply a change in reporting methodology, and does <u>not</u> reflect any change in level of activity.</p>	<p><b>333,000 USD</b></p>
<b>4. List of Activities / Projects / Events in 2012 related to contribution</b>	<b>5. Sources of Funding</b>
<p><b>Observing Programme Support for Pacific Island Countries &amp; Territories</b>            Provision of programme management, technical consultancy and engineering support, on a multi-lateral basis in conjunction with the US NOAA PI-GCOS support programme and the UK Met Office Pacific Fund programme. Includes technical support and advice via remote and in-country visits to Cook Islands, Kiribati, Niue, Tonga, Samoa, Tuvalu, Tokelau, Papua New Guinea, and the Solomon Islands            US\$85k</p>	MetService
<p><b>Severe Weather Forecasting and Disaster Risk Reduction Demonstration Project (SWFDDP)</b> – regional coordination by RSMC Wellington, including maintaining the MetConnect Pacific website.            US\$34k</p>	MetService
<p><b>SWFDDP in-country training</b> – delivered to nine participating PICTs (Samoa, Fiji, Kiribati, Cook Islands, Tuvalu, Tonga, Solomon Islands, Vanuatu &amp; Niue). Included capacity building of NMHSs and multi-agency Disaster Risk Reduction workshops.            US\$53k from MetService. <i>[NB: MfE contributed US\$77k, as reported in NZ VCP 2012 report; not included in the 'Overall national contribution' for this report.]</i></p>	NZ Ministry for the Environment (MfE) & MetService
<p><b>10<sup>th</sup> ICSHMO</b> – support for the participation of two scientists from Marshall Islands and PNG at the 10th International Conference on Southern Hemisphere Meteorology and Oceanography, April 2012, New Caledonia. US\$17k.</p>	NZ MfE
<p><b>APN contributing to CAPaBLE</b> - Assistance to the Asia-Pacific Network for Global Change Research (APN) contributing to the Capacity Development and Enhancement for Sustainable Development in Developing Countries Programme (CAPaBLE). CAPaBLE builds and 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. US\$25k</p>	NZ MfE



<p><b>UNFCCC workshop support</b> - Providing funding to support a UNFCCC workshop for small island developing states on approaches to address loss and damage associated with the adverse effects of climate change, including impacts related to extreme weather events and slow onset events. US\$43k</p>	<p>NZ MfE</p>
<p><b>IPCC/SREX</b> - Presentation and discussion of Pacific-relevant findings from the IPCC Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (SREX), at meetings in the Pacific. This covered joint support (with Australia) for a side-event at the SPREP Governing Council Meeting in Noumea in September 2012, and a session at the Pacific Platform for Disaster Risk Management meeting (also in Noumea in September 2012). US\$25k</p>	<p>NZ MfE</p>
<p>Technical support to Tokelau to draft the Tokelau Climate Change Strategy US\$4k</p>	<p>NIWA</p>
<p><b>Cook Islands cyclone model</b> - Development of a new statistical cyclone model, coupled to a storm surge and wave model and applied to the Cook Islands. This has furthered ability to model extreme coastal events and derived improved probabilistic information to support coastal infrastructure design and coastal disaster risk reduction activities US\$26k.</p>	<p>NIWA</p>
<p>Underpinning ongoing ad hoc advice and collegial support to Pacific Island technical staff involved in meteorological and hydrological monitoring in Samoa, Fiji, Cook Island, Solomon Island, PNG and Micronesia. US\$21k</p>	<p>NIWA</p>
<p><b>6. Challenges in Resource Mobilization for your Activities / Projects / Events</b></p>	<p><b>7. Opportunities for Increased Activity for your Activities / Projects / Events</b></p>
<p>Budget restrictions within New Zealand government agencies will continue to put pressure on funding for voluntary support programmes.</p>	<p>Cooperation with the World Bank may result in new opportunities within the South west Pacific.</p>
<p><b>8. Opportunities for more cooperation with other members / organisations</b></p>	
<p>New Zealand and its partners expect to maintain the current level of funding and related support for VCP activities in 2013. MetService will conduct a review of its VCP engagement in 2013, with the aim of identifying ways of improving our contribution within ongoing resource constraints.</p>	

