

Regional Collaborative Strategies for preventing Disaster Risks in South Asia: Need for a better cooperation and coordination among the SAARC member Countries

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Abstract

The SAARC region, consisting of the countries of Afghanistan, Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan and Sri Lanka is one of the most disaster prone regions in the world. The region is highly susceptible to all types of natural and human induced disasters. Due to its high vulnerability, the SAARC region is suffering the most and experiencing maximum casualties and severe damages to property and infrastructure resulting in huge economic losses on account of all types of disasters. Climate change and environmental pollution is further compounding the problem. Although the SAARC region contributes very little towards climate change and global warming, environmental pollution, it is suffering the most on account of climate change due to the region's high vulnerability. The SAARC region is also host to one of the most threatened eco-systems in the world. Climate change is also contributing to sea level rise, stronger windstorms and higher temperatures, increasing urban risk and exacerbating migration in the region.

With the Sendai Framework's greater emphasis on Global and Regional Platforms for Disaster Risk Reduction there is a much need to develop more Collaborative Strategies, coordination and cooperation mechanisms and regional platforms for preventing Disaster Risks in South Asia. Regional Platforms for Disaster Risk Reduction are multi-stakeholder forums with varying characteristics, which will act as dynamic forums for policy-makers, partners, experts and practitioners of Disaster Risk Reduction to initiate activities, share information, promote campaigns and monitor progress about disaster risk reduction.

In the SAARC region, there are a large number of organizations and institutions which are actively involved in disaster risk reduction. But there is a lack of proper coordination mechanisms or platforms among them. For an effective disaster risk reduction strategy,

collaboration, cooperation and coordination among various government departments, organizations and institutions is a must. This paper briefly discusses the importance of regional cooperation and strategies for preventing disaster risks and provides a framework for engagement of national coordination mechanisms, collaborative strategies and regional platforms for disaster risk reduction in the SAARC region.

(Key Words: Sendai Framework, DRR, Climate Change, Mitigation, SAARC, Collaboration, Coordination)

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Speaker's Profile (Prof. M. Bhaskara Rao)

A graduate in Mechanical Engineering and a Postgraduate and doctorate in Industrial Engineering and Management Prof. M. Bhaskara Rao joined the Government Service in January 1986, (in the Andhra Pradesh State RWSS Engineering Services) and served in various capacities in the Government of Andhra Pradesh before he was deputed to the Government of India as an Asst. Educational Advisor (Technical) to the Government of India in the Ministry of Human Resource Development, Department of Technical Education, Government of India, New Delhi w.e.f 04th May, 1995 and later posted as a Senior Faculty Member (Disaster Management) w.e.f 14th December, 2002 and subsequently as Professor and Head , Centre for Disaster Preparedness w.e.f 01st September, 2004 at the Dr. MCR HRD Institute of Andhra Pradesh, Government of Andhra Pradesh, Hyderabad. He was again posted as a Specialist, Policy, Planning and Related Issues in the SAARC Disaster Management Centre, New Delhi and later as Professor, Department of Management Science, Rajiv Gandhi University of Knowledge Technologies (RGUKT), APIIT, Nuzvid, Andhra Pradesh. He also served as an Advisor (DM), LBSNAA, Government of India, Mussoorie, India. Presently he is serving as a Visiting Professor, Department of Management Science, Rajiv Gandhi University of Knowledge Technologies (RGUKT), APIIT, RK Valley, Kadapa, Andhra Pradesh. He has to his credit, 12 International Conference/ Seminar Paper publications and more than 40 National Conference/ Workshop/ Seminar Papers. He was a member of the National Core Group constituted by the National Disaster Management Authority, Ministry of Home Affairs, Government of India, New Delhi for preparation of Guidelines for Management of various types of disasters in India.

