INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (of UNESCO)

Fourteenth Session of the Intergovernmental Coordination Group
for the Indian Ocean Tsunami Warning and Mitigation System
(ICG/IOTWMS-XIV)

Jakarta, Indonesia, 17-19 November 2024

National Report of Pakistan

Page 1: Overview

Q1

Consent: I have read the above information and wish to proceed.

Confirm by clicking the checkbox

Q2

Please select your country from the list below:

Pakistan

Page 2: PART I: Basic Information

Q3

TNC Name:

Dr Muhammad Afzaal

Q4

Position:

Chief Meteorologist

Q5

Organisation:

Pakistan Meteorologist Department

Q6

Telephone Number:

Q7

E-mail Address:

afzaalkarori@gmail.com

Q8

Fax Number:

Q9

Postal Address:

Sector H-8/2, Pitras Bokheri Road,
Islamabad-44000, Pakistan

Page 3: PART I: Basic Information

Q10

NTWC Agency Name:

Nation Tsunami Center Karachi, Pakistan

Q11

NTWC URL (web link) for tsunami warnings:

https://seimic.pmd.gov.pkseismicnew/index.html

Q12

NTWC Agency Contact or Officer in Charge (person):

AMEER HYDER

Q13

Position:

Director

Q14

Telephone Number:

Q15

E-mail Address:

free2hyder@yahoo.com

Q16

Postal Address:

National Tsunami early Warning Center, PMD OFFICE, main University Road Karachi. Pakistan

Q17

3a) Is your Tsunami Warning Focal Point (TWFP) the same as your National Tsunami Warning Centre (NTWC) agency?The TWFP is the 24 x 7 point of contact (office, operational unit or position, not a person) officially designated by the NTWC or the government to receive and disseminate tsunami information from an ICG Tsunami Service Provider according to established national Standard Operating Procedures. The TWFP may or not be the NTWC.

Yes

Page 4: PART I: Basic Information

Q18

TWFP Agency Name (if different from the NTWC Agency):

Respondent skipped this question

Q19

Name:

Respondent skipped this question

Q20

Position:

Respondent skipped this question

Q21

Telephone Number:

Respondent skipped this question

Q22

E-mail Address:

Respondent skipped this question

Q23

Postal Address:

Respondent skipped this question

Page 5: PART I: Basic Information

Q24

TWFP 24x7 point of contact (office, operational unit or position, not a person):

duty InCharge

Q25

E-mail Address:

Q26

Telephone Number:

Q27

Cellular Telephone Number:

Q28

Fax:

Page 6: PART I: Basic Information

Q29

3d) Has your country appointed a Tsunami Ready Focal Point (TRFP)?The TRFP is a person from the Disaster Management (DMO) or similar institution that:- Acts as a national advocate for national implementation of the Tsunami Ready Recognition Programme (TRRP) or a recognised similar initiative to help make at-risk communities prepared and resilient to any tsunami threat within their Member State.- Actively contributes to the national implementation of TRRP or a recognised similar initiative.- Routinely update UNESCO-IOC ICG/IOTWMS on the status of the national implementation of the TRRP or a recognised similar initiative. - Informs relevant national authorities and orgaisations involved in the implementation of TRRP or a recongised similar initiative on any information and/or updates provided by UNESCO-IOC on activities related to making at risk communities Tsunami Ready.

No

Q30

If yes, please provide their details below:Name of the TRFP:

Respondent skipped this question

Q31

Position:

Respondent skipped this question

Q32

Agency:

Respondent skipped this question

Q33

Telephone Number:

Respondent skipped this question

Q34

E-mail Address:

Respondent skipped this question

Q35

Postal Address:

Respondent skipped this question

Page 7: PART II: Hazard Assessment

Q36

4a) Has your country undertaken a hazard assessment?

Yes

Page 8: PART II: Hazard Assessment

Q37

4b) What type of hazard assessment has been carried out?