## SPAIN

<b>1. Country</b>	
SPAIN	
<b>2. Overall national contribution in 2012 (estimate in USD)</b>	
(300,000 USD)	
<b>3. Overall estimated national contribution in 2013 (in USD)</b>	
(250,000 USD)	
<b>4. List of Activities / Projects / Events in 2012 related to contribution</b>	
<p><b>AFRIMET</b> (cooperation programme with NW African NMHSs)</p> <p>Capacity development in applied meteorology projects:</p> <ul style="list-style-type: none"> <li>– MARINEMET Project: <ul style="list-style-type: none"> <li>○ Visit to RMSC-Dakar staff to the Canary Is. (Spain)</li> <li>○ Acquisition and delivery of computers, software and manuals to the participant countries</li> <li>○ Installation and starting up of the tide meters and AWS to the countries (7/10 are currently working and transmitting)</li> <li>○ Training on operation and maintenance of equipment</li> <li>○ Securing of the transmission links Spain-Africa</li> <li>○ Securing of transmission of the boundary conditions for deep-water modellisation</li> <li>○ Modellisation of deep waters around RMSC-Dakar</li> <li>○ Application of modellisation to Senegal, Mauritania and Cape Verde seaports</li> <li>○ Training to the users of the modellisation applications and ocean outputs from the participant countries' focal points. Las Palmas (Canary Is., Spain)</li> <li>○ Routine distribution of remote sensing products to the participant countries</li> <li>○ Support to the tasks of the consultants (from Spanish Port Authority and the University of Las Palmas)</li> <li>○ Delivery of products in the webpage <a href="http://www.afrimet.org/marinemet/">http://www.afrimet.org/marinemet/</a> and its maintenance</li> </ul> </li> <li>– METAGRI Project: <ul style="list-style-type: none"> <li>○ 159 Roving seminars in 16 African countries</li> <li>○ Consolidation of the operational METAGRI continuation project (4)</li> </ul> </li> <li>– HEALTHMET Project: <ul style="list-style-type: none"> <li>○ Training on SDS-WAS products through a fellowship to attend specific workshop co-sponsored by EUMETSAT and WMO. Support to 1 Gambian participant.</li> <li>○ Consolidation of the Climate&amp;Health WGs in Mauritania and Burkina Faso (5)</li> </ul> </li> </ul> <p>Capacity development in management and other tasks:</p> <ul style="list-style-type: none"> <li>– Conference of NW African NMHS Directors in Madrid (Spain), Oct 12.</li> <li>– Support to the attendance of the NW African NMHS Directors to the Extraordinary Session of WMO Congress. Geneva (Switzerland), Oct 12.</li> <li>– Support to the Meteo-Media workshop on the relation of NMHS and media in Dakar (Senegal), Dec 12 (4)</li> <li>– Offer to particular NMHSs the possibility of using their own space in the AFRIMET</li> </ul>	

webpage ([www.afrimet.org](http://www.afrimet.org)) to enhance their visibility

### **CIMHET** (cooperation programme with Ibero American NMHSs)

#### – Meetings

- 10<sup>th</sup> CIMHET General Meeting. Madrid (Spain), Oct 12
- Support to the attendance of Ibero-American PRs to the Extraordinary Session of WMO Congress. Geneva (Switzerland), Oct 12.
- Support to PROHIMET Workshop on “Challenges of Hydrometeorology before climate variations and extreme events”. Santo Domingo (Dominican Rep.), May 12
- Support to climate fora in Central and South America (COF-like activities)
- Support to the attendance of the PRs of Colombia, Bolivia, Ecuador and Paraguay to the GCOS workshop for South America. Guayaquil (Ecuador), Mar 12
- Support to the meeting on the implementation of the Climate Services Centre for Meso-America and the Caribbean. Mexico City (Mexico), Apr 12
- Support to the regional workshop for the implementation of WIS/WIGOS. San Jose (Costa Rica), Nov 12

#### – Training activities

- Course on Application of Satellite Meteorology to tropical-latitudes. Boca Chica (Dominican Rep.), Oct 12 (2)
- Course on Application of ECMWF Global Model to mid-latitudes meteorology. Montevideo (Uruguay), Nov 12 (3)
- Workshop on handling, homogenisation and regionalisation of climate data. Antigua (Guatemala), Oct 12 (1)
- Advanced course on management and supervision of automatic hydro-meteorological stations. Bogota (Colombia), Sep 12

#### – Other activities / Support to horizontal cooperation

- Implementation of the MCH database management system in Paraguay, Honduras, Ecuador, Venezuela and CIIFEN
- Internship of a SMN officer (Costa Rica) in AEMET HQs (Madrid) officer for data handling and processing. Nov 12
- Internship of two DMC officers (Chile) at DMH (Paraguay) to support the implementation process of a QMS for aeronautical meteorology. Sep 12.
- Internship of an AEMET officer at DNM (Uruguay) to support the institutional development. Jan 13.