Organization's Profile (RGUKT)

The Rajiv Gandhi University of Knowledge Technologies (RGUKT) was created by the Government of Andhra Pradesh, India in 2008 by an act of the Legislature as a full-fledged university to cater to the educational needs of gifted youth of Andhra Pradesh, India. It would admit roughly the top 1% of the rural students into the four residential campuses. The first batch of about 6,500 students were admitted into a six year integrated program in August of 2008. At present, most universities in India follow the affiliated college structure model where the main role of the university is to set the curriculum and conduct examinations to ensure that the students have indeed learned the material prescribed in the curriculum. Most colleges have an entering class of 100-300. Having an entry class of 6,500 students leads to issues of gigantic scale. This is unique to RGUKT and is being attempted for the first time in India. Thus RGUKT represents a unique experiment in the educational arena in India. The assumption is that ICT will permit the scaling of the learning environments by one to two orders of magnitude is possible. Another key educational objective of RGUKT is to use advances in learning sciences and explore the use of modern cognitive science tools in education and learning. Education at RGUKT is based on the intensive use of Information Technology. Every student has access to a laptop and education uses the latest advances in Learning Sciences such as Learning by Example, Learning by Doing and Problem-based Learning.

Regional Collaborative Strategies for preventing Disaster Risks in South Asia: Need for a better cooperation and coordination among the SAARC member Countries

1. Introduction

The South Asian Association for Regional Cooperation (SAARC), consisting of the countries of Afghanistan, Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan and Sri Lanka is one of the most disaster prone regions in the world. The SAARC, which was established in 1985 to promote economic and social progress, cultural development, regional cooperation, and coordination and also friendship among its member countries is dedicated to economic, technological, social, and cultural development of the region with an emphasis for collective self-reliance and improvement in the quality of life of its people. In the SAARC region, there are a large number of Scientific and Technical organizations and institutions which are actively involved in research in Science and Technology. Though the SAARC is functioning during the last 33 years, there is still lack of appropriate coordination and cooperation mechanisms and platforms particularly among the Scientific and Technical organizations and institutions, Research and Development institutions in the region.

2. Genesis of the SAARC:

The South Asian Association for Regional Cooperation (SAARC) was established on December 1985 with the objectives to promote the welfare of the people of South Asia and to improve their quality of life, to accelerate economic growth, social progress and cultural development in the region and to provide all individuals the opportunity to live in dignity and to realize their full potentials, to promote and strengthen collective self-reliance among the countries of South Asia, to contribute to mutual trust, understanding and appreciation of one another's problems, to promote active collaboration and mutual assistance in the economic, social, cultural, technical and scientific fields, to strengthen cooperation with other developing countries, to strengthen cooperation among themselves in international forums on matters of common interests and to cooperate with international and regional organizations with similar aims and purposes. Though there is so much common with every member country of the SAARC region in terms of culture, traditions, history and common beliefs, there is widespread diversity in terms of

climatic, geographical, meteorological, hydrological and socio economic conditions in the region. Most parts of the SAARC region was under unified administration during the colonial rule and got political independence only during the late forties of the twentieth century. During the initial period i.e., during the late eighties and early nineties of the twentieth century, the SAARC achieved considerable success and developed as a coherent regional organization and enjoyed active collaboration and mutual assistance, cooperation and coordination from the Member Countries in the economic, social, cultural, technical and scientific fields. The headquarters of the SAARC is located at Kathmandu, Nepal. Decisions at all levels are to be taken on the basis of unanimity and bilateral and contentious issues are excluded from the deliberations of the Association. But over the recent years, there appears to be certain blockades for effective performance and functioning of the SAARC. The first SAARC summit was held in Dhaka, Bangladesh in December, 1985. Over the recent years, the SAARC summits are not being held regularly. The last SAARC summit (eighteenth summit) was held on November, 2014 and since then, no summit was held so far.

SAARC Technical Committees comprising representatives of Member States of the South Asia region are responsible for the implementation, coordination and monitoring of the programmes in their respective areas of cooperation. In addition to determining the potential and the scope of regional cooperation in agreed areas, these Technical Committees are also involved in formulation of programmes and preparation of projects. They also coordinate the implementation of sectoral programmes and assess their implementation regularly. The SAARC Technical Committee on Science and Technology work in the areas of Science and Technology and provide support to all the SAARC activities in all matters related to Science and Technology including application of Science and Technology for Disaster Risk Reduction. There is a strong need for innovative Science and Technology research in Disaster Risk Reduction in the South Asia region. Science and Technology related Information needs to be more readily accessible and easy to understand to benefit the communities at-risk.

