

**Commemorating World Tsunami Day- November 05 2017**

**Making Coastal Communities and Cities Resilient to Tsunami in Pakistan**

Tsunamis are rare but they can affect a lot of people especially communities living in coastal areas. The 2004 Indian Ocean earthquake tsunami affected up to five million people in 15 countries. Tsunamis know no borders, making international cooperation key for deeper political and public understanding of risk reduction measures. In December 2015, the United Nations General Assembly designated 5 November as World Tsunami Awareness Day to promote a global culture of tsunami awareness.

In the second year in a row, the World Tsunami Awareness Day will align with the International Day for Disaster Reduction and the "Sendai Seven Campaign" and will focus in 2017 on Target B[[1]](#footnote-1) of the Sendai Framework for Disaster Risk Reduction which aims at reducing the number of affected people globally by disasters. The Framework also stresses upon considering the frequent and infrequent, sudden and slow-onset disasters caused by natural or manmade hazards for learning through the regional and national Strategies/institutions and plans for disaster risk reduction.

Historical evidences prove to the possibility of devastating tsunami potential of the Indian Ocean. The Makran Subduction Zone (MSZ) and Sumatra have been sources of two of the greatest tsunamis in the region in year 1945 and 2004 respectively[[2]](#footnote-2). The latter claiming some 230,000 lives. The 2011 the Great East Japan triggered powerful tsunami waves that reached heights of up to 40.5 meters (133 ft) and Japanese National Police Agency report confirmed 15,894 deaths.

The coast line of Pakistan has experienced a disastrous tsunami on 1945 when an earthquake of magnitude 8.0 occurred in the Arabian Sea which generated tsunami. Although, the population density along the Makran coast was very low even then the casualties were more than 4000. Arabian Sea cannot be ignored due to its earthquake potential as Makran subduction zone is located about hundred kilometers away from the coast. [[3]](#footnote-3) In case of another potential Makran event, Pakistan, India, Iran, Oman and proximate regions are highly vulnerable whereas Burma and others in the vicinity are vulnerable to a lower extent.

The fast growing cities of Gwadar, Pasni and Ormara in Balochistan province are likely to be the most vulnerable to tsunami due to being much closed to the Subduction zone. Similarly the most populous city and the economic hub of Pakistan, i.e. Karachi may also experience inundation due to tsunami from MSZ. MSZ extends eastward from the strait of Hermuz in Iran to near Karachi[[4]](#footnote-4).

The population at Pakistan coast has swollen during all these years with approximately 85,000 for Gwadar and over 20 million for Karachi (in comparison to less than 8000 in Gwadar and 0.1 million in Karachi of late 1940’s urban population statistics) thereby augmenting the problem of vulnerability to destruction. 70% of Pakistan’s 1,046 km coastline lacks appropriate early warning system (according to UNDP’s study during the EW initiative under One UN Joint Pilot Programme for DRR ( 2009-2012). Comparison between levels of susceptibility to damages by a potential tsunami in the region back then and now has led to the realization that there is virtually very little that has been improved in terms of community preparedness.

**AGENDA 2017**

Towards implementing the Sendai Framework of Disaster Risk Reduction (SFDRR), further efforts are needed, requiring interdisciplinary expertise. There is a dire need for overcoming challenges faced by local governments in creating a resilient built environment in cities and making communities resilient and prepared. After the launch of the UN-ISDR campaign, there is a growing recognition of the need to bring local governments into disaster risk reduction (DRR) and many countries has started advocating the campaign and initiated various systems to bring local governments into DRR.

The concept of bringing local governments into DRR requires some practical steps towards making local governments further empowered with regulatory and legislative enactments, which are related to land-use planning and control of development activities resilient built environment within their jurisdictions.

**Proposed Action**

***Action 1. Tsunami School Preparedness Drill***

Tsunami evacuation drill will be conducted in selected school in Rehri Goth of Karachi coastal area to highlight the significance of school tsunami preparedness and its effectiveness in saving lives from tsunami risk. Appropriate arrangements will be made for external observers.

***Action 2. Clean MY Coast Act by School Students***

School students will be engaged for a symbolic action for cleaning seashore adjacent to their villages. Students, school teachers, community members and guests will participate in it.

***Action 3. Making Cities Resilient to Tsunami – Consultative Dialogue with NED University Students***

A consultative dialogue will be organized for the students in collaboration with NED University of Engineering and Technology at Karachi. The dialogue will aim to sensitize students on risk informed development for making coastal cities resilient to prevailing multi-hazard risks with a special focus on tsunami.

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| Commemorating World Tsunami Day- November 05 2017Date: Tuesday November 7 2017Venue: 1) School Evacuation Drill- Rehri Goth 2) University Students Awareness Session - NED |
| Time  | Activity / Action  | Partners/ stakeholders  |
| 9:00 -11:00  | A Tsunami evacuation drill  | Education Deptt, PDMA, PMD, IRC, Police deptt. , UNICEF, JICA |
| 11:30-12:30 |  Action 2. Clean MY Coast Act by School Students | IUCN, Education deptt. Police deptt. , PMD, UNICEF, JICA |
| 12:30-2:30 | * Travel to NED University & Lunch
 |
| 2:30- 4 :30  | Making Cities Resilient to Tsunami – Consultative Dialogue with NED University Students | NED, PMD, PDMA, UNICEF, JICA, IUCN.  |

Proposed Partnership/ Invitees:

1. UNESCO
2. World Food Programme
3. NED University of Engineering and technology Karachi
4. Pakistan Metrological Department
5. National Disaster Management Authority
6. Provincial disaster management authorities of Sindh and Balochistan
7. District governments of coastal cities
8. International Union for Conservation of Nature (IUCN)
9. World Wildlife Fund
10. Lead Pakistan
11. Sustainable Development Policy Institute
12. National Institute of Oceanography
13. Ministry of Climate Change
1. Substantially reduce the number of affected people globally by 2030, aiming to lower the average global figure per 100.00 between 2020-2030 compared to 2005-2015. [↑](#footnote-ref-1)
2. https://www.researchgate.net/.../267208566\_Tsunami\_Hazard\_Assessment\_of\_Chabahar... [↑](#footnote-ref-2)
3. Mapping of Tsunami Hazard along Makran Coast of Pakistan, Technical Report No. PMD 20 /2012 by Nasir Mahmood, Karam Khan, Zahid Rafi and Dr. Finn Løvholt [↑](#footnote-ref-3)
4. Page, W., 1979. Evidence for the recurrence of large-magnitude earthquakes along the Makran Coast of Iran and Pakistan, Tectonophysics, 52(1-4), 533-547. [↑](#footnote-ref-4)