#### – Image and promotion

- Maintenance of the CIMHET webpage (<http://www.cimhet.org>)

### **SDS-WAS and GAW activities**

- Installation of Cimel station in Ouarzazate (Morocco), Feb 12.
- Support to the SDS-Africa and GAW-Sahara Projects (1)

## **5. Sources of Funding**

All activities have been funded by the Trust Funds that AEMET keeps within WMO.

Notes:

- (1) In cooperation with AECID (International Development Agency of Spain)
- (2) In cooperation with EUMETSAT
- (3) In cooperation with ECMWF
- (4) In cooperation with Norway
- (5) In cooperation with Greece

<b>6. Challenges in Resource Mobilization for your Activities / Projects / Events</b>	<b>7. Opportunities for Increased Activity for your Activities / Projects / Events</b>
<p>Difficulties in keeping the same level of investment in the future from AEMET budget because of the current budgetary reductions in Spain.</p> <p>AEMET legislative capacity to handle resources from third parties for development purposes.</p>	<p>Alignments with other developed countries (i.e. Norway or Greece) for cost-sharing</p> <p>Strategic partnerships with funding bodies (WB, EU, regional development banks)</p> <p>Better coordination/alignment with the environmental policies of the International Development Agency of Spain in order to leverage the expenses for the development of NMHSs</p> <p>Enhancement of horizontal cooperation between regional powerful NMHSs and the rest (case of Ibero America)</p>
<b>8. Opportunities for more cooperation with other members / organizations</b>	
<p>Alignments with other donor countries / funding bodies</p> <p>Reinforcement of bilateral cooperation for development</p> <p>Institutional alliances (within Spain) to avoid legislative barriers at AEMET</p>	

## SWITZERLAND



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Swiss Confederation

Federal Department of Home Affairs FDHA

Federal Office of Meteorology and Climatology MeteoSwiss

### Report on Swiss contributions to the WMO Voluntary Cooperation Programme (VCP) and related Technical Cooperation Programmes

#### Swiss contributions in 2012 and planned Swiss contributions for 2013

	USD 2012*	USD* 2013, Planned
Voluntary cash contribution to the international part of the GAW Programme:		
Quality Assurance and Science Activity Centre (QA/SAC) for ozone, carbon dioxide and methane	94'400	98'800
World Calibration Centre (WCC) for ozone, carbon monoxide and methane	277'800	290'500
GAW Station Mount Kenya, Equipment and personnel expenses including Kenya-Switzerland Trust fund	168'800	105'400
World Radiation Centre (PMOD/WRC), including World Infrared Calibration Centre, World Optical Depth Research and Calibration Centre, and World UV Calibration Center	1'518'800	1'518'800
Voluntary cash contribution to the WMO RAVI Conference on Social and Economic Benefits of Weather, Climate and Water Services	0	22'200
World Climate Conference III follow up, Global Framework for Climate Services (GFCS)	166'700	111'100
SPARC International Project Office	55'600	55'600
WMO-different contribution, CIMO Trust Fund, Regional Office Europe	111'100	111'000
<b>Total contributions</b>	<b>2'393'200</b>	<b>2'504'300</b>

