

ANNEX 9 TO CSDIP TABLE

(Draft as of May 2, 2013)

The implementation of the WMO Capacity Development Strategy is structured with key activities supporting the 19 strategic approaches under the Strategic Objectives. This table describes the general implementation framework with the key activities and roles of various stakeholders.

Capacity Development Strategy					WMO OP 2012-2015	
Strategic Objectives	Strategic Approaches	Key Activities	Cost implication ¹	Responsible bodies	Key Outcome	Key Performance Indicator
Objective 1: Define required capacities and identify deficiencies			CHF 8,337,000			
	1A: Emphasize compliance with WMO technical requirements to address priorities	<ul style="list-style-type: none"> Clarifying WMO standards, technical requirements, practices and priorities Compiling compliance reports Organizing training activities 	-	-		
		MMOP <ul style="list-style-type: none"> Development of internationally acceptable competency requirements for marine meteorological and oceanographic services Development and Revision of WMO Manuals and Guides, including the Part IV of the WMO-No. 558 (Training in the Field of Marine Meteorology), Guide to Wave Analysis and Forecasting (WMO-No-702), and Guide to Operational Ocean Forecasting 		JCOMM (ad hoc Task Team) JCOMM (Management Committee)	1.2: Delivery of weather, climate, water and related environmental products and services to users' communities is improved	1.2.1: Number of NMHSs expressing user satisfaction with the (a) availability, (b) reliability and (c) range of products that are (d) received in time and are (e) an essential contribution to decision making
		AeMP <ul style="list-style-type: none"> Development of competence assessment toolkit Collection of examples of competence assessment best practice from Members Members' surveys and coordination with RAs to determine needs/gaps 		CAeM	1.2: Delivery of weather, climate, water and related environmental products and services to users' communities is improved	1.2.1: Number of NMHSs expressing user satisfaction with the (a) availability, (b) reliability and (c) range of products that are (d) received in time and are (e) an essential contribution to decision making
		TCP <ul style="list-style-type: none"> Development and progress in establishment of region-specific tropical cyclone competency standards for all the five tropical cyclone regional bodies 		TC regional bodies.	1.2: Delivery of weather, climate, water and related environmental products and services to users' communities is improved	1.2.1: Number of NMHSs expressing user satisfaction with the (a) availability, (b) reliability and (c) range of products that are (d) received in time and are (e) an essential contribution to decision making
	1B: Assist countries in identifying deficiencies of the NMHSs	<ul style="list-style-type: none"> Organizing stakeholder fora to guide national and regional requirements process and to show global interdependence Organization of national and regional users' events Developing guidance material on the role and operation of NMHSs Country assessments and independent analysis, conducting and reporting on country assessments to establish baselines and for M&E Promoting transparency through information sharing leading to the development of requirements-driven strategies 	-	-		
	MMOP <ul style="list-style-type: none"> Assist national capacity assessment of coastal inundation forecasting (CIFDP, Phase 1)² 		JCOMM/ CHy (CIFDP Steering Group)	1.2: Delivery of weather, climate, water and related environmental products and services to users' communities is improved	1.2.1: Number of NMHSs expressing user satisfaction with the (a) availability, (b) reliability and (c) range of products that are (d) received in time and are (e) an essential contribution to decision making	

Capacity Development Strategy					WMO OP 2012-2015	
Strategic Objectives	Strategic Approaches	Key Activities	Cost implication ¹	Responsible bodies	Key Outcome	Key Performance Indicator
Objective 1: Define required capacities and identify deficiencies	1B: Assist countries in identifying deficiencies of the NMHSs	WWW/WIGOS <ul style="list-style-type: none"> Compliance with WIGOS implementation plans, i.e., WIGOS Framework Implementation Plan (WIP), Regional WIGOS Framework Implementation Plans (R-WIPs), Implementation Plan for the Evolution of Global Observing Systems (EGOS-IP) Providing Members with tools to assist them in filling the existing gaps in the design, operation and maintenance of WIGOS observing systems, including both the infrastructure and human capacities development Providing Members with the technical guidance and guidelines on a design, development and implementation of a national integrated/composite observing system to provide required observations Assist Members in using WIGOS Operational Information Resource (WIR) tools for the design and management of national WIGOS networks Assist Members in implementing and exploiting WIGOS metadata standards, practices and procedures 		ICG-WIGOS	4.1 WMO Integrated Global Observing System is implemented	<ul style="list-style-type: none"> Completion of WIGOS milestones according to WIGOS implementation plan Increased availability of observations for users
		ETR <ul style="list-style-type: none"> Assist Technical Programmes in developing competency frameworks for guiding the identification of training needs. 				
		DRR <ul style="list-style-type: none"> Development of national end-to-end multi-hazard early warning systems Developing national/regional protocols 		Secretariat, NMHSs, EC-WG/DRR	2.1: Multi-hazard early warning systems are implemented	2.1.1: Number of NMHSs contributing to the implementation of multi-hazard early warning systems
		RP <ul style="list-style-type: none"> Carrying out fact-finding and needs-assessment mission Emergency assistance to NHMSs Development of the online guide on the Role, Operation and Management of National Meteorological Services to provide a one-stop, consistent and up-to-date reference resource to assist managers of an NMS 		RAs, Secretariat	6.2: Infrastructure and operational facilities of NMHSs and Regional Centres are improved, particularly in developing and least developed countries	6.2.1: Number of NMHSs with improved infrastructure and operational facilities
	1C: Encourage development of services to address specific user needs	<ul style="list-style-type: none"> Development of communication plans Definition of new services and new products to be delivered by the NMHSs in accordance with the WMO Strategy for Service Delivery 	-	-		
		WCP <ul style="list-style-type: none"> Guidance on climate information for climate risk management and adaptation Development of user-targeted climate services for agriculture, water and health sectors for Climate Risk Management and adaptation Implementation of climate monitoring and climate watch systems (CWS) at regional and national levels Development of guidance on specifications for modern climate data management systems 		RAs, WCSP/Data and Monitoring CCI/OPACE-1 WCSP/Data and Monitoring	3.2: Climate information and prediction products for climate adaptation and risk management are improved 3.1 Improved Climate Monitoring, long range forecasts and long term projections 4.4 Data Rescue and Data Management Systems Improved	3.2.4: Number of Members providing targeted/tailored climate information, products and services, through formal mechanisms including National Climate Outlook Forums, to support user requirements in their countries for adaptation and climate risk management in key socio-economic sectors 3.1.1: number of Members issuing climate watch bulletins 4.4.2 Number of Members implementing modern climate data management systems

