

Why to Better Manage Disasters?

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Each rupee invested in disaster preparedness saves seven in disaster response according to OCHA. Direct losses from disasters go up to two percent of Indian GDP and 12% of Indian government revenue according to World Bank estimates. About five percent of Indian GDP is lost due to road accidents. If we include road accidents in disasters¹, and prevent them, imagine Indian GDP may grow at about 14.2% instead of about 7.2%.

Worldwide disasters during 2000 to 2017 resulted in 1.45 million deaths, 5.07 million injured, 3.85 billion affected humans, and damages of \$2.174 trillion according to The International Disaster Database EM-DAT². Swiss Re, reinsurer, estimated \$306 billion in global losses and Munich Re estimated insured and uninsured losses of \$330+ billion in 2017, making it one of the costliest years for disasters on record. **In India 87,014 persons died, 206,136 injured, and 1.03 billion affected due to disasters during 2000 to 2017 according to ED-DAT. These figures exclude about 140,000 recorded mortalities due to road accidents every year.**

India is one of the most disaster prone countries in the world. India had some of the world's most severe famines, droughts, cyclones, earthquakes, chemical disasters, mid-air head-on aeroplanes collision, rail accidents, and road accidents. India has ranked at the top or near top in almost all type of disasters with number of deaths and people affected, stated Kailash Gupta³. Kapur et al. in their *Disasters in India: Studies of Grim Reality* book state that **India should hang her head in shame. There is no foyer in the world with space large enough to exhibit the collective pain on the face of India due to disaster mortality and morbidity.**

Don't these figures motivate you to better manage disasters? After all, disaster management is everybody's business. Wouldn't you like to save your, your family, friends, fellow human being's lives, and sufferings from disasters?

In the aftermath of disasters, generally communication systems are the first to break-down, when they are needed the most. After cyclone Fani landfall on May 3, 2019, near Puri all communication systems, including satellite phones failed. Communication was restored by amateur radio operators (Hams) operating from the Odisha State Disaster Management Authority office in Rajiv Bhawan of Bhubaneswar for 10 days. Even if normal communications systems are not broken they are over whelmed. By chance, if some phone callers are able to connect to emergency responders, most of the callers will say they need immediate help and their condition is worst. **Emergency responders will not know how to triage numerous callers, who and which place and persons should be given priority. "Disaster response is basically random. They don't know who they should help or when they can help. There is no science behind response⁴,"** according to Ahmad Wani of One Concern.

¹ What is a disaster? It is a debatable issue and two books are published: 1. *What is a Disaster? Perspectives on the Question*, Edited by E L Quarantelli, published by Routledge in 1998. 2. *What Is A Disaster?: New Answers to Old Questions*, Edited by Ronald W Perry and E L. Quarantelli, published by Xlibris Corp. in 2005

² EM DAT is maintained by Centre for Research on the Epidemiology of Disasters at the Université catholique de Louvain in Brussels

³ "Disaster Management and India: Responding Internally and Simultaneously in Neighbouring Countries," book chapter on India in *Comparative Emergency Management: Understanding Disaster Policies, Organizations, and Initiatives from Around the World*; edited by David McEntire and published by Federal Emergency Management Agency available at <https://training.fema.gov/hiedu/aemrc/booksdownload/compemgmtbookproject/>.

⁴ <https://www.routefifty.com/management/2018/02/small-california-town-earthquake-risks/145884/>

India is spending huge amounts of money after disasters in response, relief, and rehabilitation. Rajiv Gauba, Union Home Secretary told State Relief Commissioners on May 21, 2019, that Rs. 9,600 crores were released in 2018-19 for State Disaster Response Fund and Rs. 10,000 crores released from National Disaster Response Fund to severely affected states⁵. It was stated at the beginning that a rupee invested in disaster preparedness, saves about seven rupees in response. **Yet, notification for creation of National Disaster Mitigation Fund in the Official Gazette, mandated under Section 47(1) of Disaster Management Act, 2005, has not been issued even after 14 years. Disaster prevention, preparedness, and mitigation need to be emphasized to reduce disaster mortality and morbidity in India.**

