IOC Circular Letter No. 2327

(Available in English, French and Spanish) 14 January 2010

To: ICG/CARIBE EWS Tsunami Warning Focal Points (TWFP)
ICG/CARIBE EWS Tsunami National Contacts (TNC)
ICG/CARIBE EWS Chair and Vice-Chair

cc: Official National Coordinating Body for liaison with the IOC Member States
Permanent Delegates/Observer Missions to UNESCO of IOC Member States

Subject: 12th January 2010 Haiti Earthquake and Tsunami Event: Post-Event Assessment of the Performance of the Caribbean Tsunami and other Coastal Hazards Early Warning System

One of the most severe earthquakes in more than 100 years hit the Caribbean state Haiti at 21:53 UTC (16:53 local time). With a magnitude of Mw 7.0, very shallow (10 km depth) and located close to the capital Port au Prince it has caused severe destruction and casualties. The tsunami warning system for the Caribbean CARIBE-EWS went into action, and first reports indicate timely and adequate information was produced and disseminated.

Since 2006 a tsunami warning system for the Caribbean has been under development with the support of UNESCO’s Intergovernmental Oceanographic Commission (IOC). The Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE EWS) oversees its establishment. The Pacific Tsunami Warning Centre (PTWC) is the interim tsunami warning service provider for the Caribbean while the West Coast and Alaska Tsunami Warning Centre (WC/ATWC) is providing tsunami warning service for the USA territories in the Caribbean region.
The recent event provides us with an opportunity to evaluate the performance of the system and will enable us to identify those components which worked properly and, most importantly, any components which did not work in an appropriate manner and are in need of further attention.

We have therefore designed a post-event assessment questionnaire to evaluate the performance of the CARIBE EWS and to provide a benchmark of the present status of the system. We seek your support and cooperation to complete this questionnaire as fully and accurately as possible. This may involve obtaining input from different organisations, but we believe that this effort will have direct benefits for the entire Caribbean community at regional, national and local levels.

The questionnaire addresses 4 main areas of an end-to-end warning system, including upstream and downstream components. These are:

- The Interim Advisory Service
- National Actions
- National Response
- Monitoring and Modelling

After receiving the questionnaires from the Member States, we will compile the information and publish a report, which will be distributed at the ICG/CARIBE-V. We, therefore, urge you to answer the questionnaire as completely as possible to ensure that we have a definitive assessment of the status of the CARIBE EWS as of 12 January 2010.

We would like to stress that the objective of this assessment is to be positive and constructive, and not to be in any way critical or judgemental. We would like the report to be as open and honest as possible, and we hope that you will approach the questionnaire in this spirit. We would also welcome any other information you would like to be included in the report, such as photographs, national reports of the event or any comments on the system and areas in need of improvement.

Please complete and return the attached questionnaire by email to cartws@unesco.org or by FAX to +33-1-45685010. Our timeline for the assessment is to have all questionnaires returned to us at the ICG/CARIBE EWS Secretariat by 10th February (4 weeks after the event), and to publish the report as soon as possible thereafter, with a target date of 10th March.

We are confident that all Member States will understand the importance and value of conducting this assessment and we rely on your support. We were fortunate that the tsunami of 12th January was non-destructive. It is vital that we use such events to measure the performance of the CARIBE EWS in order to test it and improve it for future tsunami events, which could be more destructive.

With the assurances of my highest consideration, I remain,

Sincerely Yours,

[signed]

Wendy Watson-Wright
Assistant Director-General, UNESCO
Executive Secretary, IOC

Attachments: Post Event Questionnaire
INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION
ICG/CARIBE EWS SECRETARIAT

12 JANUARY 2010 HAITI EARTHQUAKE AND TSUNAMI EVENT

POST-EVENT ASSESSMENT QUESTIONNAIRE

COUNTRY: __________________________

Contact Details

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<tr>
<th>Contact Name:</th>
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<td>Name of Organisation</td>
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<td>Fax:</td>
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Instructions

This is an electronic form which can be filled out in several ways:

1) If you use Microsoft Word software you can fill out the form electronically. To tick checkboxes (yes/no answers), you can either use the tab button or the mouse to move to the required answer. Written answers can be typed in the grey area next to the questions, and the area will expand to fit longer answers.
2) If the form fields don’t work, then you can type your answers next to the relevant question.
3) Please give all times in UTC, not local time.
4) Please include as much information as possible in your answers. If there is not enough room on the questionnaire form, then please send extra information in a separate document.
5) Where multiple answers are possible, please feel free to tick more than one box.

You may also print the questionnaire and fill out by hand, then scan/email or fax it back to us.