Capacity Development Strategy					WMO OP 2012-2015		
Strategic Objectives	Strategic Approaches	Key Activities	Cost implication ¹	Responsible bodies	Key Outcome	Key Performance Indicator	
Objective 1: Define required capacities and identify deficiencies	1C: Encourage development of services to address specific user needs	HWRP <ul style="list-style-type: none"> Finalize the preparation of the Manual on Flood Forecasting Provide advice and support to the projects related to the Flash Flood Guidance System (FFGS) and PROHIMET taking account of other initiatives in the area Provide advice on and monitor the development and application of the Global Flood Alert System Review the current status of and provide guidance material on Quantitative Precipitation Estimation (QPE), Quantitative Precipitation Forecasting (QPF) and probabilistic Quantitative Precipitation Forecasting (pQPF) Prepare guidance to undertake an intercomparison related to the use of operational flood forecasting models Prepare guidance material on drought forecasting and indices – including quantifying uncertainties 		CHy, CLW	2.1: Multi-hazard early warning systems are implemented	2.1.1: Number of NMHSs contributing to the implementation of multi-hazard early warning systems	
		AgMP <ul style="list-style-type: none"> Develop guidelines for operational interface between NMHSs and farmers Develop guidance material on analysis and evaluation of agrometeorological data, products, and services Develop Guidance Material for coping with drought and desertification 		CAgM/OPAG1 on Agromet Services CAgM/OPAG3 on Climate Variability/ Change and Natural Disasters in Agriculture	1.1 Improved access to seamless weather, climate, water, and related environmental products and services 2.3. Drought early warning systems are improved	1.1.1 Analyses showing the social and economic benefits of improved services 2.3.1: NMHSs and Regional Centres issuing drought early warnings	
	1D: Establish modalities for partner and stakeholder engagement	<ul style="list-style-type: none"> Working with national partners and government entities to build a common vision for use of environmental information to address societal needs Organization of national development partner and stakeholder meetings Sharing of projects and requirements 	-	-			
		WCP <ul style="list-style-type: none"> Support for sectoral Outlook Forums in conjunction with Regional Climate Outlook Fora (RCOF) Regional Workshops on Climate Services for User sectors Support for user aspects of climate services through regional workshops and national and Regional Climate Outlook Forums Support for WCAS participation in the activities of UN and partnering agencies 			3.2: Climate information and prediction products for climate adaptation and risk management are improved	3.2.4: Number of Members providing targeted/tailored climate information, products and services, through formal mechanisms including National Climate Outlook Forums, to support user requirements in their countries for adaptation and climate risk management in key socio-economic sectors	
		AgMP <ul style="list-style-type: none"> Support for to the meeting and activities of the UNCCD and UNCBD Interaction with FAO and other agricultural organizations 		AgMP, CAgM	7.1: WMO leadership and contribution in relevant UN system and other international partners' initiatives and programmes is improved	7.1.3: Active strategic partnerships with UN and other international organizations supporting priority activities	
		WWW/WIGOS <ul style="list-style-type: none"> Assist Members in establishing closer collaboration at the national level with other government agencies, and with potential external data providers in accordance with mechanisms and procedures for engagement, coordination and collaboration with partner organizations 		ICG-WIGOS	4.1 WMO Integrated Global Observing System is implemented	<ul style="list-style-type: none"> Completion of WIGOS milestones according to WIGOS implementation plan Increased availability of observations for users 	

Capacity Development Strategy					WMO OP 2012-2015	
Strategic Objectives	Strategic Approaches	Key Activities	Cost implication ¹	Responsible bodies	Key Outcome	Key Performance Indicator
Objective 1: Define required capacities and identify deficiencies	1D: Establish modalities for partner and stakeholder engagement	MMOP <ul style="list-style-type: none"> Assist development of country-specific end-to-end integrated coastal inundation forecasting system, through Demonstration Projects (CIFDP, Phase 2)² 		JCOMM/ CHy (CIFDP Steering Group)	1.2: Delivery of weather, climate, water and related environmental products and services to users' communities is improved	1.2.1: Number of NMHSs expressing user satisfaction with the (a) availability, (b) reliability and (c) range of products that are (d) received in time and are (e) an essential contribution to decision making