No workshop on higher education in disaster management was held in India. **The International Emergency Management Society – India Chapter (TIEMS-IC)**, a non-profit professional organization of emergency and disaster management professionals persuaded **National Institute of Disaster Management (NIDM) to co-organize a Workshop on Higher Education in Disaster Management: Challenges and Opportunities at NIDM, New Delhi on February 10, 2017.** This was first time NIDM co-hosted a workshop in its campus with a non-profit. The workshop was supported (without funding) by six organizations, including The Jamsetji Tata School of Disaster Studies of Tata Institute of Social Sciences, Ashoka Innovators for Public, and The Institution of Engineers (India)⁶. The irony is: TIEMS-IC paid rent for a class room for holding a parallel session in the adjoining Indian Institute of Public Administration and for 55 participants' lunch.

Be Prepared is the motto of Scouting. Lord Baden-Powell in his 1908 published book *Scouting for Boys* explained, Be Prepared means “you are always in a state of readiness in mind and body to do your duty.” There are 100+ proficiency badges, inter alia, rescuer, swimmer, first-aid, path finder, handyman, cook, camper a Scout may earn on passing certain skill standard. I was awarded Bharat Scout (later I also received President's Scout) certificate and badge in February 1961 by Lady Oval Baden Powell, wife of the Founder of the movement and World Chief Guide in Jaipur. **Be prepared is ingrained and hard wired in me. Scouting needs to be promoted for disaster preparedness.**

My home in Baroda started shaking around 8:46 am on Jan. 26, 2001, due to earthquake. I, an amateur radio operator with call sign VU2KIZ, started my radio and communicated with other HAMS around the world. I was nearest radio operator from the epicentre. I joined at Vadodara Railway station a team of nine HAMS from Mumbai, who were traveling in 9031 Mumbai Gandhinagar Kutch Express with radios, antennas, power supply, cables, and other equipment for restoring emergency communication. The train terminated at Ahmedabad station at 01:40 Hrs. on Jan. 27, 2001, due to broken bridges.

We formed four sub-teams, three went to Bhuj, Bhachau and Anjar. I was at Emergency Operations Center (EOC) in Sachivalaya, Ghandinagar. We set up our radio stations and restored amateur radio communications by 27th Jan. morning. International disaster management experts were pouring at the EOC and waiting for instructions from govt. officials. There was failure of command and control system. I thought, if this is the level of mismanagement at the centre of state government, it would be worse at remote villages (~ 25,000 people died). **I thought disaster management should not be left to only politicians and bureaucrats. I decided to do something, got my calling, and from a business manager, became a disaster manager⁷.**

⁵<https://www.ndmindia.nic.in/images/pdf/ROD%20of%20Relief%20Commissioner's%20conf%202019.pdf>

⁶ <http://www.tiems.info/images/pdfs/TIEMS-2017-Newsletter-Special-issue--Oktober.pdf>

⁷ Above is a modified excerpt published in Prof. Anil Gupta of IIMA promoted Society for Research and Initiatives for Sustainable Technologies and Institutions (SRISTI) at http://www.sristi.org/english/dmis/dmexp1_old_8_july_02.htm.

I started with a six-month certificate course in disaster management from IGNOU and co-authored a text book on *Disaster Preparedness* for PG Diploma in Disaster Management and Master of Public Administration for IGNOU. In 2004, I joined PhD in Emergency Management at North Dakota State University, Fargo, USA, which is first university in the world to start a PhD in Emergency Management per se. In 2006, I withdrew and in 2008, re-started PhD at University of North Texas, Denton, which is first university in the world to start Bachelor of Science degree in Emergency Administration and Planning in 1983. **University of North Texas awarded me PhD in 2013, when I was 70 years, 42 years after IIMA awarded me PGDBA.**

Progress has been made in disaster management in India, showcased by evacuation of 1,557,170 people in Odisha before cyclone Fani landfall and 64 fatalities⁸. We received international acclaim for this. However, what is not known is the pathetic conditions of 1.65 crore affected people whose houses were destroyed, animals perished, crops damaged, they lost electricity and communication facilities, and means of livelihood. I was in Odisha for 20 days till 7th June and am witness to worst affected villages in Puri district.