Multi-hazard assessment including tsunami

Page 9: PART II: Hazard Assessment

Q38

4c) What type of multi-hazard assessment has been carried out? (select all that apply)

Drought,

Tsunami,

Earthquakes,

Flooding,

Landslide,

Cyclone

Page 10: PART II: Hazard Assessment

Q39

4d) Who did the tsunami hazard assessment in your country? (select all that apply)

National Agency,

National / Local University,

Please specify the name(s) of the agencies:

NTWC Karachi ,Pakistan, NED UNIVERSITY KARACHI

Q40

4e) At what level was the tsunami hazard assessment carried out? (select all that apply)

City Level

Q41

4f) Which coastal areas have been mapped for tsunami hazard? Please include the names of the Region / City and an approximation of the percentage mapped.

Gwader, City. Pakistan coastal area around 1100km. approx. 5% mapped

Q42

4g) For each of the data types listed below (in rows), answer the two questions (in columns). Select Yes / No / Don't know from the drop-down menu.

	Was this data used for tsunami hazard assessment?	Is this data publicly available?
Bathymetry	**No**	**Don't know**
Seismo-tectonic model	**No**	**Don't know**
Topography	**Yes**	**Don't know**
Land Cover	**No**	**No**
Infrastructure details	**No**	**Don't know**

Q43

4h) What products do you have from the tsunami hazard assessment? (select all that apply)

Probabilistic Tsunami Hazard Assessment (PTHA),

Inundation map,

Evacuation map

Page 11: PART II: Hazard Assessment

Q44

4i) On a scale of 1 (Very poor) to 5 (Very good), please rate your country's capability to undertake tsunami hazard assessment

Capacity to undertake tsunami hazard assessment	**Fair**

Q45

4j) On a scale of 1 (Not a priority) to 5 (Essential), what is the priority level in your country to improve capacity in the following areas of tsunami hazard assessment?

Probabilistic Tsunami Hazard Assessment (PTHA)	**Medium priority**
Deterministic Tsunami Hazard Analysis	**Medium priority**
Field Studies on Tsunami Impacts	**Medium priority**
Hazard map	**Medium priority**
Inundation map	**High priority**
Evacuation map	**High priority**
What other areas of capacity in tsunami hazard assessment require improvement?	**PDMA Sindh has been tender for Multiple Hazard mapping.**

Q46

4k) On a scale of 1 (No capacity) to 5 (Very good), what capacity does your country have to give training and/or consultancy on tsunami hazard assessment to other countries?

Probabilistic Tsunami Hazard Assessment (PTHA)	**Poor**
Deterministic Tsunami Hazard Analysis	**Moderate**
Field Studies on Tsunami Impacts	**Moderate**
Hazard map	**Moderate**
Inundation map	**Moderate**
Evacuation map	**Poor**
Please provide the name(s) and contact detail(s) of any individuals / institutions in your country that could provide this training / consultancy	**it is difficult to provide said information.**

Page 12: PART II: Risk Assessment

Q47 **Yes**

5a) Has your country undertaken a tsunami risk assessment?

Page 13: PART II: Risk Assessment

Q48 **Multi-hazard risk assessment including tsunami**

5b) What type of risk assessment?

Page 14: PART II: Risk Assessment

Q49

5c) What hazards have been considered in your multi-hazard risk assessment? (select all that apply)

Tsunami,

Drought,

Earthquakes,

Flooding,

Cyclone

Page 15: PART II: Risk Assessment

Q50

5d) Who did the tsunami risk assessment in your country? (select all that apply)

National Agency,

National/local University,

Please specify the name(s) of the agency(ies):

PMD, NED University.

Q51

5e) At what level was the tsunami risk assessment carried out? (select all that apply)

City Level,

Community / Neighbourhood Level

Q52

5f) Which coastal areas have been tsunami risk mapped? Please include the names of the Region / City and an approximation of the overall national percentage of risk prone areas mapped.

Gwadar city Pakistan.

Q53

5g) How many Cities / Municipalities / Regencies are at risk from tsunami?

there is 1100 km of coastal line Pakistan and many cities some of them named below:
Karachi, Gwadar, Omara, Pasni, Jiwani, etc.

Q54

5h) What products do you have from the tsunami risk assessment? (select all that apply)

Risk map,

Evacuation map

Page 16: PART II: Risk Assessment

Q55

5i) On a scale of 1 (Very poor) to 5 (Very good), please rate your country's capability to undertake tsunami risk assessment

Capability to undertake tsunami risk assessment	**Fair**

Q56

5j) On a scale of 1 (Not a priority) to 5 (Essential), what is the priority level of your country to improve capacity in the following areas of tsunami risk assessment?