Capacity Development Strategy					WMO OP 2012-2015	
Strategic Objectives	Strategic Approaches	Key Activities	Cost implication ¹	Responsible bodies	Key Outcome	Key Performance Indicator
Objective 2: Increase visibility and national ownership			CHF 6,183,000			
	2A: Emphasize socio-economic benefits of services provided by NMHSs to decision makers	<ul style="list-style-type: none"> Developing an advocacy, outreach and communication strategy to approach government Advocating inclusion of NMHSs in the national development planning process and to secure buy-in and national funds contributions to the development of NMHSs 	-	-		
		PWS <ul style="list-style-type: none"> Capture, improve and disseminate existing approaches for assessing the socio-economic benefits (SEB) of NMHSs through: <ul style="list-style-type: none"> Compiling existing methodologies for socio-economic benefits (SEB) assessment of meteorological and hydrological services, Preparing and disseminating a set of authoritative guidelines and practical recommendations on methods and procedures for conducting SEB studies, and Supporting the implementation of pilot projects in all WMO Regions on SEB of services provided by NMHSs, collecting and analysing their outcome and disseminating the information to NMHSs and funding agencies. 		For all activities in different degree: RAs, PWSP in collaboration with the Regional Programmes, WMO Forum on socio-economic benefits of met/hydro services, World Bank	1.1: Improved access to seamless weather, climate, water, and related environmental products and services (e.g., warnings, forecasts and supporting information)	1.1.1: Number of Members demonstrating quantitative measurements of the socio-economic benefits of their products and services
		WCP <ul style="list-style-type: none"> Climate Information and Prediction Services showcase projects to demonstrate the benefits of climate services 			3.2: Climate information and prediction products for climate adaptation and risk management are improved	3.2.2: Number of Members operationally developing and disseminating climate products and information for national needs
		LDC <ul style="list-style-type: none"> Training on socio-economic benefits (SEB) for LDCs and SIDS 			1.1: Improved access to seamless weather, climate, water, and related environmental products and services (e.g., warnings, forecasts and supporting information)	1.1.1: Number of Members demonstrating quantitative measurements of the socio-economic benefits of their products and services
	2B: Assist NMHSs to incorporate requirements into national policy, legislative frameworks and national development plans	<ul style="list-style-type: none"> Collecting and disseminating examples of clear legislative and policy frameworks, best practices and case studies Assisting developing countries clarify national laws and procedures through consultation, and training Collecting and researching of socio-economic benefit information Assisting NMHSs in the development of their strategic plans to include the four dimensions of NMHSs capacity Clarifying national mandates and legislation of NMHSs for improved service delivery 	-	-		
	PWS <ul style="list-style-type: none"> Guide NMHSs to prepare a thorough assessment of their Service Delivery capability by using the "Implementation Plan for the WMO Strategy for Service Delivery" as a basis for presetting to the national decision makers their requirements for improving their service delivery for better decision making in support of national economic development and building resilience in response to weather-related events: 			PWSP in collaboration with the Regional Programme, ETRP, RAs	1.2: Delivery of weather, climate, water and related environmental products and services to users' communities is improved	1.2.1: Number of NMHSs expressing user satisfaction with the (a) availability, (b) reliability and (c) range of products that are (d) received in time and are (e) an essential contribution to decision making

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Strategic Objectives	Strategic Approaches	Key Activities	Cost implication ¹	Responsible bodies	Key Outcome	Key Performance Indicator
Objective 2: Increase visibility and national ownership	2B: Assist NMHSs to incorporate requirements into national policy, legislative frameworks and national development plans	<ul style="list-style-type: none"> Test the Implementation Plan in a few NMHSs, including twinning and collaboration with other NMHSs, Organize regional workshops for senior management of NMHSs to disseminate and share the experiences and knowledge gained from the implementation in individual countries 				
		RP <ul style="list-style-type: none"> Advocacy with NMHSs in national planning process Development of example laws and strategic plans Assist NMHSs develop laws and strategic plans 		RAs, Secretariat	6.1: Visibility and relevance of NMHSs in national and regional development agendas is improved, particularly in developing and least developed countries	6.1.1: Number of NMHSs with (a) increased contribution to national policy setting, (b) improved awareness by users on types of services NMHS can deliver, (c) improved user accessibility to forecasts and warnings, (d) improved timeliness of forecasts and warnings; and (e) increased accuracy of forecasts and warnings
		LDC <ul style="list-style-type: none"> Three national workshops on strategic planning Assist LDCs and SIDS develop strategic planning 		LDCP, VCP and national partners	6.1: Visibility and relevance of NMHSs in national and regional development agendas is improved, particularly in developing and least developed countries	6.1.1: Number of NMHSs with (a) increased contribution to national policy setting, (b) improved awareness by users on types of services NMHS can deliver, (c) improved user accessibility to forecasts and warnings, (d) improved timeliness of forecasts and warnings; and (e) increased accuracy of forecasts and warnings
		MMOP <ul style="list-style-type: none"> Assist national capacity assessment of coastal inundation forecasting (CIFDP, Phase 1 to 4)² 		JCOMM/ CHy (CIFDP Steering Group)	1.2: Delivery of weather, climate, water and related environmental products and services to users' communities is improved	1.2.1: Number of NMHSs expressing user satisfaction with the (a) availability, (b) reliability and (c) range of products that are (d) received in time and are (e) an essential contribution to decision making
	2C: Enhance outreach to end users and decision makers	<ul style="list-style-type: none"> Assisting NMHSs through workshops, training events and consultancies in the development of services designed to meet user needs, with particular emphasis on public weather services for increased visibility of NMHSs 	-	-		
		PWS <ul style="list-style-type: none"> Guide NMHSs in engaging users and decision makers to evaluate their needs, link service development and delivery to user needs, and evaluate and monitor service performance and outcome. Different methods need to be applied for different user groups ranging from the general public to government decision makers, such as: <ul style="list-style-type: none"> Identify user communities directly benefiting from products and services of NMHSs and establish dialogue with them to find out needs, Determine feasibility of response to needs, and take action for appropriate response, Build in feedback mechanisms Carry out surveys to determine level of satisfaction Use NMHS websites, and media channels, including social media to engage users, encourage feedback, and provide educational materials 		PWSP in collaboration with WWRP SERA Working Group and Regional Programme, RAs	1.2: Delivery of weather, climate, water and related environmental products and services to users' communities is improved	1.2.1: Number of NMHSs expressing user satisfaction with the (a) availability, (b) reliability and (c) range of products that are (d) received in time and are (e) an essential contribution to decision making
		AgMP <ul style="list-style-type: none"> Development and support to regional activities of AGM Provide support to NMHSs to organize Roving Seminars for Farmers 		AGM, CAgM	6.2: Infrastructure and operational facilities of NMHSs and Regional Centres are improved, particularly in developing and least developed countries	6.2.3: Number of NMHSs with programmes and networks for collaborating on service delivery at regional levels