After Fani landfall, we proactively and pro bono formed a consortium of organizations representing drone pilots and civil society organizations and worked with Odisha government to demonstrate the use of drones, GIS, AI, and machine learning for quick, effective and efficient relief. A presentation was made to Development Commissioner and number of Secretaries of different government departments at the Secretariat in Bhubaneswar on May 27, 2019. Please see a 57 second video of this effort at https://youtu.be/3zaIRn_pHg4.

I have been working full-time for last 18 years as resilience activist and disaster manager pro-actively and pro bono. Exceptions being (a) honorarium from IIMA for designing for the first time in fifty years a half-credit elective course in disaster management and teaching during 2014-15, and (b) fee from TIEMS for being part of 73 transdisciplinary researchers of 14 consortium organizations from 11 countries who completed a four year European Commission co-funded project. In that research, we conceptualized and coined, *crisis participatory governance*⁹. **Crisis participatory governance includes citizens (particularly vulnerable, low social capital, unarticulated) and civil society in risk communication and an organized response to a crisis by engaging them in policy making and implementation. The vision of TIEMS-IC is to make India disaster resilient using crisis participatory governance a mass movement.**

TIEMS-IC is working proactively and pro bono and endeavouring to meet the needs of India in the disaster management domain that others are not realizing or attempting to solve. For example, TIEMS-IC is working for six years with Jaipur Municipal Corporation and got Jaipur city selected as one of the 100 Resilient Cities¹⁰, pioneered by Rockefeller Foundation. Jaipur and Pune both were selected in 2016. Pune released Urban Resilience Strategy to become a Model of liveability and sustainability on June 24, 2019¹¹. An Agenda Setting Workshop “Towards a Resilient Jaipur” was held on Oct. 5, 2017. After that hardly any progress has been made despite continuous follow-up at all levels, including with Chief Secretary. Why? Because of apathy of Jaipur Municipal Corporation and Rajasthan government.

⁸ Special Relief Commissioner, Revenue & Disaster Management Department (Disaster Management), Government of Odisha. *Preliminary report on extremely sever cyclone storm “Fani”*. May 2019

⁹ Gupta, K. (2015). Crisis participatory governance report (D2.3). Retrieved from Action Plan on Science in Society Related Issues in Epidemics and Total Pandemics Website: http://www.asset-scienceinsociety.eu/sites/default/files/d2.3_crisis_participatory_governance_report.pdf

¹⁰ <https://www.100resilientcities.org/cities/jaipur/>

¹¹ <http://www.100resilientcities.org/pune-releases-urban-resilience-strategy-become-model-livability-sustainability-india/>

TIEMS-IC aims to reduce mortality, morbidity, and alleviate suffering of human beings from disasters. TIEMS-IC is disaster management partner of world's greatest free annual Jaipur Literature Festivals. We want to make disaster awareness a mass movement by promoting at cricket matches, *garbha* dances and other festivals, and big gatherings like *kumbh* mela. This tasks can only be achieved in collaboration with government, businesses, community, non-profit, social organizations, and other stakeholders.

The poorest of the poor are the most vulnerable in disasters. They strive to get next meal. The barrier to make them aware of disaster management is: **Why poor people should bother of a very low probability disaster (although of high impact) happening sometime in future when their daily survival itself is a disaster?** Our target "customers" are at the bottom of the pyramid and different stakeholders, activists, decision makers in government, businesses, non-profits, other humanitarian organizations, and likeminded opinion leaders (including you the reader) with whom we want to collaborate, coordinate, and partner. **We are confident that with concerted effort mortality and morbidity due to disasters can be substantially reduced.**

The best gift you can give to disaster vulnerable people is your time. Other resources follow. You, the benevolent WIMWIAN (alumni), are welcome to contribute in the efforts of TIEMS-IC in reducing mortality and morbidity due to disasters by your time wherever you are, by your skills, network, knowledge, and wisdom. TIEMS-IC can also provide you the platform and domain knowledge support for your project. I await your response on +91 94140 47890 or at kailashgupta@my.unt.edu. I shuttle between Jaipur and Santa Clara in California and we could have face-to-face meeting.



Dr Kailash Gupta (in blue checked shirt in front) as part of the team of Centre for Youth and Social Development, Bhubaneswar discussing with cyclone Fani affected people in Cyclone Shelter (whose houses were destroyed) Bamania village of Gram Panchayat and Block Brahmagiri of District Puri on May 19, 2019