

## Report on MLMT Training at CIMH, Barbados



5-28-12

**Title of Training:** Mid-Level Meteorological Technician (MLMT) Training course;  
Formerly WMO Class III

**Duration of Training:** 29<sup>th</sup> August 2011 – 25<sup>th</sup> May 2012 (9 months)

**Venue of Training:** Caribbean Institute of Meteorology and Hydrology (CIMH), Husbands,  
St. James, Barbados

**Training Provider:** Caribbean Institute of Meteorology and Hydrology (CIMH)

**Sponsors for the Training:**

1. Partners for the South - South Cooperation Project between Pacific and the Caribbean SIDS on Climate Change Adaptation and Disaster Risk Management.
2. United Nation Development Program (UNDP)
3. Japan Overseas Cooperation (JOC)
4. World Meteorological Organization (WMO)

**Participants:** South-South project sponsored participants form the South West Pacific;  
**Williams Bae WORWORKON (Vanuatu)**, Kony NATO (PNG), Wilson SAEGA  
(Solomon Is.) and Wilson VAAUA (Western Samoa).



### **2011 – 2012 MLMT participants from CIMH**

***Back row (Left - right);*** Kony NATO  
(PNG), Chris SOYER (Jamaica),  
Brown ANDESON (Barbados), Wilson  
VAAUA (Samoa)

***Front row (left – right);*** Williams  
WORWORKON (Vanuatu), Sheri Ann  
SPRINGA (Barbados), Annie JOSHEP  
(Dominica), Wilson SAEGA (Solomon  
Is)

**Caribbean Institute of Meteorology and Hydrology:** The Caribbean Institute for Meteorology and Hydrology (CIMH) is a training and research organisation formed by the amalgamation of the Caribbean Meteorological Institute (CMI) and Caribbean Operational Hydrological Institute (COHI). The Caribbean Meteorological Institute was established in 1967 by the member states of the Caribbean Meteorological Organisation (CMO) while the Caribbean Operational Hydrological Institute (COHI) was established in 1982. Even though the two Institutes were amalgamated since the mid 1980's, the organisation continued to be known as the Caribbean Meteorological Institute up until September 1999 when the name was officially changed to reflect the dual role of the Institute. Responsibility for the operation of the Institute rests with the sixteen Commonwealth Governments which comprise the CMO.

The Institute is located at Husbands, in the parish of St. James, Barbados, on the western side of the island. This location is about two kilometres from the Cave Hill Campus of the University of the West Indies, with which the Institute is affiliated. The Institute was designated as a Regional Meteorological Training Centre by the World Meteorological Organisation (WMO) in 1978 in recognition of the high standard of its training programmes. Students from all parts of the Caribbean, and sometimes beyond, are trained in such branches of meteorology as weather observing, forecasting, radar and satellite meteorology, instrument maintenance, agrometeorology, and climatology, and in operational hydrology. Hence the CIMH is the education, training, and research arm of the Caribbean Meteorological Organisation (CMO).

The sixteen member countries participating in the CMO are Anguilla, Antigua and Barbuda, Barbados, Belize, British Virgin Islands, Cayman Islands, Dominica, Grenada, Guyana, Jamaica, Montserrat, St. Kitts/Nevis, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago, and the Turks and Caicos Islands.

The primary functions of the Institute are to:

1. Provide facilities for the **training** of various categories of meteorological and hydrological personnel.
2. Operate as a centre of **research** in meteorology and hydrology and associated sciences.
3. Operate as **contractors and consultants** on various meteorological and hydrological projects
4. Maintain a service for the upkeep, repair, and calibration of meteorological instruments
5. Provide advice to participating governments on meteorological and hydrological matters
6. **Collect, analyse, and publish** meteorological and hydrological data

Since the first training course which commenced in 1968, more than 1400 students have been trained at the Institute in the various branches of meteorology, while more than 200 have been trained in hydrology since the inception of this program in 1982. Students for these courses come from the sixteen member countries of the Caribbean Meteorological Organization (CMO), as well as from non-member countries such as the Bahamas, Suriname, and some African and SW Pacific countries. The training program is designed to ensure that meteorology and hydrology make their maximum contribution to the economic development of the region.