3. Disaster Vulnerability of the SAARC Region:

The SAARC region is one of the most disaster-prone regions of the world. The region is a hot spot to all types of natural and human induced disasters. Afghanistan, Bangladesh, India and Pakistan recorded significantly higher frequencies of natural disasters than many other countries in the world during the last fifty years. The SAARC region is home to an astounding variety of geographical features, such as glaciers, rainforests, valleys, deserts, and coastal area that are typical of much larger continents. The region is also exposed to a variety of hazards due to the geo-climatic characteristics of the region. These hazards range from avalanches and earthquakes to glacial lake outburst floods (GLOF) in the Himalayas in the North, droughts and floods in the plains, and cyclones that originate in the Bay of Bengal and the Arabian Sea. Importantly, many countries in the region share common geological formations and river basins, and natural hazards frequently transcend national boundaries. Despite increasing disaster risk in the region awareness and understanding of this risk among individuals and governments remains low.

Although the SAARC region contribute very little towards environmental pollution, release of Green House Gasses (GHG), climate change and global warming, it is generally suffering the adverse impacts of climate change and climate variability due to its vulnerability. The SAARC region is also host to one of the most threatened eco-systems from the effects of the climate change. However, there has been growing awareness and concern about the impacts of the disasters and therefore over the recent years better mobilization of resources have taken place to tackle the problem of natural disasters on part of all the stakeholders such as scientists, policy makers, Voluntary Organizations, NGOs, etc. Progressive governments in the SAARC region have taken several initiatives in this regard in order to ensure effective disaster risk reduction strategies are in place.

4. Present Status of Disaster Risk Reduction (DRR) Measures in the SAARC Region

All the governments of the member countries of the SAARC region have accorded top priority for Disaster Risk Reduction. Policy makers in the SAARC region prioritized for increasing their country's resilience to disasters. Realizing that enhancing resilience to hazards in the region is critical, they have tried to incorporate and integrate disaster risk reduction in their various developmental activities. The region has taken several

initiatives in areas of Disaster Risk Reduction such as strengthening governance, more investments in risk sensitive areas, improved early warning systems and preparedness measures. The adoption of the Agenda for Sustainable Development, which includes the Sendai Framework for Disaster Risk Reduction, has strengthened the government's efforts in the region. But lot more need to be done in this regard, given the high vulnerability of the region and predominant poverty and under development in the region. The region is also witnessing continued, steady path of economic development over the recent years. This positive growth trends have increased the number of people and physical assets but have not been coupled with corresponding investments in effective disaster risk management practices in most parts of the region. Several policy initiatives were taken by the governments of the member countries of the region to put in place an effective Disaster Risk Reduction strategy in place. National policies for effective Disaster Risk Reduction were formulated in India, Bangladesh and Sri Lanka and several disaster reduction programmes were implemented in coordination with national and international organizations. In addition to all the national governments, several state governments, provincial and regional governments, local and municipal administrations in the region also have taken several initiatives to reduce disaster risk. All these policies and initiatives seek to ensure a safe and disaster resilient region. All the SAARC member countries are implementing the measures in accordance with the four priorities of action and seven targets to be achieved under the SFDRR. Strengthening and improving early-warning are vital to building disaster resilience in the South Asia region. This requires a lot of collaboration and cooperation among various organizations and institutions in the region.

5. Disaster Response Mechanism in the SAARC Region

The SAARC region has a well established administrative network. In view of frequent and periodic occurrences of various types of disasters, the administrative mechanism in the region have developed well established practices for organizing response to disasters. There is a paradigm shift by the governments in their approach to disaster response. The focus is shifted from post disaster reaction to pre disaster action. But the present systems and procedures and practices needs to be further strengthened. Since the region is a hot spot for all types of disasters, the response to disasters should be quick, positive and in the most

appropriate manner. Application of science and technology plays a very important role in this regard particularly in the area of information technology, communication and knowledge dissemination.

