



Water Information Systems Experts Planning and Development Workshop

June 7th to 10th 2011
Coco Creole Resort
Rodney Bay, St. Lucia

Agenda

DAY 1 Experiences with water Information management; national and regional reporting obligations			
8:00 - 9:00	Registration		
9:00 - 9:30	Welcome remarks	General introductions; welcome statements	<ul style="list-style-type: none"> • Permanent Secretary, St. Lucia Ministry of Agric (Water Resources Agency); • David Farrell, CIMH; • Christopher Cox, CEHI; • Christopher Corbin, UNEP-CAR/RCU
9:30 - 9:45	Participant introductions	Include brief statement on role in the agency represent by each participant	Facilitated - Christopher Cox, CEHI
9:45 - 10:00	Workshop overview and Day 1 objectives	Provide a detail of the presentations, format of the workshop, anticipated outputs from the workshop	Christopher Cox, CEHI
10:00 - 10:30	BREAK		
10:30 - 11:00	Presentations: State of water information systems in the region; review of existing and previous initiatives	International water management protocols; particular reference to standards set by the WMO; Challenges, limitations and avenues for improvement and replication	Moderated by TBD <ul style="list-style-type: none"> • David Farrell, CIMH; • TBD, CATHALAC
11:00 - 11:30	Presentations: Existing reporting obligations by treaty (other frameworks) for the region	Reporting requirements for relevant conventions and frameworks; Rio Conventions; Cartagena Conventions (TR-33); St. Georges Declaration. Present examples of outputs and the decision making applications	Moderated by TBD <ul style="list-style-type: none"> • Christopher Corbin, UNEP-CAR/RCU; • David Farrell, CIMH;
11:30 - 12:00	Plenary discussion		Moderated by TBD
12:00 - 1:00	Presentations (10 minute): State of the hydrometric and water quality observation stations in select countries; describe the tools, instruments used, data archival processes (software used), administrative processes	Barbados experience	Alex Ifill, BWA
		Cuba experience	Marlen Perez, CIMAB
		Jamaica experience	Herbert Thomas, WRA
		St. Vincent & the Grenadines experience	Marco Audain, CWSA
		Trinidad & Tobago experience	TBD, WRA
1:00 - 2:00	LUNCH		

2:00 – 2:30	Presentation: The community perspective for water quality monitoring	How NGO and CBO groups are conducting monitoring ; data applications for decision making at community and state level	Mary-Beth Sutton, Caribbean SEA
2:30 – 3:00	Plenary discussion	Challenges, limitations; avenues for improvement and replication	Moderated by TBD
3:00 - 3:30	BREAK		
3:30 - 4:00	Presentation: Best practice database management	Focus on what works best – regional and national perspectives; discussion on standard software (MS Excel, Access); customized databases; possibilities to interface with GIS applications	TBD
4:00 - 4:30	Plenary discussion	Reflections on Day 1	Christopher Cox, CEHI

DAY 2 Working sessions on development of a common framework for water data capture, archival and dissemination			
9:00 - 9:15	Day 2 objectives	Participants given instructions for workgroups. This will include assignment of discussion Chairs and rapporteurs and mode of reporting. The intention is to capture information in a style that provides the basis for production of a protocol/framework	Christopher Cox, CEHI
9:15 - 10:00	(A) Climatic working group – development of working model/guideline	Consider best approaches to data structure for hydro-meteorological monitoring (note: exclude the water quality components); look at parameters of interest; data encoding/formatting using standard practice	Lead - David Farrell, CIMH
	(B) Water quality working group – development of working model/guideline	Consider best approaches to data structure for surface, ground water and coastal water quality monitoring; look at parameters of interest; data encoding/formatting using standard practice	Lead - Marlen Perez, CIMAB
10:00 - 10:30	BREAK		
10:30 - 12:30	Workgroup deliberations continue		
12:30 - 1:30	LUNCH		
1:30 - 2:30	Workgroup deliberations continue		
2:30 - 3:00	BREAK		
3:00 - 4:00	Joint working session: Integrating the outputs from the working groups	Combine the two developed frameworks into a single framework as appropriate	Moderated by TBD
4:00 - 4:30	Plenary discussion	Review of drafts of framework/protocol; Discussion on how to assist countries that are currently disadvantaged; Action points for moving toward a standardized Caribbean database. Reflections on Day 2	David Farrell, CIMH