Tsunami risk assessment at national level	**High priority**
Tsunami risk assessment at regional level	**High priority**
Tsunami risk assessment at city level	**High priority**
Tsunami risk assessment at village level	**High priority**
Tsunami risk assessment at community / neighbourhood level	**High priority**
What other areas of capacity in tsunami hazard assessment require improvement?	**whole 1100 km of coastal line Pakistan is required to improve.**

Q57

5k) On a scale of 1 (No capacity) to 5 (Very good) what capacity does your country have to give training and/or consultancy on tsunami risk assessment to other countries?

Tsunami risk assessment at national level	**Moderate**
Tsunami risk assessment at regional level	**Moderate**
Tsunami risk assessment at city level	**Moderate**
Tsunami risk assessment at village level	**Moderate**
Tsunami risk assessment at community / neighbourhood level	**Moderate**
Other (specify below)	**Moderate**

Page 17: PART II: Policies

Q58

6a) Does your country have a national tsunami policy? For each of the four disaster management phases listed below, select standalone policy / multi hazard policy / policy not available. Use the comments box to detail the specific name of the policy (if available).

	In what form is the policy?
Prevention and mitigation	**Multi hazard including tsunami**
Preparedness	**Multi hazard including tsunami**
Emergency response	**Multi hazard including tsunami**
Rehabilitation and reconstruction	**Multi hazard including tsunami**

Q59

6b) Does your country have local tsunami policies? For each of the disaster management phases listed below, select standalone policy / multi hazard policy / policy not available. Use the comments box to detail the specific name(s) of the policy (if available).

	In what form is the policy?
Prevention and mitigation	**Standalone tsunami only**
Preparedness	**Multi hazard including tsunami**
Emergency response	**Multi hazard including tsunami**
Rehabilitation and reconstruction	**Multi hazard including tsunami**

Page 18: PART II: Plans

Q60

7a) Does your country have national, local and community level tsunami disaster risk reduction plans? For each of the four disaster management phases listed below, select standalone plan / multi hazard plan / plan not available. Use the comments box to detail the specific name(s) of the plan(s) (if available). Please use the scroll bar to view the entire table.

	National level	Local level	Community level
Prevention and mitigation	**Standalone tsunami only**	**Multi hazard including tsunami**	**Standalone tsunami only**
Preparedness	**Standalone tsunami only**	**Multi hazard including tsunami**	**Multi hazard including tsunami**
Emergency response	**Standalone tsunami only**	**Multi hazard including tsunami**	**Multi hazard including tsunami**
Rehabilitation and reconstruction	**Standalone tsunami only**	**Multi hazard including tsunami**	**Multi hazard including tsunami**

Q61

7b) Are your country's tsunami disaster risk reduction plans based on hazards and risk assessments?

No

Page 19: PART II: Guidelines

Q62

8a) Does your country have national tsunami DRR guidelines? For each of the four lifecycle phases, select standalone guidelines / multi hazard guidelines / guidelines not available. Use the comments box to detail the specific name of the guidelines (if available).

	In what form are the guidelines?
Prevention and mitigation	**Multi hazard guidelines including tsunami**
Preparedness	**Multi hazard guidelines including tsunami**
Emergency response	**Multi hazard guidelines including tsunami**
Rehabilitation and reconstruction	**Multi hazard guidelines including tsunami**

Q63

8b) Does your country have local tsunami DRR guidelines? For each of the four lifecycle phases, select standalone guidelines / multi-hazard guidelines / guidelines not available. Use the comments box to detail the specific name of the guidelines (if available).

	In what form are the guidelines?
Prevention and mitigation	**Multi hazard guidelines including tsunami**
Preparedness	**Multi hazard guidelines including tsunami**
Emergency response	**Guidelines not available**
Rehabilitation and reconstruction	**Guidelines not available**

Page 20: PART III: Detection and Warning

Q64

9a) Does your country have a national capability to assess and/or receive potential tsunami threat information and advise/warn its coastal communities?

