MAINSTREAMING DISASTER RISK REDUCTION IN SCHOOLS’ CURRICULUM
(ANALYTICAL INSTRUMENT FOR POLICY ADVOCACY)

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“Things like DRR need to be there in the textbooks. Aspired to interpret, we ourselves will learn further and teach children better. Children will in turn explain things to their younger brothers and sisters, even to their parents and to those who cannot read or write. The new learning has a capacity to inform, who should do what during, before or after a disaster.”


“Disaster Reduction Begins at School”
(United Nations International Strategy for Disaster Reduction, 2006-8)
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1 – INTRODUCTION

Education is the strategic source for social transformation. Faced a challenge! Look at your basic education system. What it aims at and what else it can further integrate. Curriculum streams and content in particular. If something goes wrong or new problems come forward, developed nations look back into their education’s potential with a question in mind. Could it help us out? How far it can solve the growing problems? Never meant for a single objective as education has lot more to offer but surely, it is powerful enough to address some emerging challenges too. Recurring ‘natural disasters’ is one such challenge, where education can make a noticeable difference.

Growing frequency of natural disasters in Pakistan demands to explore and address the issue from diversified perspectives. Going explosive and unruly, nature exposes itself in more than one form. Unprecedented flooding, massive earthquakes, cyclones and avalanches, droughts and dry spells, you name a calamity, this country has got it. Therefore, it is best to make our children learn it today for a safer tomorrow. Being younger and naïve, children are a high-risk category in the wake of a disaster. Therefore, disaster management knowledge is not only important for them but eventually for the entire nation. Physically fragile and located in a high-risk zone, it is a matter of life and death for Pakistan to impart at least basic understanding of disaster risk response or reduction (DRR), preparation and mitigation skills to its children. Education can prove a primary and prime instrument for that. Fundamental skills, attitudes and responses could be learnt from start to confront and co-opt such occurrences, so long as they become predictable and controlled.

Indus Consortium (IC), in collaboration with OxfamNovib, has initiated the task of reviewing schools’ curricula meant to launch a campaign for a disaster sensitive education. The study in hand appraises Sindh and Punjab’s Primary and Secondary level curriculum, authorized by Punjab Text Book Board (PTB) and Sindh Textbook Board (STB). Major thrust in this study, however, remains on Class 1 to Class 8th curriculum. Most rural schools, frequently flooded or risked by other disasters, are primary or middle schools. Therefore, the study attempts to analyze primary and middle school curriculum just by default. Every single subject, having some closer or farther relevance, has been brooded to pin point where and what could be suitable integrated. Obviously, it is not confined to the curriculum analyses, rather the whole system has
been studied to offer workable suggestions. DRR learning envisages the whole paraphernalia of education.

Thatta and Badeen, the two districts of Sindh where one member of the consortium i.e. LHDP\(^1\) and three districts of Punjab i.e. Muzzafargh, Rajanpur and Layyah, where other two members of the consortium i.e. HELP\(^2\) and Doaba Foundation are implementing their projects, were selected as target districts for the study. Government Girls Primary Schools (GGPS) and Government Boys Primary Schools (GBPS) were randomly selected, but with representative assortment, in consultation with Social Organizers of the respective IC members. Individual interviews as well as Focus Group Discussions (FGDs) were held with teachers, members of School Councils (SC), local elders and somewhere with parents too. Even students, boys and girls, were engaged in group discussions (FGDs) to explore their feelings and perceptions to understand their attitudes and tendencies.

In the same districts, Executive District Officers (EDOs), Districts Education Officers (DEOs) and Assistant Educations Officers (AEOs) were also interviewed to collect their reflections on the subject. The researcher also held - mostly face to face and some telephonic - interviews with maximum available authorities and experts in education sector. It includes provincial Secretaries or Chief Secretaries of Education and Schools, Chairpersons Textbook Boards, Director and Deputy Directors Schools, Humanities. Curriculum Wings and Literacy, and certain members of Curriculum Review Committees (CRCs). Select journalists’ and social workers’ views were also sought from those concerned with the issue\(^3\).