DAY 3 Integrating GIS and spatial applications in water resources information systems			
9:00 - 9:15	Day 3 objectives	Brief synopsis of Day 2 and how outputs from Day 2 will be considered for Day 3 deliberations and what are the expected outcomes	Christopher Cox, CEHI
9:15 - 9:45	Presentation: Representing water parameters spatially	General presentation on GIS and water data management, justification for moving into GIS applications, How can GIS tools be used to influence decision making in land zoning and planning, public health and emergency planning. Where is the state of the art in marrying GIS and water leading? Look at modeling applications.	Alex Ifill, BWA
9:45 - 10:30	Presentations: National applications of GIS for water resources management	Cuba experience	Marlen Perez, CIMAB
		Trinidad and Tobago experience	TBD, WRA
		Barbados experience	Alex Ifill / Ramon Roach, BWA / CZMU
10:30 - 11:00	BREAK		
11:00 - 11:30	Presentation: State of art in Caribbean water information system (WIS) applications	Presentation on the dedicated water information systems in the Caribbean; experiences, capabilities, challenges, use of GIS tools to assist in developing the data archive. On-line demonstrations	Jim Joseph, Consultant Marc Morell, CARIBSAT
11:30 - 12:00	Presentations: Experiences by national users; decision making context	Grenada experience	Trevor Thompson, LUD
		Jamaica experience	Herbert Thomas, WRA
12:00 - 12:30	Plenary discussion	Upgrading NWIS to generate information products	Moderated by TBD
12:30 - 1:30	LUNCH		
1:30 - 2:30	Plenary discussion: Standard protocol for spatial information	Best approaches for integrating the monitoring/database frameworks into GIS format/spatial databases; formulation of standard database(s) - deciding what are the critical elements that all spatial databases must contain	Moderated by Marlen Perez, CIMAB
2:30 - 3:00	BREAK		
3:00 - 4:00	Plenary discussion: The case of open-source versus proprietary software	Challenges using proprietary products; free-ware, what are the best options. Linking existing systems with GIS	Facilitated discussion led by Alex Ifill, BWA; Marlen Perez, CIMAB

4:00 - 4:30	Way forward	Toward a common spatial platform for water resources management; Reflections of Day 3	Facilitated discussion - led by David Farrell, CIMH
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DAY 4 Sustainability of National Water Information Systems			
9:00 - 9:10	Day 4 objectives	Guiding principles for sustainability and the day's expected outcomes	Ms. Catherine Senecal, McGill University
9:10 - 9:20	Presentations: Institutional hurdles: national perspectives on strategies for meeting information needs of managers; recruiting and maintaining human resources; securing political support and financial resources; user access and data security; inter-agency coordination	St. Lucia experience	Deborah Bushell
9:20 - 9:40		Jamaica experience	Herbert Thomas
9:40 - 9:50		Grenada experience	Trevor Thompson, LUD
9:50 - 10:00		Guyana experience	Garvin Cummings, Guyana Ministry of Agriculture
10:00 - 10:30	Plenary discussion:	How to manage institutional challenges; best practices	Moderated by Dr. Chandra Madramootoo, McGill University
10:30 - 11:00	BREAK		
11:00 - 12:30	Panel discussion: Environmental indicators: perspectives on successful use of water quality data in various sectors; strategies to include water quality data in national WIS. Demonstrate private sector partnerships toward financing of water info systems based on value of data.	Focus on Tourism, Agriculture, Potable water supply, Health, Emergency management sectors; increasing relevance of WIS by meeting developmental needs	Ramon Roach; Herbert Thomas; Representative, National Emergency Management Office, St. Lucia, others TBD; Moderated by Christopher Cox, CEHI
12:30 - 1:30	LUNCH		
1:30 - 2:00	Presentation: CDPMN Drought Monitor	Information products: examples of added features to a WIS which generate information products to benefit managers and guide policy in various sectors; going beyond the archive function of the data base	Adrian Trotman, CIMH
2:00 - 2:30	Plenary discussion:	information products to increase the relevance of NWIS	Moderated by David Farrell, CIMH
2:30 - 3:00	BREAK		

3:00 - 3:30	Presentation: Role of training, higher education and examples of educational opportunities: specialized short courses, new on-line courses, addition of material to existing curriculum, internships, research	Dissemination and education: examples of current programs and educational offerings that can be developed and used to disseminate the application of NWIS or to teach operational aspects of it or to expand relevance	David Farrell, CIMH Jacob Opadeyi, Adrian Cashman, UWI
3:30 - 4:00	Plenary discussion	Determination of priority list of educational methodologies for NWIS; resources; partnerships	Moderated by Adrian Cashman, UWI
4:00 - 4:30	Concluding remarks		Christopher Cox, CEHI

Instructions for Day 2 working groups

Water quality (pollution) and Climate/natural system (volume) working groups

1. **Divide the audience** into the two groups based on the participants' professional alignment;
2. **Facilitate a general discussion** on the essential parameters for monitoring – use the country presentations from Day 1 as a basis for defining;
3. **Facilitate an in-depth discussion** on the data architecture and formats that are used by experienced national and/or regional agencies;
4. **Preparation of data template:** This will be an interactive session where a blank table is prepared that represents the various fields of data that should constitute typical a water information database. Participants will be asked to contribute appropriately. The template must be based on international guidelines (WMO, others). Discussion should entail the need for each of the parameters;
5. **Test various data entry scenarios:** Participants will be asked to come up with various scenarios of data capture/input for different circumstances; e.g. one-off water quality measurements vs. periodic observations of permanent stations vs. continuous monitoring. This exercise can be extended to surface, ground and coastal water observations. Participants will then determine the degree to which the template is useful and will modify as appropriate until a suitable model is found that meets most needs. **Question to be asked;** to what extent are external influencing parameters important for capture? Example, land use, point sources of sources of pollution, etc?
6. **Prepare the final template** document. This will be used as the initial draft for the guideline that will be developed for practitioners in Caribbean;
7. **Merge the findings** for the two work groups.