\* Exchange rate: 1 USD = 0.90 CHF

WMO\_voluntary-cooperation-programme-VCP\_Report2013.docx / INZ#3086

Switzerland continued

## Report on the VCP and related co-operation activities in 2012 and outlook 2013

- ▶ Switzerland is continuously operating the following central facilities in favour of the GAW Programme:
  - World Calibration Centre and Quality Assurance/Science Activity Centre for ozone, carbon monoxide and methane at the Swiss Federal Laboratories for Materials Testing and Research (EMPA, Dübendorf): EMPA provides calibration services, station audits, trainings and operational support of the global GAW network
  - World Optical Depth Research and Calibration Centre (WORCC) at the World Radiation Centre (Davos): The WORCC is providing quality control and quality assurance for the operational aerosol optical depth measurements at a dozen of global GAW stations.
  - A calibration centre for infrared radiation is maintained at the World Radiation Centre (Davos).
  - World UV Calibration Centre at the World Radiation Centre (Davos).
- ▶ Following a renewed decision of the Swiss Federal Government in 2011, Switzerland will continue its involvement with the World Radiation Centre Davos. As in the past, the World Radiation Centre will be jointly financed by the Swiss Federal Government, the Canton of Grisons and the township of Davos.
- ▶ MeteoSwiss and EMPA regularly provide capacity building and consumables to the global GAW station in Kenya. In addition to that, Switzerland contributed to the WMO-GAW Kenya Trust Fund in 2012.
- ▶ Switzerland contributed to the Secretariat of the Global Framework for Climate Services (GFCS) at WMO. So far, this annual contribution will be continued until the World Meteorological Congress in 2015.
- ▶ The Swiss voluntary contributions for 2013 will be in approximately the same order as for 2012.
  
- CATCOS (Capacity and Twinning of Climate Observing Systems): this project (Sep 2011 - Dec 2013) is financed by the Swiss Development and Cooperation Agency (SDC), total 2.3 Mio CHF, and supports the enhancement of greenhouse gases, aerosol and glacier measurements in 7 countries worldwide. Countries: Kenya (aerosols), Indonesia (aerosols), Vietnam (GHGs, aerosols), Chile (GHGs, aerosols), Ecuador (glaciers), Colombia (glaciers), Kirgizstan (glaciers). In 2012, the MOUs with Kenya, Indonesia, Ecuador, Kyrgyzstan and Colombia have been signed; implementation in Indonesia (aerosols) was successfully completed; first implementation in Kyrgyzstan (glaciers) successful, further work in summer 2013; CATCOS brochure and webpage completed and published.
- CLIMANDES: project between SENAMHI Peru and MeteoSwiss approved (Sep 2012 - Aug 2015), financed by SDC, with 2 modules: 1) support of WMO Regional Training Centre (RTC) at La Molina University, 2) improvement of climate services (GFCS twinning). Overall coordination: WMO. Successful Kick-off meeting of the project in Lima, Peru, in August 2012; successful Launch Event and MOU signature during WMO Extra Congress in October 2012.

<b>1. Country</b>	
United Kingdom	
<b>2. Overall national contribution in 2012 (estimate in USD)</b>	
~\$1,718,126 (Converted from GBP @ year average 1GBP:1.58507USD)	
<b>3. Overall estimated national contribution in 2013 (in USD)</b>	
~\$1,605,478	
<b>4. List of Activities / Projects in 2012 related to contribution</b>	
<p><b>Funding overview:</b> The main UK contribution to WMO VCP is funded as part of the UK Public Weather Service (PWS) which sets some priorities:</p> <ul style="list-style-type: none"> <li>• 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).</li> <li>• Sustained, and optimally improved, levels of observation data available on the WMO Information System.</li> <li>• Ensure the continued unrestricted exchange of data and products, and effective results of WMO Programmes.</li> </ul> <p>In addition, we seek to mobilise resources from other donors, where possible (Additional sources of funding are noted along with the activities highlighted below)</p> <p><b>Projects highlights from 2012:</b></p> <p><b>Project area - Observations</b></p> <ul style="list-style-type: none"> <li>• 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 and Tarawa) and the GSN station at Pitcairn, through the 'Pacific Fund', managed by MetService New Zealand. Additional consumables were also supplied to the GUAN station at Gan, Maldives, via GCOS.</li> <li>• UK VCP continues to support the GUAN station at St Helena and, as part of this support, replaced the Hydrogen Generator in 2012 ensuring the sustainability of the upper air observations. There are plans to install a new MMS (Met. Monitoring System) in 2013. UK VCP has continued to assist with a GCOS funded project in Madagascar. 11 AWSs have now been installed across the country. The Minister from the Ministry of Public Works, alongside two staff from Meteo Madagascar (funded by UK VCP), visited the Met Office in February in support of the ongoing project</li> </ul> <p><b>Project Area – Forecasting &amp; NWP</b></p> <ul style="list-style-type: none"> <li>• Continued support was provided to the WMO SWFDP through the continued delivery of Global Centre products to the Southern Africa, Eastern Africa and Pacific projects.</li> <li>• Forecaster training was provided for both the SWFDP East-Africa and Southern-Africa, given by Paul Davies from the Met Office Operations Centre - followed by a week of Public Weather Service training for attendees, designed and delivered by one of the Met Office 'PWS Advisors'.</li> <li>• UK VCP is currently working on the provision of lake surface temperature measurements on Lake Victoria to help improve the modelling in the Lake Victoria Region, which aims to assist regional forecasting activities in the East Africa Area.</li> <li>• The Met Office Africa LAM (running at 12km resolution) continues to be disseminated in graphical form via the website (alongside the 4km Lake Victoria model and ATD lightning product <a href="http://www.metoffice.gov.uk/weather/africa/lam/index.html">http://www.metoffice.gov.uk/weather/africa/lam/index.html</a>). A 'cutout' from the Global model (25km) for the whole of Africa is also transmitted as GRIB data via</li> </ul>	