Some countries of the region such as India, Bangladesh, Sri Lanka, Nepal and Bhutan have also adopted the Incident Command System (ICS) and Multiagency Coordination Systems for organizing an effective response to disaster situations. In India, the modified and adopted version of the original Incident Command System (ICS) i.e., Incident Response System (IRS) to suit Indian conditions for organizing an effective response was put in place. The adaptation process was carried out by the National Core Group members constituted by the Government of India. This adapted version of the Incident Response System is also being followed by the countries of Afghanistan, Bhutan, Nepal and Sri Lanka with minor changes to suit their local conditions for organizing an effective professional response to disasters in their countries.

In most cases in the SAARC region, the disaster response problems could rarely be attributed to lack of resources. The response problems were far more likely to result from inadequate management and failure of tactics than from any other single reason. Weaknesses in disaster response management in most cases in the region may be due to lack of accountability, including unclear chains of command and supervision, lack of reliable incident information, lack of effective resource management, failure of tactics, poor communications, etc. In order to further improve their disaster response capabilities, the member countries of the SAARC region have decided to develop a Natural Disaster Rapid Response Mechanism (NDRRM) for coordination and planned approach to meet all types of disaster emergencies in the region. This requires a lot of cooperation and coordination and appropriate collaborative strategies among the regional and local governments and various organizations and institutions in the SAARC region.

6. Regional Collaboration for Disaster Risk Reduction (DRR) in the SAARC Region

Strengthening and improving early-warning are vital to building disaster resilience in the South Asia region. This requires a lot of collaboration and cooperation among various organizations and institutions in the region.

Though the SAARC was established thirty three years ago regional cooperation and collaboration in the region has not progressed at the desired pace. Even some of the most common problems of the region were also not addressed properly. If we compare the achievements of SAARC with other regional organizations like ASEAN, it is evidently clear that the SAARC has much to learn from the success of these organizations. In the recent past, even the annual SAARC summits were not held regularly. Though socially, culturally the member countries in the SAARC region share common traditions, religious and cultural practices that cross over national boundaries, the region as a whole is not able to address and resolve its regional problems. Disaster Risk reduction and significant environmental challenges facing the region cannot be addressed without a meaningful cooperation. It appears that the process of cooperation and collaboration remains centralized in the national governments only and the provincial and local governments have no role to play. The relationship among the SAARC member countries is not just thirty three years old, but it is a few thousands of years old, deep rooted in the history and therefore, it is important that the political leaders should draw from the deep well of history to build ties. It seems that the political leadership does not face any pressure from their constituencies for regional cooperation and collaboration agenda in the SAARC region. Lack of trust and open hostilities between two countries of the region were witnessed on several occasions.

In the SAARC region, substantial progress has been achieved in understanding the cause and effects of natural hazards. There exists a wealth of scientific, technical knowledge, information and engineering know-how that could be effectively used to reduce disaster impacts. Science and Technology have brought a deeper understanding of disaster risks and lot of knowledge and information on how to reduce them is available in the domain of Science and Technology organizations and institutions in the region. Since there is no collaboration and cooperation in the region, there are gaps in passing this knowledge and information to the needy to take appropriate action for Disaster risk Reduction.

7. Present Problems of the SAARC

At present, the SAARC is facing a number of problems particularly due to lack of cooperation and collaboration among its members. The first problem is that the governments of the member countries of the SAARC region are not on ideal terms with each other and facing political headwinds. In most parts of the region, where relations have been

comparatively better until the past few years, it appears that the present situation is far from desired due to strained relations among the neighborhood member countries.

The second problem is the impact of China's unprecedented forays into each of the member countries in the region. China, a global economic and military power has started to interfere in the internal affairs of the SAARC. Though China is not a member of the SAARC, it has a stake in the internal politics of the member countries of the region since it has a growing presence in the massive infrastructure development and connectivity projects in the SAARC region. China's much ambitious Belt and Road Initiative (BRI) is creating tensions in the region. China is also trying to take on the role India should have been in a better position to play as a leading economic, science and technology and military power and trying to project India as an unconcerned and biased to the needs and aspirations of the small countries in the region.

The third problem is strained diplomatic relations between two important neighboring countries in the region i.e., India and Pakistan due to recent ceasefire violations and cross-border infiltrations on the Line of Control and surgical strikes. The recent developments in the Maldives have led to the Maldives cancelling its participation in the Indian Navy's Milan exercises in the Indian Ocean. While some of these problems may be hard to resolve, the fundamental facts of geography and shared common history and culture of the SAARC region (most parts of the region was under the single and unified administration till the middle of the last century) cannot be ignored. India, as a big brother should focus its efforts, through collaborative strategies making the neighborhood first again.