The meteorology program is conducted at the four WMO classified levels;

1. Entry-Level Technician (Meteorological Assistants - Observers), formerly WMO Class IV
2. Mid-Level Technicians (Senior Meteorological Assistants), formerly WMO Class III.
3. Senior-Level Technicians (Forecasters), formerly WMO Class II
4. BSc. Meteorologist, formerly WMO Class I

While the hydrology program also offered at the two WMO classified levels;

1. Hydrological Technicians, formerly General Technicians.
2. Diploma in Hydrology formerly, Higher Technicians.

The programs are designed to upgrade the skills of personnel working in the field of water resources at the operational level.

**Mid-Level Met Technician Course Content:** This is an eight (8) months course and is intended for experienced observers who are expected to supervise and instruct Entry-level technicians and assist higher level personnel with the processing of data and in the preparation of meteorological and other information. Graduates are expected to:

- a) Have a thorough knowledge of the rules and regulations governing the observing, recording and use of meteorological and other data
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- b) Quality control data and complete simple statistical and other analysis of the data
- c) Prepare summaries and reports of the analysed data
- d) Assist with field and other experiments in the areas of specialisation
- e) Inspect and set-up weather observation sites
- f) Maintain, repair and calibrate relevant meteorological instruments

The first part of the course which is like the foundation of the training program covers the Topics of:

- Mathematics
- Physics
- General Meteorology
- Instruments and Observations
- Statistics
- GIS

After foundation, the Students are then specializes in one of the following areas:

- 1) Applications of meteorology
  - a) Aeronautical Meteorology
  - b) Climatology
  - c) Hydrometeorology
  - d) Agrometeorology
- 2) Instrument maintenance and repair
  - a) Review of instruments and observations
  - b) Electricity
  - c) Electronics
  - d) Principles of meteorological instruments
  - e) Technical practices

**A personal perspective on the Training:** The eight (8) months training (including the attachment) was very comprehensive and successful. I am ecstatic to have achieved "Credit" in the formal training and putting together 4 training proposals to present them to my Director on my return.

I have acquired a thorough knowledge of the rules and regulations governing the observing, recording and information on the use of meteorological data to hydrology, Agriculture, Climate change and Aviation industry. I have also gained more knowledge in Quality control and simple statistical and other analysis of the relevant data to prepare summaries and reports to help in decision making within my organization. Also now I have a better understanding of Inspecting and setting-up weather observation sites including the maintenance of basic meteorological instruments

Very importantly Caribbean and the small islands of the South Pacific have a lot of similarities in terms of the geography and climate, hence the effective risk reductions practices in both region

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should be able to achieve the same results. Therefore my proposed training programs, I have incorporated the training programs provide by CIMH and the passed VMGD's training practices. Also as much as possible I have tried make sure it is in line with the VMGD development plan and WMO guidelines.

Once the proposals are approved by the Vanuatu Permanent Representative (PR) to WMO and RMTTC (Fiji), then the logistics (funding & exact dates) will roll in. Apart from minor changes that may be included or omit, I strongly believe that the proposals will be implemented in Vanuatu in the near future.

**Challenges:** Overall I really enjoyed the CIMH training and especially attending the same training with my four (4) colleagues from SW Pacific was a bonus. The few minor challenges faced during the duration would be;

1. The duration of the training. Nine (9) months away from work and family is a very long time. Most of the NMHS's in the South Pacific have limited human resources, hence while it is very important to send officers for trainings, it will also mean that extra people will be needed to cover for the duties and or less people on the job, hence more funding (overtime, extra personals & etc), quality of data, withholding other activities and etc.
2. The dialog used at CIMH (Caribbean) is somewhat different from what is used in the SW pacific which makes communication and learning a bit difficult. During our 9 months at CIMH, I could only understand about 50% of what some of the teachers were saying, but only 20-50% from the locals.
3. During the training periods our monthly stipends payments were don't through cheaques from UNDP Barbados. At times Mr. Clarke from UNDP, has to drop it during weekends (when he was available), payments coming late or we have to go and pick it up from UNDP which is traveling by bus (03) from CIMH/Home to Bridgetown then walk to another bus terminal to get bus (11) to UNDP office. However using my ANZ ATM in Barbados to access my monthly stipends, I thought it was more appropriate, secure and effective.
4. I felt that during the training period or at least the first few months, there were a lot of unknowns or uncertainties that could have been resolved if a briefing had been done between UNDP and the group before the departure. Things like how the stipends will be paid, other types of payments or entitlements, emergency arrangements and etc should be made known in advance.
5. If there is a need to have someone as a liaison officer or have a person in-charge of the group mission, it should be made know to the group by UNDP. This is because while I see the importance and was taking the leading role for the group, there were certainly some concerns