District Risk Management (DRM) Coordinators, Representatives of National Disaster Management Authority (NDMA) and Local UNDP officials, and where accessible Director Planning and Development (P & D), Director Finance and Accounts and the Deputy Commissioners were also requested to reflect upon the system and constrains in this connection. Opinions of provincial rescue forces, where available, are also incorporated. Although physical safety such as locality, resilience, quality and risk-resistant structure of schools is partially a relevant concern but the author avoids it deliberately to maintain curriculum, schooling, teaching and learning aspects of primary education as the centre of attention.

The study begins with a precise contextualization of massive challenges posed by natural catastrophes, with ever-increasing recurrence, especially in the risk-prone countries in southern hemisphere of the world. It also highlights danger and the loss they cause to children’s lives, school buildings and education across globe, especially in countries like Pakistan and other countries of South Asia. Before moving to pertinent policy proposals, it throws light on essential commitments made by Hygo Frame of Action (HFA), United Nations International Strategy for Disaster Reduction (UNISDR) and Unite Nation’s (UN) relevant Covenants and Conventions. Apart from the researcher’s own analyses and insights, the study also borrows idea from

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\(^1\) Lar Humanitarian Development Programme (LHDP), Sindh
\(^2\) Human Empowerment to Lead and to Progress (HELP), Rajanpur, Punjab
\(^3\) See Annexure 1 for the research design and interviews questions and sampling of the schools.
UNICEF’s framework proposed for mainstreaming DRR in curriculums. However, generalizations made, ideas extended, conceptual and operational suggestions put forward are entirely an outcome of the author’s own understanding and insights. Nevertheless, dots connected from concerned people’s views are admitted.

The approaches used to draw analyses briefly intro mentioned hereby. Under ‘Infusion’ or ‘permeation’ approach - limited or holistic - Sindhi, Urdu, English, Pakistan Studies, Geography, Science and Social Studies are analyzed here. Looking into the intrinsic potential of existing curriculum the approach suggests infiltrating DRR topics into a number of suitable subjects. The whole curriculum is scrutinized, identifying what can fit in where, how and in which subject? Although the provision of information through this approach remains limited but literal revision of the persuades experts to place themes like cyclones or earthquakes or other forms of natural disasters in natural as well as social science subjects. In-spite of dispersing the message across subjects, the approach precludes community’s role in disaster management and fails to transmit other practical skills and dispositions for resilience and safety.

‘Centralized Competency Approach’ is another form adopted if state authorities are advised to instrumentalize education to improve general social learning around the subject. Usually, it is employed at the higher level. DRR concepts, critical skills and competencies are built into the curricula in cooperation with key stakeholders. Career subjects, module development, teachers training and scope follows that exercise. Further plans for resourcing, expansion and higher specialization are managed later based on experience and assessment. Governmental support, however, is essential to make it a success. For being a quick-fix-approach it sometimes marks quick success but when government or donors loose interest, it suffers a lot.

Carving out entirely a new subject, known as ‘dedicated subject approach’ is also advised in theory to integrate DRR in curriculum. It reflects all social, technical, economic and scientific aspects of climatic change, disasters and DRR. The stand-alone subject advocates to awards substantial room in curriculum of teaching DRR with reference to risks, types and intensities of disaster in a country or region. Winning government’s will to commit resources and convincing curriculum authorities cause serious challenges to materialize the approach. If done, the approach itself becomes an excuse to not to infuse DRR in other subjects. In addition, early morning assemblies, students clubs, after school or vacation times, trips and drills, exhibitions, special events and ceremonies are also the avenues to insert DRR at multiple levels. The approach, identified as ‘curriculum or extra-curriculum based approach’ however requires careful crafting to maintain interest and spirit. The approach does carry certain advantages but it might distract policy advocates from negotiating desired reforms in the curriculum. Certain social, political and economic dimensions addressing vulnerabilities could be undermined. Recommendations, extracted from the detailed analysis are outlined at the end.