EUMETCAST. Following user feedback from the EUMETSAT RA1 Users Forum additional fields have been added and will be transmitted by EUMETSAT soon.

- ATD lightning data is now also being provided to EUMETSAT (however visualization at the NMHSs is dependent on the local workstation system which is awaiting updating via EUMETSAT)
- In addition, work is currently ongoing through UK VCP in partnership with SAWS to develop a new website to enhance the access to model fields from the Africa LAM, 4km Lake Victoria model, SAWS 12km and ATD lightning information. The website is based on the SATREP/EUMETRAIN website and will allow more interaction by the forecasters in Africa e.g. overlaying products, compared to the static graphics currently available on our website (due to be launched summer 2013).
- The annual Met Office/WMO Aviation Seminar was developed and delivered to ~ 20 delegates at RTC Pretoria, South Africa, in October, with logistical support provided by SAWS. The training was based on providing guidance and practical example of best practice implementation and assessment of the new Aeronautical Meteorological Personnel (AMP) Competence Standards.

In partnership with WMO an evaluation of the Lake Victoria 4km model was undertaken, using Met Office scientists and in consultation with one of our MSc fellows Khalid Muwembe from Uganda (see below). This research paper is due to be published soon in the journal 'Meteorological Applications'

#### **Project area – Climate Services, IT and Communications**

- The “localisation” project has continued in Zambia, implemented using Climsoft on second-user PCs supplied by Computer Aid International. UK VCP provided additional software to be installed on the PCs donated by Computer Aid.

UK VCP funding enabled a representative from KMD to assist the Rwanda Met. Agency with the implementation of automatic communications of observational data and their transmission as TDCF onto the WIS, and also to enable automatic ingestion into the Climsoft Climate Data Management System. Several follow up visits have also been arranged in conjunction with ongoing Met Office work with Rwanda Met. Agency.

#### **Project area - Service Delivery**

- Support has continued for TV weather presentation delivery by NMHSs. This includes the ongoing development and contributions to our e-learning support website at [www.met-elearning.org/moodle](http://www.met-elearning.org/moodle) which provides advice and discussion forums on all aspects of the media studios including the use of WeatherEye-PC, the TV graphics package provided free from the UK to developing country NMHSs.
- Hardware components were replaced at a number of sites including Guinea Conakry, Rwanda, Malawi, DR Congo, Djibouti, Senegal, Maldives and Congo Brazzaville.
- UK VCP, with equipment funded through FCO, was able to provide 28 developing country NMHSs with digital hard drive recorders to improve the efficiency of the media studios. Rather than delivering video tapes by hand to the TV station, this has provided the ability to send presentations electronically to the TV stations for broadcast. At NMHSs where this has already been installed this has allowed much wider distribution of weather forecasts to more TV stations and significantly reduce the production time.
- In partnership with WMO VCP, the Media studio at the Ethiopia National Met Agency (NMA) was upgraded by Met Office staff during a two week visit in November. Along with new studio equipment and software training, a digital recorder was provided which has saved a daily 200km round-trip to one of the TV stations.
- A consultant from KMD travelled to the Comoros Islands in March to install a new TV media studio at their newly constructed building. This month-long visit was undertaken in partnership with (and funding from) WMO VCP.
- Through UK VCP the consultant from KMD was also able to successfully install a new media studio at Meteo Madagascar.
- Following delivery of equipment provided by UK VCP, Kenya Met Department have also now



been able to reinstate their media studio. This was needed following a building fire which, unfortunately, badly damaged the existing equipment. Following a request from Mozambique, two Met Office trainers were also able to visit and assist with training in the WeatherEye-PC software. Presentations are now created using this improved software package