Capacity Development Strategy					WMO OP 2012-2015	
Strategic Objectives	Strategic Approaches	Key Activities	Cost implication ¹	Responsible bodies	Key Outcome	Key Performance Indicator
Objective 2: Increase visibility and national ownership	2C: Enhance outreach to end users and decision makers	LDC <ul style="list-style-type: none"> Regional workshops for African/Asian LDCs and SIDS Training events in TV weather presenting 		LDCP, VCP and national partners	1.2: Delivery of weather, climate, water and related environmental products and services to users' communities is improved	1.2.1: Number of NMHSs expressing user satisfaction with the (a) availability, (b) reliability and (c) range of products that are (d) received in time and are (e) an essential contribution to decision making
	2D: Develop leadership and management capacities	<ul style="list-style-type: none"> Enhanced training to develop leaders at various NMHSs organizational levels Development of a network of qualified experts to assist NMHSs with management skills and strategic planning Facilitating twinning arrangements 	-	-		
		ETR <ul style="list-style-type: none"> Offer annual Workshops on Human Resources Development for NMHSs in Developing Countries 				
	2E: Reinforce national support to meet societal needs for weather, climate and hydrology services	<ul style="list-style-type: none"> Categorizing NMHSs according to the level of services and use the categories to guide assistance Link the categories to human, institutional, infrastructural and procedural capacities needed to provide the required levels of service (for information on NMHSs categories, see Annex 6: Categorization of NMHSs) Tailoring fellowship and training activities as well as technical assistance to address identified deficiencies and WMO priority areas 	-	-		
		PWS <ul style="list-style-type: none"> Effective decision support systems are the main outcome of delivering useful Services. Such systems require the establishment of mechanisms to enhance the coordination and collaboration among the various stakeholders for improved uptake of weather, climate and water information to develop strategies applicable to their needs. Some specific activities to address are: <ul style="list-style-type: none"> Training management and staff of NMHSs to better understand the impact of extreme meteorological and hydrological events on the national economy; Establishment of sustainable operational and collaboration mechanisms between NMHSs and stakeholders; Development or customization of specific weather and climate information products and services to respond to the requirement of the stakeholders and provision of training to stakeholders in weather and climate information products and services Provision of expert support for the use of weather and climate products in the decision-making processes Setting up economic decision support tools and case studies; Assessing the societal impact of weather- and climate-related events in collaboration with social science experts; and Understanding and improving the utilization of hydrometeorological information by stakeholders through societal and economic research and application projects. 		PWSP has developed and implemented LTD (Learning through Doing) projects that employ many of the principles and actions outlined for this strategic approach. The lessons learnt and experiences of PWSP could be applicable, in collaboration with many other WMO Programmes, RA and TC experts as well as social scientists and economists from collaborating agencies and organizations	1.2: Delivery of weather, climate, water and related environmental products and services to users' communities is improved	1.2.1: Number of NMHSs expressing user satisfaction with the (a) availability, (b) reliability and (c) range of products that are (d) received in time and are (e) an essential contribution to decision making