**Turning Ideas into Actions:** The trainings at the CIMH not only improved my understanding in the field of Meteorology, but very importantly the attachment provided an avenue for me to see things as a trainer and or training coordinator which fits in very well with my duties and responsibilities in the Vanuatu Meteorology and Geo-Hazards department. Below is some proposed training activities that I have develop during my attachments at the CIHM and would present it to my Director for his comments on my return seek his approval for implementation in Vanuatu.

I strongly believe that the proposed trainings activities are in line with the aim and objective of the South-South project; *“ to encourages the exchange of ideas, experiences and best practices*

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between the Small Islands Developing States in the Pacific and the Caribbean, in order to find suitable solutions and replicate best practices for addressing the various threats posed by climate change and disasters''. At the same time addressing the capacity building issues in the VMGD and the communities of Vanuatu, upgrading personals of the VMGD according to the world governing body (WMO) and last but not least, getting everyone becoming more proactive in addressing DRR in Vanuatu.

The proposed trainings activities are;

	<b>Training Program</b>	<b>Proposed time</b>	<b>Remarks</b>
1	Training Workshop Obs Capacity Building	Jul/Aug 2012	Included in VMGD 2012 budget
2	Rainfall Recorder	2013	Seek External funding
3	Mid-Level Meteorological Technician (MLMT)	2013 (May- Sept)	- Internal/external funding - May extend invitation to other countries - Will be an ongoing training
4	Entry- Level Meteorological Technician (ELMT)	2013	- Internal funding & base on new recruitments - Will be an ongoing training

**Recommendation:** For the benefits of fulfilling the aim and objective of the South-South project, I strongly believe the following recommendations in addressing Disaster Risk Reduction (DRR) and Disaster Management (DM) with regards to climate change in Vanuatu and regionally should be considered:-

1. The WMO Regional Meteorological Training Center (RMTC) in Fiji in collaboration with other NMHSs in the SW Pacific should be running or looking into running similar trainings (at least a full ELMT and MLMT syllabus). If for some reason the RMTC (FMS) can't run these courses, there should be a clear pathway between the RMTC (FMS) and the NMHS's training section/units to allow for a proper and effective coordination of trainings between both the NMHSs and RMTC (FMS).
2. The focus of the South-South project in funding student to CIMH is very valuable to the NMHSs and should continue into the future. Likewise the idea of supporting local and regional trainings within the SW Pacific region to transfer the knowledge gained at CIMH, will be very cost effective, might take less time and beneficial to our colleague back in our various offices including other non participating NMHS around the region.
3. I strongly believe that the proposed training programs (above) are in line with the aim and objectives of the South-South project. Since almost 95% of topics (ELMT & MLMT courses) are a replica from CIMH, it is according to the WMO guidelines. The rest of the 5% or so is included to basically reflecting the VMGD local operation and development plan. Therefore I am humbly requesting that the VMGD management, RMTC (FMS), UNDP and SPREP to consider the proposal and make further comments where necessary and very importantly provide financial support towards the implementation of the two programs (ELMT & MLMT) at VMGD in Vanuatu.

**Acknowledgements:** I hereby would like to thank the office of the UNDP both in Fiji and Barbados for the coordination and support towards this training project. Special thanks to UNDP, SPREP, Japan Overseas Cooperation (JOC) and World Meteorological Organization (WMO) for the financial support towards the training and CIMH for accepting me to undertake the training at the institution. A very special thank you to Ms. Karen Bernard and Mr. Marlon Clarke form UNDP (Fiji/Barbados) for their tremendous support and timely liaisons between the group and the UNDP office or other parties concerned to make our study and stay in Barbados enjoyable and very successful. And last but not least I would like to acknowledge the Principal and wonderful staffs, who work tirelessly to make sure received what we went for both in and out of class during the 9 months. I learnt a lot during the Training as well as meet a lot of friends from Barbados and elsewhere in the Caribbean who attended training at CIMH. It is once in a lifetime achievement and experience that has made the lamp brighter at the end of the tunnel in my career.

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