Yes

Page 21: PART III: Detection and Warning

Q65

9b) Does your country utilise the data provided by the IOTWMS Tsunami Service Providers (TSPs) for the Coastal Forecast Zones (CFZ) of your country's coastline to determine national threats or does it undertake its own threat assessments? (select all that apply)

Use TSP data,

Use own threat assessments

Q66

9c) Which organisation in your country has the responsibility for assessing and/or receiving potential tsunami threat information?Please provide the name and contact details.

NTWC, PMD Karachi center Pakistan +92-21-99261423

Q67

9d) Does the organisation responsible for assessing and/or receiving potential tsunami threat information operate 24x7?

Yes

Q68

9e) What / which infrastructure is available to enable 24x7 operations? (select all that apply)

Computers,

Internet,

Landline Phone,

Mobile Phone or Cell Phone,

Fax,

GTS (WMO Global Telecommunication System),

UPS (Uninterruptable Power Supply),

Please specify any other infrastructure:

WhatsApp group

Q69

9f) Which level of tsunami threat forecast information is produced by the responsible organisation? (select all that apply)

National,

Local

Q70

9g) Does the organisation have access to national and/or international seismic networks? (please select one from the following options)

Yes, national and international

Page 22

Q71

9h) Is national seismic data shared in real time?

Some national seismic data is shared in real time,

Please specify which seismic data is shared in real time: station name, Karachi, Umerkot , Gwadar, Nilor.etc

Page 23: PART III: Detection and Warning

Q72

9i) Does your organisation have access to GNSS data?

Yes

Q73

9j) Is the list of broadband seismometers operated by your country listed accurately in the IOTWMS seismic database http://www.ioc-tsunami.org/index.php?option=com_oe&task=viewDocumentRecord&docID=20796)?

Yes

Q74

9k) When compared to the IOTWMS seismic database (http://www.ioc-tsunami.org/index.php?option=com_oe&task=viewDocumentRecord&docID=20796), have you decommissioned or added broadband seismometers operated by your country (Check all that apply and include details in the comments section below)

Some stations have been added

Page 24: PART III: Detection and Warning

Q75

9l) Does the organisation have access to national and/or international sea level networks? (please select one answer from the following options)

No

Page 25: PART III: Detection and Warning

Q76

9m) Is national sea level data shared in real time?

Respondent skipped this question

Page 26: PART III: Detection and Warning

Q77

9n) Is the list of sea level stations operated by your country listed accurately in the IOTWMS sea level database (http://www.ioc-tsunami.org/index.php?option=com_oe&task=viewDocumentRecord&docID=20833)?

No

Q78

9o) When compared to the IOTWMS sea level database (http://www.ioc-tsunami.org/index.php?option=com_oe&task=viewDocumentRecord&docID=20833), have you decommissioned or added sea level stations operated by your country (Check all that apply and include details in the comments section below)

There are no changes

Page 27: PART III: Detection and Warning

Q79

9p) What other observing networks are operated by your country and used for tsunami early warning?

GNSS/GPS (please specify below),

Please provide the type of observing network, the station name/location, email contact of any other observing network operator (IOTWMS Secretariat will contact for more information).:

KARACHI, PASNI, ORMARA, GWADAR

Q80

9q) Does the organisation have the capability of analysing real-time seismic and sea-level data for potential tsunami threat?

YesPlease specify the software tools used:
SEISCOMPRO4

Q81

9r) Does the organisation have capability for tsunami modelling to support generation of threat forecasts?

YesPlease specify the modelling tools and data used:
TOAST modeling software.

Q82

9s) Does the organisation responsible for identifying a potential tsunami threat also issue national tsunami no threat, watches, advisories, alerts and/or warnings?

Yes

Q83

9t) What are the threshold or criteria (for example sea levels, magnitude) for declaring a potential national tsunami emergency, watch, alert, advisory or warning?

6.5 magnitude and above offshore earthquake (detailed enclosed in SOP document is attached

Q84

9u) What actions were taken by your country's National Tsunami Warning Centre (NTWC) and/or Tsunami Warning Focal Point (TWFP) in response to earthquake events and messages issued by the IOTWMS TSPs during the inter-sessional period?