We may need to contact you to clarify your answers, so please include a contact phone number where we can reach you.
12 JANUARY 2010 HAITI EARTHQUAKE AND TSUNAMI EVENT

POST-EVENT ASSESSMENT QUESTIONNAIRE

SECTION A – INTERIM ADVISORY SERVICE

1) How and at what time (UTC) did you learn that a big earthquake had taken place?
   How:            Time (UTC):

2) Did you receive the first tsunami watch bulletin from the PTWC and/or WC/ATWC?
   Yes ☐         No ☐
   If YES to either or both, at what time was the bulletin received (UTC)?
   PTWC:            WC/ATWC:

3) How did you receive the bulletin (cross more than one box if appropriate)?
   Email:☐          Fax:☐          GTS:☐
   Phone:☐          Other (please specify):

4) Did you acknowledge receipt of the bulletin?
   Yes ☐         No ☐

5) Were subsequent bulletins received from PTWC, WC/ATWC or another source?
   Yes ☐         No ☐
   If YES, please list the bulletin numbers and the time (UTC) you received them.

<table>
<thead>
<tr>
<th>PTWC</th>
<th>Time UTC</th>
<th>WC/ATWC</th>
<th>Time UTC</th>
<th>Others</th>
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(Add more rows if necessary)

6) Was information about the earthquake received from other sources?
   Yes ☐         No ☐         If YES, please provide details:
SECTION B – NATIONAL ACTIONS

The purpose of this section is to find out what actions were taken by National Warning Centres, including independent analysis of the event, notification of relevant organisations, issuing and cancellation of warnings.

7) Were any earthquake parameters calculated at the national level?

Yes ☐ No ☐

If YES, please specify:

Location: Depth: Magnitude: Type of Mag.:  

8) Was any action taken BEFORE receiving the PTWC/ WC/ATWC information?

Yes ☐ No ☐

If YES, please give details:

9) What action was taken after receiving the first bulletin? Please list times (UTC) as well as actions. Include details of organisations or government agencies contacted.

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<th>Time (UTC)</th>
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10) Did your National Warning Centre issue a tsunami warning to the public? If yes, what time was it issued (UTC)?

Yes: ☐ Time: No: ☐

11) If a tsunami warning was issued to the public, was the warning based on bulletins from the PTWC and/or WC/ATWC, or on information determined by your National Warning Centre?

PTWC: ☐ WC/ATWC: ☐ National TWC: ☐

12) If a tsunami warning was issued to the public, was a tsunami wave height forecast provided?

Yes ☐ No ☐

If YES, please provide details:
13) How was the warning issued? (eg phone, fax, email, sirens, police etc). Cross more than one box if appropriate.

Phone: [ ] Fax: [ ] Email: [ ] sirens: [ ]

Other (please specify)

14) If a warning was issued, what time was the warning cancelled (UTC)? What was the reason for cancellation? How was this information communicated to the public?

Time of Cancellation:

Reason for Cancellation:

Communication method:

15) Were there any communication problems with distributing the tsunami warning or cancellation information? (eg mobile phone network overload, people not answering phones etc).

Yes [ ] No [ ]

If YES, please provide details:

SECTION C – NATIONAL RESPONSE

The purpose of this section is to find out what the national and local response was to the event after the tsunami warning had been issued by the National Warning Centre.

16) What actions were taken by the national disaster management organisation (or equivalent)?

<table>
<thead>
<tr>
<th>Action taken</th>
<th>Time (UTC)</th>
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(Add more rows if necessary)

17) Were any areas evacuated?

Yes: [ ] No: [ ]

If YES, please provide details in the following table:
18) If an evacuation occurred, did the process happen smoothly?

Yes: □      No: □

If NO, please provide details of problems encountered:

19) Did people in some areas self-evacuate before a warning was issued?

Yes: □      No: □

If YES, please provide details in the following table:

<table>
<thead>
<tr>
<th>Area Evacuated</th>
<th>Time (UTC)</th>
<th>Estimated Evacuated</th>
<th>No. People</th>
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SECTION D – MONITORING AND MODELLING

20) Were sea level data monitored during the event?

Yes □    No □

If YES, which stations were monitored and how were they monitored?
### Sea Level station Monitoring method

<table>
<thead>
<tr>
<th>Sea Level station</th>
<th>Monitoring method</th>
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<tbody>
<tr>
<td></td>
<td>GTS ☐ IOC Sea Level Facility ☐ Other ☐</td>
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<td>GTS ☐ IOC Sea Level Facility ☐ Other ☐</td>
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(Add more rows if necessary)

**21) If the answer to question 20 is NO, does your National Warning Centre know how to access sea level data over the GTS or on the IOC Sea Level Facility website?**

GTS: Yes ☐ No ☐

IOC Sea Level Facility: Yes ☐ No ☐

**22) Did your National Warning Centre use any numerical model scenarios during the event (deep ocean propagation and/or inundation model scenarios)?**

Yes: ☐ No: ☐

**SECTION E – OTHER INFORMATION**

Please feel free to provide any further information you would like to be included in the report. This could include comments which you can type below, or attachments such as photographs, or any other documents you consider relevant. We would particularly welcome copies of any national post-event assessment reports that are available.