Capacity Development Strategy					WMO OP 2012-2015	
Strategic Objectives	Strategic Approaches	Key Activities	Cost implication ¹	Responsible bodies	Key Outcome	Key Performance Indicator
Objective 3: Optimize Capacity Development Knowledge Management (CDKM)			CHF 935,000			
	3A: Enhance mechanisms for collecting and sharing of up-to-date information relating to NMHSs development	<ul style="list-style-type: none"> Completing the development of a Country Profile Database Developing coordinated information collection mechanisms including surveys and online submissions from Members Relevant M&E data on NMHSs CD will be made available for access by stakeholders including partners and investors 	-	-		
		MMOP <ul style="list-style-type: none"> Assist NMHS to maintain a national stakeholders forum for coastal inundation forecasting (for coastal inundation management, CIFDP, Phase 1 to 4)² 		JCOMM/ CHy (CIFDP Steering Group)	1.2: Delivery of weather, climate, water and related environmental products and services to users' communities is improved	1.2.1: Number of NMHSs expressing user satisfaction with the (a) availability, (b) reliability and (c) range of products that are (d) received in time and are (e) an essential contribution to decision making
		WWW/WIGOS <ul style="list-style-type: none"> Implement WIGOS Operational Information Resource (WIR) Feedback mechanism regarding progress on actions from the Implementation Plan for the Evolution of Global Observing Systems (EGOS-IP) through national contact points 		ICG-WIGOS	4.1 WMO Integrated Global Observing System is implemented	<ul style="list-style-type: none"> Completion of WIGOS milestones according to WIGOS implementation plan Increased availability of observations for users
		LDC <ul style="list-style-type: none"> Development and enhancement of LDC Websites 		LDPC, VCP	1.2: Delivery of weather, climate, water and related environmental products and services to users' communities is improved	1.2.1: Number of NMHSs expressing user satisfaction with the (a) availability, (b) reliability and (c) range of products that are (d) received in time and are (e) an essential contribution to decision making
	3B: Share best practices and success stories relating to the development of NMHSs	<ul style="list-style-type: none"> Establishing web-based and other mechanisms Encouraging Members to prepare specific examples of successes and challenges in capacity development of their NMHSs Highlighting lessons learned and principles that could be applied in other countries 	-	-		
		MMOP <ul style="list-style-type: none"> Maintain JCOMM (online) Catalogue of Practices and Standards (http://www.jcomm.info--> Standards and Best Practices, or bestpractice.iode.org) 		JCOMM/ CHy (Management Committee)	1.2: Delivery of weather, climate, water and related environmental products and services to users' communities is improved	1.2.1: Number of NMHSs expressing user satisfaction with the (a) availability, (b) reliability and (c) range of products that are (d) received in time and are (e) an essential contribution to decision making
		WWW/WIGOS <ul style="list-style-type: none"> Keep Rolling Review of Requirements web pages up to date on the WMO website; consolidate feedback from Members on progress with regard to the implementation of actions from the EGOS-IP, analyse results, produce synthesis, and communicate findings and recommendations back to Members 		ICG-WIGOS	4.1 WMO Integrated Global Observing System is implemented	<ul style="list-style-type: none"> Completion of WIGOS milestones according to WIGOS implementation plan Increased availability of observations for users
		AeMP <ul style="list-style-type: none"> Collection of examples of best practice of MSTA (MET Services in the Terminal Area) from Members Development & demonstration of new MSTA models to Members and aviation users Organization of ET-MTSA/TT-UN meeting(s)/user briefings as required Study of user needs in coordination with ICAO 		CAeM	1.2: Delivery of weather, climate, water and related environmental products and services to users' communities is improved	1.2.1: Number of NMHSs expressing user satisfaction with the (a) availability, (b) reliability and (c) range of products that are (d) received in time and are (e) an essential contribution to decision making

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Strategic Objectives	Strategic Approaches	Key Activities	Cost implication ¹	Responsible bodies	Key Outcome	Key Performance Indicator
Objective 3: Optimize Capacity Development Knowledge Management (CDKM)	3B: Share best practices and success stories relating to the development of NMHSs	RP <ul style="list-style-type: none"> Development of the online guide on the Role, Operation and Management of National Meteorological Services to provide a one-stop, consistent and up-to-date reference resource to assist managers of an NMS 		RAs, Secretariat	6.2: Infrastructure and operational facilities of NMHSs and Regional Centres are improved, particularly in developing and least developed countries	6.2.1: Number of NMHSs with improved infrastructure and operational facilities
	3C: Enhance communities of practice dealing with the development of NMHSs	<ul style="list-style-type: none"> Coordinating the work of informal groupings into communities of practice to provide assistance, insight, experience and knowledge of development and implementation of global and regional initiatives relating to development of NMHSs 	-	-		
		VCP <ul style="list-style-type: none"> Share best practices and coordinate assistance efforts through the VCP/IPM and project data bases 		RAs, Secretariat	6.2: Infrastructure and operational facilities of NMHSs and Regional Centres are improved, particularly in developing and least developed countries	6.2.1: Number of NMHSs with improved infrastructure and operational facilities
		RP <ul style="list-style-type: none"> Exchange information and explore cooperation with regional meteorological societies Explore use of INTAD network to advance regional development assistance 		RAs, Secretariat	6.2: Infrastructure and operational facilities of NMHSs and Regional Centres are improved, particularly in developing and least developed countries	6.2.1: Number of NMHSs with improved infrastructure and operational facilities