### **Project area - Human Resources Development**

- The six students (from Zimbabwe, Lesotho, Cameroon, Uganda, Trinidad & Tobago and Bhutan), sponsored by UK VCP and WMO ETR, successfully completed their “MSc in Applied Meteorology and Climate with Management” at Reading University in September. Good feedback has been received - for example, Zimbabwe Meteorological Department has indicated that the NMHS has begun the process of developing a Climate Change Division with the Zimbabwean Fellow acting as a focal point for this Department.
- Six students (from Kenya, Swaziland, Samoa, Antigua&Barbuda, Malaysia and Papua New Guinea) are currently undertaking this MSc course, sponsored again by UK VCP and WMO ETR.
- UK VCP arranged for two forecasters from the Rwandan Met Agency to visit the UK Met Office to assist with the ongoing developments in service delivery at RMA.
- In partnership with WMO AeMP, UK VCP supported the translation of the WMO QMS guides. UK VCP has also developed an online e-learning QMS training course which is available to all NMHSs, free of charge, on the moodle website: [http://www.met-elearning.org/moodle\\_v2/](http://www.met-elearning.org/moodle_v2/). with the aim of supporting the development and implementation of Quality Management Systems in developing country NMHSs.
- Following good feedback, UK VCP again ran the facilitated, online management training course, “Essentials of Management” in Feb 2012. 28 students completed this course and provided good feedback. Several have since requested to participate in the discussion forum of the next course (which has now just begun) to help share their learning.

### **Others**

- UK VCP has been pleased to support the secondment of Wayne Elliot to the WMO Resource Mobilisation Office for a second year.

USA

1. Country

USA	
<b>2. Overall national contribution in 2012 (estimate in USD)</b>	
[2,090,000.00 USD]	<b>3. Overall estimated national contribution in 2013 (in USD)</b>
	[unknown given budget uncertainties]
<b>4. List of Activities / Projects / Events in 2011 related to contribution</b>	
<b>5. Sources of Funding</b>	
Spanish Translation of COMET MetEd Modules	US Department of State
Critical Aviation e-Learning Programs (year 4)	US Department of State
International Hydrology Courses	US Department of State
Online Degree: Climatology and Climate (year 1)	US Department of State
Critical Training Materials for RAV	US Department of State
Expanded Volcanic Ash Distance Learning	US Department of State
Tropical Synoptic Course Workshop	US Department of State
iMet-1500C Training Class (CHUAS)	US Department of State
African Training Desk and NCEP Trainer	US Department of State
Training (Desk) for International Monsoon	US Department of State
Tropical / South America Desk	US Department of State
ITIC Training Program on Tsunami Warning	US Department of State
RAV SWFDDP - Full Demonstration Phase	US Department of State
Mexico - Rio Grande Flood Forecast Up-grade	US Department of State
El Salvador Strengthening Hydraulic	US Department of State
American Meteorological Society Annual Meeting	US Department of State
Pacific Desk	US Department of State
Farm-Weather Radio in Zambezi River Basin	US Department of State
Purchase and Installation of GEONETCast	US Department of State
Support to the CIMO WMO Trust Fund	US Department of State
Support to EC PORS WMO Trust Fund (GIPPS)	US Department of State
South Pacific Digital HF Network Refresh and Hub Move	US Department of State
Central America FFG Follow up	US Department of State
Caribbean Regional Climate Outlook Forum (CariCOF)	US Department of State
RAV Task Teams	US Department of State
Support to WMO's VLab	US Department of State
ESCAP	US Department of State
<b>6. Challenges in Resource Mobilization for your Activities / Projects / Events</b>	
<b>7. Opportunities for Increased Activity for your Activities / Projects / Events</b>	
Pending major government budget cuts	Almost zero
<b>8. Opportunities for more cooperation with other members / organisations</b>	

For the past 7years, NWS has had an agreement w ith USAID to provide technical and scientific resources to meet OFDA's objectives regarding preparedness for hydro-meteorological disasters, such as floods, droughts, cyclones/hurricanes, other extreme climate/w eather related events, and geophysical disasters such as tsunami. This parallels an agreement that USA ID has w ith WMO.