The message is the part SOP before issuing 2nd and 3rd Bulletin of Tsunami during the inter-sessional period.

Q85

9v) Did your country's NTWC and/or TWFP participate in the 6-monthly communications tests conducted by the IOTWMS TSPs?

Yes (please name the organisation(s) that participated in the additional comments)

,
Additional comments:
yes, mostly desktop drill.

Q86

9w) Did your country's NTWC and/or TWFP participate in national and/or international Tsunami Exercises (eg. IOWave) conducted in the inter-sessional period between ICG meetings?

Yes (please name the exercise(s) and organisation(s) that participated in the additional comments)

Q87

9x) After the December 26 2004 tsunami and until now, was your country impacted by any damaging tsunami? If Yes, what was your national response to each event (please comment if warnings were issued by your NTWC in a timely manner to enable communities to respond, if public were evacuated, etc.)

No

Q88

9y) Since 2018, have there been any enhancements in your national warning SOPs and alerting?

Yes (please specify the enhancements):
improve timeline, included threat level, included siren triggering mandate and when, added color code during the inter-sessional period. and improved warning chain as well

Page 28: PART III: Dissemination

Q89

10a) How is the tsunami information (warning, public safety action, etc) disseminated within country? (select all that apply)

Email,

SMS,

Telephone,

Fax,

Webpage,

Radio,

WhatsApp / Facebook / Other social media,

Sirens,

Television,

Police/military

Q90

10b) For each emergency response organisation listed below, which communication methods for emergency response are available? (select all that apply)

National DMOs	**Telephone, Fax, Email, SMS**
Local DMOs	**Telephone, Fax, Email, SMS, Siren**
General Public	**Telephone, SMS, Siren**
Coastal Communities	**Telephone, SMS, Siren**
Media	**Telephone, Fax, Email, SMS**

Q91

10c) How is the warning situation terminated?

Four kinds of Tsunami Bulletin are terminating in such situation, according to SOP/ Advisory/alerts

Q92

10d) What website is used for display of national threat status during events? Please provide the URL.

https://seismic.pmd.gov.pk/seismicnew/index.html

Q93

10e) Does your country's national tsunami warning system utilise the Common Alert Protocol (CAP) for the dissemination of warnings? If yes, please describe how the CAP is integrated into your warning dissemination processes, including any platforms or communication channels that are specifically utilised to broadcast CAP-formatted alerts to the public and relevant stakeholders.

Yes (please describe how CAP is integrated):
TV news, SMS, WhatsApp's and other

Q94

10f) Who is primarily responsible for the direct dissemination of tsunami alerts to the public in your country, and what is the timeframe for these alerts to achieve effective last-mile responses? Please provide details.

PMD , NTWC center Karachi. The timeline given in SOP Document 5-13 minutes

Page 29: PART IV: Standard Operating Procedures

Q95

11a) For each of the (upstream) emergency response issues listed below (in rows), consider the four questions (in columns). Select a yes/no response using the drop-down menus.

	Does your SOP address this aspect of tsunami emergency response?	Is support required to develop/improve this aspect of tsunami emergency response in your SOP?	Is support required to develop Human Resources in this aspect of tsunami emergency response?	Is support required to develop infrastructure for this aspect of tsunami emergency response?
24/7 Emergency Operation Centre (EOC)	**Yes**	**No**	**Yes**	**No**
Receiving information from the NTWC	**Yes**	**No**	**Yes**	**Yes**
Response Criteria / decision making	**Yes**	**Yes**	**Yes**	**Yes**

Q96

11b) For each of the (downstream) emergency response issues listed below (in rows), consider the four questions (in columns). Select a yes/no response using the drop-down menus.