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Objective 4: Reinforce Resource Mobilization and Project Management			CHF 336,000			
	4A: Enhance coordination and actively explore new funding opportunities and develop proposals through dialogue with stakeholders and development partners	<ul style="list-style-type: none"> Develop mechanisms for sharing information regarding funding opportunities and to facilitate access to donors 	-	-		
		VCP/RMO <ul style="list-style-type: none"> Develop Information module on Resource Mobilization Opportunities by NMHS at National and Regional Level Continuously catalogue the key focus areas of development partners and donors and relay this information to WMO Programmes, ROs and PRs Engage with IPM, NMHS and other donors to secure support and continuously seek contributions to Emergency Assistance Fund Renew / establish new multi-annual agreements for collaborative activities in support of Weather and Climate and Hydrological Services with UNDP, WB, UNEP, EU-ACP, EC, Regional Development Banks, major Overseas (AID) Development Agencies and Private Foundations Identify needs at regional and national level in association with RAs, PRs and Regional Offices Support NMHSs to develop and submit proposals to Climate Investment Funds – CIFs (GEF, Adaptation Fund, Green Fund, etc.) 			6.2: Infrastructure and operational facilities of NMHSs and Regional Centres are improved, particularly in developing and least developed countries 6.4: Capacities of NMHSs are enhanced through cooperation and partnerships with other national and regional organizations	6.2.1: Number of NMHSs with improved infrastructure and operational facilities 6.4.1: Development projects and activities funded through voluntary and extra-budgetary resources
		MMOP <ul style="list-style-type: none"> Assist members to identify resources to enhance coastal inundation forecasting (CIFDP)² 		JCOMM/ CHy (CIFDP Steering Group)	1.2: Delivery of weather, climate, water and related environmental products and services to users' communities is improved	1.2.1: Number of NMHSs expressing user satisfaction with the (a) availability, (b) reliability and (c) range of products that are (d) received in time and are (e) an essential contribution to decision making
	4B: Enhance capacity to develop, implement, monitor and evaluate projects	<ul style="list-style-type: none"> Creating a project coordination system within the Secretariat to assist in the development and coordination of large scale projects Developing a monitoring and evaluation toolkit and assistance and guidance in gathering data and information Workshops and courses on Project Management 	-	-		
		VCP/RMO <ul style="list-style-type: none"> Support RM workshops at regional level: Provide RM input to Regional Technical Workshops as required Support regional workshop on project management, and monitoring and evaluation for NMHSs Support WMO Scientific and Technical Programmes to source funds to implement activities as outlined in Compendium of Projects 2012-2015 Seek accreditation for WMO as Multi-lateral Implementing to CIFs as appropriate, in particular the Green Fund 			6.4: Capacities of NMHSs are enhanced through cooperation and partnerships with other national and regional organizations	6.4.1: Development projects and activities funded through voluntary and extra-budgetary resources
		RP <ul style="list-style-type: none"> Placement of project managers in WMO office in the region 		RP with RMO/PCU	6.4: Capacities of NMHSs are enhanced through cooperation and partnerships with other national and regional organizations	6.4.1: Development projects and activities funded through voluntary and extra-budgetary resources

Capacity Development Strategy					WMO OP 2012-2015	
Strategic Objectives	Strategic Approaches	Key Activities	Cost implication ¹	Responsible bodies	Key Outcome	Key Performance Indicator
Objective 4: Reinforce Resource Mobilization and Project Management	4C: Encourage innovative voluntary and bilateral cooperation	<ul style="list-style-type: none"> Seminars and workshops to facilitate south-south cooperation Promote cooperation between NMHSs and their ODA agencies in development assistance Strengthen and expand VCP Encourage communities of interest such as the IPM 	-	-		
		VCP/RMO <ul style="list-style-type: none"> Support post event needs assessments as needed Prepare requests for Emergency Assistance Promote the model of NMHS in developing countries partnering with their ODA to direct financing towards projects in LDCs for Capacity Development of NMHS and Weather and Climate Services Facilitate NMHSs and WMO engagement in the "Delivering as One UN" with strong emphasis on engagement with UN Country Teams Represent WMO in the undg Non Resident Agency Task Team Advocate for the role of WMO/NMHSs in Climate Observations and Climate Change Adaptation and Disaster Risk Reduction; in sustainable development/achievement of MDGs Coordinate VCP through IPMs and expand IPM participation 		RAs, Secretariat	6.4: Capacities of NMHSs are enhanced through cooperation and partnerships with other national and regional organizations	6.4.1: Development projects and activities funded through voluntary and extra-budgetary resources
		RP <ul style="list-style-type: none"> Encourage and facilitate regional and inter-regional "twining arrangements" especially in priority areas Include south-south cooperation in responsibilities of Regional Office Directors 		RAs, Secretariat	6.4: Capacities of NMHSs are enhanced through cooperation and partnerships with other national and regional organizations	6.4.1: Development projects and activities funded through voluntary and extra-budgetary resources

Capacity Development Strategy					WMO OP 2012-2015	
Strategic Objectives	Strategic Approaches	Key Activities	Cost implication ¹	Responsible bodies	Key Outcome	Key Performance Indicator
Objective 5: Strengthen Global, Regional and Sub-Regional Mechanisms			CHF 4,239,000			
	5A: Strengthen the work of global and regional centres	<ul style="list-style-type: none"> Delivering regional and sub-regional pilot projects and demonstrations with emphasis on the services that support regional issues, and their link with WMO priorities and global systems Assist NMHSs reduce the high cost of observing system expendables and maintenance 	-	-		
		WCP <ul style="list-style-type: none"> Development of Global Seasonal Climate Update (GSCU) (consensus-based) Standardization of Regional Climate Center (RCC) product presentation and dissemination Development of climate curriculum modules for use in RTCs and national training programmes Implementation of trans-regional Regional Climate centre networks for polar regions Establishment of a worldwide system of Regional Climate Centres with special focus on vulnerable developing regions Training aspects related to GPS and RCC infrastructure (GFCS project KO 3.9) <ul style="list-style-type: none"> Development of global and regional Climate Data Rescue initiatives 		WCP/WCSP	3.2: Climate information and prediction products for climate adaptation and risk management are improved 6.2: Infrastructure and operational facilities of NMHSs and Regional Centres are improved, particularly in developing and least developed countries	3.2.2: Number of Members operationally developing and disseminating climate products and information for national needs 6.1.2: Number of NMHSs with (a) increased contribution to regional policy setting; (b) improved awareness by regional users on types of services that can be provided; (c) improved regional user accessibility to forecasts and warnings; (d) improved timeliness of forecasts and warnings delivered from the Regional Centre; and (e) increased accuracy of forecasts and warnings delivered from the Regional Centre
		WWW/WIGOS <ul style="list-style-type: none"> Further develop the network of WMO Regional Instrument Centres (RICs) and Regional Marine Instrumentation Centres (RMICs) 		ICG-WIGOS	4.4 Data Rescue and Data Management systems improved	4.4.1 Number of NMHSs undertaking data rescue or being involved in regional collaborative data rescue initiatives such as MEDARE
	5B: Strengthen global, regional and sub-regional mechanisms to provide support for weather, climate and hydrological services	<ul style="list-style-type: none"> Working with the regional associations to build regional political support for NMHSs services Building partnerships with sub-regional bodies and economic groupings Strengthening RCOF process by providing training and workshop Building on the successful African Conference for Ministers Responsible for Meteorology (AMCOMET), region-wide conferences for ministerial level officials would focus on the socio-economic benefits of investments in NMHSs and the expanding services required of NMHSs Collaborative arrangements with entities in the region with mandates that are complementary to those of WMO can extend WMO's advocacy and support for NMHSs 	-	-		
	WCP <ul style="list-style-type: none"> Development and oversight by CCI-CBS of climate components of Global Data Processing Forecasting System (GDPFS), including development of a Climate Services Manual 			3.2: Climate information and prediction products for climate adaptation and risk management are improved	3.2.2: Number of Members operationally developing and disseminating climate products and information for national needs	