8. Suggestions and Recommendations

- Leaders of the SAARC member countries should meet more often informally and there should be more interactions with every level of the governments in the region.
- Political leaders and various partners in the SAARC region should recognize that there is an urgent need to accelerate the implementation of the agreed global frameworks through better regional collaboration strategies and a more people-centred, inclusive approach as advocated by the Sendai Framework advocates.

- Administrators and policymakers in the SAARC region should empower their national DRR platforms through greater engagement with science and technology organizations, research and development institutions in the region.
- The member countries in the South Asia region should strongly promote multi-disciplinary disaster risk reduction in university education as well as professional training. This will ensure human resource development in the Disaster Risk Reduction field in the region.
- The South Asian countries should further increase investments substantially in disaster risk reduction for resilience including in multi-hazard early warning systems and dissemination channels and enhance team efforts in hazard and disaster monitoring and research and allocate more funds for research in disaster risk reduction
- There must be free exchange of scientific and technical knowledge and information to promote research for disaster risk reduction in the SAARC member countries and continue the much-needed science-policy dialogue to ensure that implementation of disaster risk reduction measures at all levels are sound science and technology based.
- Scientific and Technical organizations and institutions in the SAARC region should conduct frequent meetings, seminars, interaction workshops and conferences on DRR to provide an opportunity to the science, research and academic community in the region to frequently interact, share and exchange knowledge and information..
- All the scientists and technocrats from the recognized scientific/research organizations and educational institutions from the SAARC member countries may be exempted from visa restrictions to promote free travel within the region to encourage frequent interaction for knowledge sharing and exchange of information among the member countries.
- Coherence should be fostered for Disaster Risk Reduction through collaboration between scientific and technical organizations, institutions, governments, stakeholders and NGOs. Science and Technology should be utilized in a way that are not politically aligned or geographically contained.
- There needs to be a deeper understanding on how Science and Technology can effectively address disaster risk at the regional level. Stakeholders should establish channels through which information can move with ease and strengthening collaboration.
- The SAARC Disaster Management Centre (SDMC), which is a regional centre under the administrative control of the SAARC should extensively collaborate with premier academic

institutes and research organizations in the region, international organizations, NGOs for DRR and engage in extensive networking through the National Focal Points of Member States of the SAARC region.

- Important Scientific and Technical Organizations and Regional /National Institutions like AIT, NITs and IITs/IISc/IISERs in the SAARC region may take a lead role in designing specified curriculum designs and modules in disaster risk reduction.
- The key component of the Sendai Framework is collaboration among various Science and Technology organizations and Institutions and integrate them into national government decision making for disaster risk reduction. This can be done by collaboration and promoting cooperation and coordination among the scientific bodies, academic associations and institutions, and well-trained/individuals in to the national disaster management organizations/offices. This is necessary to implement all four priority areas of the Sendai Framework in the SAARC region.

9. Conclusion

Significant Disaster Risk Reduction and environmental challenges facing South Asia cannot be addressed without regional collaboration strategies and co-ordination mechanisms. Increasing frequency and intensity of disasters in the South Asia region has galvanized the SAARC member countries to enter into various bilateral agreements and regional collaboration and cooperation mechanisms for putting in place effective disaster risk reduction strategies. But there are certain problems in implementation. The SAARC can easily address these problems. Regional collaboration for Disaster Risk Reduction has to be prioritized for sustainable development and poverty alleviation in the SAARC region. With the Sendai Framework's greater emphasis on regional collaboration in reducing disaster risks, there is a further significant need to share application of science and technology and disseminate Disaster Risk Reduction knowledge, methodologies and tools. With the presence of a large number of Scientific and Technical organizations and institutions in the SAARC region, through effective regional collaborative strategies and cooperation mechanisms and involvement of competent and vibrant scientific and engineering community in the SAARC region, with the continued political commitment and support from the governments of the member countries of the region, it is quite possible to face all the challenges of Disaster Risk Reduction and ensure a safe and disaster resilient South Asia.

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