	Does your SOP address this aspect of tsunami emergency response?	Is support required to develop/improve this aspect of tsunami emergency response in your SOP?	Is support required to develop Human Resources in this aspect of tsunami emergency response?	Is support required to develop infrastructure for this aspect of tsunami emergency response?
Warning dissemination	**Yes**	**Yes**	**Yes**	**Yes**
Evacuation call procedures	**No**	**Yes**	**Yes**	**Yes**
Community evacuation procedures	**No**	**Yes**	**Yes**	**Yes**
Communication with NTWC	**Yes**	**Yes**	**Yes**	**Yes**
Communication with Local Government	**Yes**	**Yes**	**Yes**	**Yes**
Media arrangements	**Yes**	**Yes**	**Yes**	**Yes**
Communication with other stakeholder i.e. Red Cross, Fire Brigade, Search and Rescue, Police, Army, Navy etc.	**Yes**	**No**	**No**	**No**

Q97

11c) Would your country be willing to share your SOPs with the IOTIC and other countries?

Yes

Page 30: PART IV: Evacuation Infrastructure

Q98

12a) Does your country have the following evacuation infrastructure? (select all that apply and detail specific areas). Please use the scroll bar below to view the entire table.

Evacuation shelter	**Yes**
Comment:	Gwadar city Karachi
Vertical evacuation structure	**Yes**
Natural or artificial hill for vertical evacuation	**Yes**
Evacuation signage	**No**
Other (please specify)	**Yes**

Q99

12b) Is your evacuation infrastructure integrated in the evacuation plan?

No

Page 31: PART IV: Tsunami Exercises

Q100

12c) Are tsunami exercises incorporated within national policies and guidelines? (select all that apply)

National guidelines

Q101

12d) At what levels were the exercises conducted during the inter-sessional (between ICG meetings) period? (select all that apply)

City level,

School level

Q102

12e) What kind of tsunami exercise activities have been undertaken in your country and how many times during the inter-sessional (between ICG Meetings) period?

Organisation table top exercise	**Yes**
Comment:	two time
Inter-organisation table top exercise	**Yes**
Comment:	few times
National tsunami drill/exercise	**Yes**
Comment:	two times
Indian Ocean Wave exercise	**Yes**
Comment:	two times
Local tsunami drill/exercise	**Yes**
Comment:	sometimes

Page 32: PART IV: Public Awareness

Q103

13a) Who is responsible for tsunami public awareness programmes in your country?

Provincial Disaster Management Office

Q104

13b) What tsunami related education and awareness materials do you have? (select all that apply)

Leaflets or flyers,

Posters,

Booklets,

Video, or other visual or oral media,

Teaching kits on tsunamis,

School curricula

Q105

13c) Would your country be willing to share these education and awareness materials with the Indian Ocean Tsunami Information Centre (IOTIC) and other countries?

Yes

Q106

13d) Do you undertake the following tsunami awareness activities?

World Tsunami Awareness Day	**Yes**
Comment:	one time in a year
Global Disaster Risk Reduction day	**No**
Public tsunami preparedness outreach	**Yes**
Comment:	one time in a year
School and/or children awareness	**Yes**
Comment:	one time in a year
Exhibitions	**Yes**
Comment:	one time in a year
Competitions or other ways of highlighting tsunami safety	**No**
Tsunami Exercise	**Yes**
Comment:	one time in a year
Other (Please specify)	**No**

Q107

13e) Use the boxes below to indicate any areas in which you require support from the IOTIC to develop or enhance public awareness in your country. If you do not require support, please leave blank.

Participation/support by international agencies or experts to your country's activities

Q108

13f) Can your country offer support to other Member States to develop or enhance public awareness in their country?

No

Page 33: PART V: UNESCO-IOC Tsunami Ready Recognition Programme (TRRP)

Q109

14a) Does your country have an interest to participate in the UNESCO-IOC TRRP?

Yes, we are already participating,

Additional comments:

conduct awareness workshop

Q110

14b) Aside from UNESCO-IOC TRRP, is your country currently implementing any other tsunami resilience and preparedness related initiatives or programmes?

Yes (please describe the initiatives or programmes below)

,

Other tsunami resilience and preparedness related initiatives or programmes being implemented in your country:

conduct awareness workshop

Q111

14c) What number of villages, cities/districts and provinces/state levels in your country are at risk to tsunami?

Village	**0**
City / District	**2**
Province / State	**2**

Q112

14d) Does your country have a National Tsunami Ready Board (NTRB)The National Tsunami Ready Board (NTRB) is responsible for guiding the community on the steps for Tsunami Ready recognition and for the review and approval of the community's Tsunami Ready application. It consists of designated representatives of the National Emergency Management Agency or Disaster Mangement Office, NTWC, TNC, the scientific community, and other invited guests.