Capacity Development Strategy					WMO OP 2012-2015	
Strategic Objectives	Strategic Approaches	Key Activities	Cost implication ¹	Responsible bodies	Key Outcome	Key Performance Indicator
Objective 5: Strengthen Global, Regional and Sub-Regional Mechanisms	5B: Strengthen global, regional and sub-regional mechanisms to provide support for weather, climate and hydrological services	TCP <ul style="list-style-type: none"> Establishment of institutional arrangements for coordination in tropical cyclone forecasting and warnings in all the five tropical cyclone basins Establishment of Storm Surge Watch Scheme (SSWS) for inclusion of storm surge advisories into the tropical cyclone advisories by RSMCs with activity specialization in tropical cyclones 		TCP, RSMCs/TCWCs, and related Members TCP, MMOP, RSMCs	1.2: Delivery of weather, climate, water and related environmental products and services to users' communities is improved	1.2.1: Number of NMHSs expressing user satisfaction with the (a) availability, (b) reliability and (c) range of products that are (d) received in time and are (e) an essential contribution to decision making
		RP <ul style="list-style-type: none"> Organization of regional seminars and technical conferences to address regional and sub-regional priorities and enhance regional and sub-regional mechanisms Promoting working group activities of Regional Associations Support the 2nd AMCOMET Conference and associated Boards and Task Forces Development of African Strategy for meteorology and climate services Increase WMO staff in the region through hires, secondments, JPO etc Pursue visibility in Ministerial level bodies (e.g., CMO, SPREP, LAS, etc) 		RAs, Secretariat DRA/RAF, LCDP, African Union RAF, African Union DRA and Members	6.2: Infrastructure and operational facilities of NMHSs and Regional Centres are improved, particularly in developing and least developed countries 6.1: Visibility and relevance of NMHSs in national and regional development agendas is improved, particularly in developing and least developed countries	6.1.2: Number of NMHSs with (a) increased contribution to regional policy setting; (b) improved awareness by regional users on types of services that can be provided; (c) improved regional user accessibility to forecasts and warnings; (d) improved timeliness of forecasts and warnings delivered from the Regional Centre; and (e) increased accuracy of forecasts and warnings delivered from the Regional Centre 6.1.1: Number of NMHSs with (a) increased contribution to national policy setting, (b) improved awareness by users on types of services NMHS can deliver, (c) improved user accessibility to forecasts and warnings, (d) improved timeliness of forecasts and warnings; and (e) increased accuracy of forecasts and warnings

Capacity Development Strategy					WMO OP 2012-2015	
Strategic Objectives	Strategic Approaches	Key Activities	Cost implication ¹	Responsible bodies	Key Outcome	Key Performance Indicator
Objective 6: Increase Education and Research Opportunities			CHF 5,953,000			
	6A: Improve access to and provision of fellowships	<ul style="list-style-type: none"> Provision of fellowships and enhancing fellowship opportunities by building partnerships with academic institutions and academic societies Provision of education and training advice to RTCs 	-	-		
		ETR <ul style="list-style-type: none"> Advocating with Members and other groups for additional fellowship opportunities particularly in the high priority areas 		SG (D/DRA, D/ETR & D/RMO) and Members	6.3: Education and training development facilities at national and regional levels are improved, especially in developing and least developed countries	6.3.2: Degree to which Members are getting value for money from the WMO Fellowship Programme
	6B: Strengthen applications of research findings	<ul style="list-style-type: none"> Workshops and seminars to share the information and findings Training workshops on the application of new research findings for operational use 	-	-		
		WCP <ul style="list-style-type: none"> Support to joint CCI-WCRP activities on regional climate predictions and projections 			3.2: Climate information and prediction products for climate adaptation and risk management are improved	3.2.4: Number of Members providing targeted/tailored climate information, products and services, through formal mechanisms including National Climate Outlook Forums, to support user requirements in their countries for adaptation and climate risk management in key socio-economic sectors
		MMOP <ul style="list-style-type: none"> Continue supporting education/training events, jointly with research programmes, on ocean state forecasting and ice analysis – including regular series of Ice Analyst workshops, GODAE summer school, storm surge and wave forecasting trainings 		JCOMM (Programme Areas)	1.2: Delivery of weather, climate, water and related environmental products and services to users' communities is improved	1.2.1: Number of NMHSs expressing user satisfaction with the (a) availability, (b) reliability and (c) range of products that are (d) received in time and are (e) an essential contribution to decision making
TCP <ul style="list-style-type: none"> Continual arrangements with WWRP for scientific workshops inviting forecasters to get familiar with new technology for application into operational tropical cyclone forecasting and warning services, and for training workshops and attachments with support from RSMCs with activity specialization in tropical cyclones for training tropical cyclone and storm surge forecasters from Members of the tropical cyclone regional bodies. Updating the Global Guide to Tropical Cyclones to catch up with advances in science and technology on, and new experience and practices in forecasting and warnings of tropical cyclones. Development of Tropical Cyclone Forecaster Website to serve as a platform to assist forecasters around the world in gaining access to a real-time information as well as forecast products concerning tropical cyclone development, movement, intensity and structure, and also provide research outcomes and training materials as a source of information for the forecasters to improve their skills and competencies in tropical cyclone forecasting 			TCP, RSMCs/TCWCs TCP, HKO	1.2: Delivery of weather, climate, water and related environmental products and services to users' communities is improved	1.2.1: Number of NMHSs expressing user satisfaction with the (a) availability, (b) reliability and (c) range of products that are (d) received in time and are (e) an essential contribution to decision making	