Please specify any existing coordination mechanisms that can fulfil this role of NTRB:

PMD, PDMA, LDMOS

Q113

14e) Which institution(s) should be involved in the implementation of TRRP or similar national initiative? (please use a comma between the name of the institutions)

PMD (NTWC) CENTER KARACHI

Q114

14f) Are any communities (for example, villages, cities, districts, provinces or states) in your country currently working towards implementing or interested in implementing the UNESCO-IOC TRRP or similar national initiative?

Yes (please list the names of the communities below),

Names of the communities working towards or interested in working towards TRRP:

Fish forum, red crescent. official 1122 rescue

Q115

14g) Have any communities in your country achieved recognition through UNESCO-IOC TRRP or similar national initiative?

No

Page 34: PART V: UNESCO-IOC Tsunami Ready Recognition Programme (TRRP)

Q116

15a) Is there national capacity to develop tsunami hazard maps?

No, there is a strong need for technical support organised through IOTIC and/or ICG/IOTWMS activities

Q117 15b) Is there national capacity to train the community on identifying and estimating the number of people that live in the tsunami hazard zone?	**No, there is a strong need for technical support organised through IOTIC and/or ICG/IOTWMS activities**
Q118 15c) Is there national capacity to train the community on the inventory of available economic, instrastructural, political, and social resources to reduce tsunami risk at the community level?	**No, there is a strong need for technical support organised through IOTIC and/or ICG/IOTWMS activities**
Q119 15d) Is there national capacity to work with the community to develop tsunami evacuation maps, plans and procedures at the community level?	**No, there is a strong need for technical support organised through IOTIC and/or ICG/IOTWMS activities**
Q120 15e) Is there national capacity to work with the community to develop a public display of tsunami information?	**Yes, it can be partially done through mobilising national experts and funding, but also needs some international technical expertise**
Q121 15f) Is there national capacity to work with the community to develop local context outreach and public education materials?	**Yes, it can be partially done through mobilising national experts and funding, but also needs some international technical expertise**
Q122 15g) Is there national capacity to train and build capacity of community to be able to organise and implement outreach and education activity?	**No, there is a strong need for technical support organised through IOTIC and/or ICG/IOTWMS activities**
Q123 15h) Is there national capacity to train and build capacity of community to be able to organise and implement tsunami exercises?	**Yes, it can be partially done through mobilising national experts and funding, but also needs some international technical expertise**
Q124 15i) Is there national capacity to train and build capacity of communities to be able to develop their community Emergency Operation Plan?	**No, there is a strong need for technical support organised through IOTIC and/or ICG/IOTWMS activities**
Q125 15j) Is there national capacity to train and build capacity of communities to manage 24/7 tsunami emergency response operation?	**Yes, it can be easily done through mobilising national experts and funding**

Q126

15k) Is there national capacity to train and work with the communities to develop mechanisms (means and procedures) to receive 24/7 warning?

Yes, it can be partially done through mobilising national experts and funding, but also needs some international technical expertise

Q127

15l) Is there national capacity to train and work with the communities to develop mechanisms (means and procedures) to disseminate 24/7 warning to the community?

Yes, it can be easily done through mobilising national experts and funding

Page 35: PART V: UNESCO-IOC Tsunami Ready Recognition Programme (TRRP)

Q128

15m) Which of the following challenges inhibit the implementation of TRRP or similar national initiatives in your country? (select all that apply)

Tsunami is not a high priority hazard in country,

Limited awareness,

Limited activity,

Lack of community interest,

No community group or engagement in disaster risk reduction

Page 36: PART VI: Narrative

Q129

16) Please briefly describe any innovations or modifications to national tsunami warning and mitigation procedures or operations since the last reassessment. For example, this might include tsunami related research projects, implementation of new seismic and/or sea level monitoring technologies, tsunami mitigation activities and best practices (especially in preparedness and emergency management), as well as public education programmes or other measures taken to heighten awareness of the tsunami hazard and risk.

Innovations and modifications to national tsunami warning and mitigation procedures have advanced significantly in recent years. These efforts are aimed at improving the accuracy of warnings, the speed of dissemination, and the effectiveness of mitigation strategies. Here are some notable examples

Enhancement in Early Warning Systems: Projects focusing on the development of more accurate and faster early warning systems enhancing Seismic stations near coast, installed 5 sirens and improve warning chain.

Tsunami Mitigation Activities: Community-Based Tsunami evacuation planning Education and Preparedness Programs: Initiatives that involve local communities in planning and practicing evacuation routes and emergency procedures, which includes drills and educational and awareness campaigns, For pilot area i-e Gwadar city

Q130

17) Please provide a brief summary of plans for future tsunami warning and mitigation system improvements

Future plans for tsunami warning and mitigation system improvements typically involve a multifaceted approach aimed at enhancing early warning capabilities, increasing community resilience, and improving response mechanisms. Some key elements of these plans often include:

Advanced Technology: Integration of advanced monitoring technologies such as seismographs, tide gauges, and ocean buoys to enhance detection and early warning capabilities.

Improved Communication: Upgrading communication systems to ensure timely dissemination of alerts and advisories to at-risk communities, government agencies, and emergency responders.

Community Education: Implementation of public awareness campaigns and educational programs to increase understanding of tsunami risks, evacuation procedures, and preparedness measures among coastal populations.

Risk Assessment and Mapping: Conducting comprehensive risk assessments and vulnerability mapping to identify high-risk areas and prioritize mitigation efforts.

Capacity Building: Providing training and resources to government agencies, disaster management personnel, and community leaders to enhance their capacity to respond effectively to tsunami threats.

Cross-Sector Collaboration: Foster collaboration among government agencies, non-governmental organizations, research institutions, and international partners to coordinate efforts and share resources for tsunami preparedness and response.

Infrastructure Resilience: Implementing measures to strengthen critical infrastructure such as hospitals, schools, and evacuation routes to improve resilience against tsunami impacts.

Early Warning Systems Integration: Integration of tsunami warning systems with broader disaster management frameworks to facilitate a coordinated response to multi-hazard scenarios.

By focusing on these areas, countries can work towards building more resilient communities and reducing the potential impact of tsunamis on lives, livelihoods, and infrastructure.

Q131

18) Please list areas where your country would like support for targeted capacity development.

Pakistan, would likely seek support in various areas to enhance its capacity for tsunami warning and risk mitigation. Here's a list of potential areas where Pakistan may desire assistance:
1. Early Warning Systems Enhancement: Pakistan may need support in upgrading its early warning systems to ensure timely detection and dissemination of tsunami alerts to coastal communities.
2. Technology and Infrastructure: Assistance in acquiring and implementing advanced technology and infrastructure for monitoring seismic activities, oceanic conditions, and early detection of potential tsunamis.
3. Training and Capacity Building: Support for training local personnel in disaster management, including effective response protocols and community awareness programs.
4. Risk Assessment and Mapping: Collaboration with international partners for conducting comprehensive risk assessments and mapping vulnerable areas to develop targeted mitigation strategies.
5. Community Engagement and Education: Initiatives to educate coastal communities about tsunami risks, evacuation procedures, and preparedness measures to enhance resilience at the grassroots level.
6. Research and Development: Funding and collaboration opportunities for research institutions to conduct studies on tsunami dynamics, local geological conditions, and coastal vulnerabilities to inform mitigation strategies.
7. Policy and Governance Support: Assistance in formulating and implementing policies, regulations, and governance frameworks to strengthen institutional capacity for disaster risk management at national and local levels.
8. Cross-Border Cooperation: Regional collaboration and information sharing with neighboring countries to foster a coordinated approach to tsunami early warning systems and disaster response efforts.
9. Infrastructure Resilience: Support for retrofitting critical infrastructure along the coast to improve resilience against tsunami impacts, such as hospitals, schools, and emergency shelters.
10. Public Awareness Campaigns: Funding and expertise for designing and implementing public awareness campaigns to promote a culture of preparedness and resilience among coastal populations.
By focusing on these areas, Pakistan can work towards building a robust and effective tsunami warning and risk mitigation framework with the support of international partners and stakeholders.

Q132

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