Capacity Development Strategy					WMO OP 2012-2015	
Strategic Objectives	Strategic Approaches	Key Activities	Cost implication ¹	Responsible bodies	Key Outcome	Key Performance Indicator
Objective 6: Increase Education and Research Opportunities	6B: Strengthen applications of research findings	WCRP <ul style="list-style-type: none"> Engaging regional experts in climate research, modelling and analysis through analysis of global simulations (CMIP5) and regional model outputs (CORDEX). To empower young generation of climate scientists to be more active and gain experience in analysis and interpretation of climate information to serve the needs of decision makers and experts who are pursuing climate adaptation and risk management planning Train-the-Trainers in order to assist the research community and institutions of higher learning in education, training and development of next generation of climate scientists; Scientific Exchange to provide greater opportunities for the early career scientists, especially those from developing regions, to become more active in global, regional and national climate research and application, To promote greater representation of scientists from developing countries and young scientists in International conferences and workshops. 		WCRP	3.1: Improved climate monitoring, long range forecasts and long-term projections 5.1: Research in climate prediction/projection to improve the skills of seasonal, decadal and longer timescales is enhanced	3.1.1: Number of Members issuing (a) monthly predictions; (b) seasonal predictions; (c) climate watch bulletins; and (d) long-term projections 5.1.1: Number of new activities advancing climate research capacity at the global and regional level, especially for early career scientists and scientists from developing and LDC countries 5.1.2: Number of early career scientists and scientists from developing and least developed countries that participate in WCRP activities to advance climate research 5.1.3: Degree of satisfaction among NMHSs with the skill of climate predictions
		WWRP and GAW <ul style="list-style-type: none"> Working Groups, Expert Teams, Science Advisory Committees and the Management Group of the Commission for Atmospheric Sciences coordinate a global research effort and establish and communicate best practices within WWRP and GAW in such a way that it responds to Member needs and provide a forward looking perspective on emerging requirements and technologies. Support and arrange specialized symposiums, workshops and conferences where, among others, experts from the structure of CAS share knowledge, provide advice, guidance, training and support to scientists from especially developing countries (IWAQFR, nowcasting research symposiums, verification training workshops, etc.) Support dedicated training events to address WMO Members capacity to perform high quality observation, learn best practices on quality control and quality assurance, data analysis and modeling (GAWTEC, measurement intercomparisons, etc.). Support the participation of experts as well as scientists from developing countries in key scientific events not organized by WMO that would benefit knowledge transfer and exchange between WWRP and GAW and other relevant initiatives. 		ARE: WWR, AER, CAS ARE: WWR, AER ARE: WWR, AER ARE: WWR, AER	5.1: Research in climate prediction/projection to improve the skills of seasonal, decadal and longer timescales is enhanced	5.1.1: Number of new activities advancing climate research capacity at the global and regional level, especially for early career scientists and scientists from developing and LDC countries 5.1.2: Number of early career scientists and scientists from developing and least developed countries that participate in WCRP activities to advance climate research 5.1.3: Degree of satisfaction among NMHSs with the skill of climate predictions

Note 1: The assumption used to determine the cost implication is as follows:

1. Non-staff costs are captured. Staff costs are excluded.

2. Costs of activities are captured by objective as follows:

Objective 1: costs of activities relating to the sessions of Technical Commissions, the Training Programme, the Regional Programme (20 per cent only), and Expected Result 7;

Objective 2: costs of activities relating to the Public Weather Service Programme, the Aeronautic Meteorology Programme, the Tropical Cyclone Programme, the Disaster Risk Reduction Programme, the LDS Programme (50 per cent only), the Marine Meteorology Programme, and the Regional Programme (10 per cent only)

Objective 3: costs of activities relating to the Regional Programme (10 per cent only), and the REM costs for information and communication technologies (10 per cent only)

Objective 4: costs of activities relating to the Resource Mobilization Programme and the VCP Programme

Objective 5: costs of activities relating to the Regional Programme (60 per cent only)

Objective 6: costs of activities relating to fellowships and the Research Programme

Note 2: The general framework of the WMO Coastal Inundation Forecasting Demonstration Project (CIFDP: <http://www.jcomm.info/CIFDP>) directly addresses all the Strategic Objectives 1 to 6, through supporting NMHSs to enhance capabilities for coastal inundation forecasting, taking a part of national coastal management.