Finally, it is absolutely unethical and unjust, if I do not thank IC and its members, though IC is the custodian of the study, for their support and cooperation during the research. All staff and people associated with them formally and informally deserve my special gratitude for facilitating the extensive fieldwork and travel in Sindh and South Punjab.
Hussain Jarwar and Khalid Saifullah from IC deserve immense thanks along with Iqbal Hyder, Liaqat Ali and Jamshed Fareed from LHP, Doaba and HELP Foundation. Likewise, my heartiest admiration is due to Fizza Qureshi (Karachi), Qaisar-e-Azam, Abdullah Saraz, Naveed Akhtar, Zafar Khaskheli and Sanam Abbasi from LHDP (Badeen), Faiz Fareed, Jameel Laghari, Imran Ahmed and Khurram from HELP (Rajapnupur), Bilal Ahmed, Shaukat Hussain, Sarfaraz Ahmed, Mazhar Iqbal, Naeem Malik and Zahida Bibi from Doaba Foundation (Muzzafargarh and Layyah) for making every possible effort to arrange meetings with maximum suitable persons in the field. Further on, I genuinely appreciate my friends Iqbal Mallah and Maqbool Mallah from Hyderabad to provide contacts and seek appointments with various officials of Sindh Textbook Board and some independent experts to discuss the subject. Surely, it added value to my work. Without their and several other peoples’ kind support and earnest assistance, it would have been extremely difficult to reach right persons at right time.

10.- GROWING FREQUENCY OF NATURAL DISASTERS: A MAJOR CONCERN

“If an earthquake strikes, people living in huts and cottages are far safer than those living in bungalows. Not earthquake, it is RCC that kills with a single stroke. They too need to learn how to survive in a disaster,”

Dilish Kumar, GBPS Teacher, himself living in a hut at, Tumb Bheel, UC Khosaki, Badin.

Nature in the known history has never been so furious perhaps, as the world witnessed it in the last couple of decades. Multiplied frequency and magnitude of disasters has caused unprecedented loss of life, livelihoods and infrastructure in the recent past. Rising temperatures and shifting tides of climate cast catastrophic effects, particularly, on the southern hemisphere of globe. Chaotic urbanization and industrial toxics are agitating equilibrium inside earth and shaking the serenity of skies. Poor countries and poorer populations fall victim to disasters more than ever given the specific effects of climatic change, unsafe buildings, fragile infrastructure, lack of preparatory measures and mismanagement. Apart from other trounces, it proves detrimental to whatever development gains a country has made. Boisterous and unbounded by political boundaries, disasters impact supersedes regional and political boundaries. Settlements in high-risk zones, changing geographic, demographic and technological conditions, environmental degradation and scarcity of resources compound rural and urban poor’s vulnerability in developing and underdeveloped countries.

As estimated by UNISDR, around 302 hazards struck the world claiming nearly 30,000 lives and harming 206 million people just in 2011. Roughly, it incurred a loss of USD 366 billion in a single year1. No more an occasional phenomena, as was traditionally perceived, natural catastrophes touch the figure of 400, causing 74000 deaths and affecting more than 230 million people every single year. Add local turmoil and pandemics, the figure conveniently doubles. Between 1980
and 2000 around three-fourth of the worlds population was affected by the phenomena, at least once in the two decades. Floods alone harm more than 500 million people each year. Close to 500 cities around the world, with a population of one million, face cyclones or repeated bouts earthquakes. Over 100 countries, roughly 250 million people are threatened by droughts and desertification, perhaps the least noticed form of disaster.

Despite some improvement in the last couple of decades, disaster risk response and corresponding capabilities still remain a challenge, direly so in developing countries of the world. Legal and policy frameworks, adequate assessment and preparatory measures, identification of risk factors, early warning and most importantly knowledge management and education in this area still remain under-developed, under-financed and insufficiently addressed.

3 – RELEVANT UN CONVENTIONS AND OTHER INTERNATIONAL COMMITMENTS

The ‘right to life’ and the ‘right to education’ are avidly pursued by UN Convention on the Rights of the Child (1990). It states that, ‘every child has both the inherent right to life’ (Article 6) and ‘the right to education’ (Article 28). Both the rights are seriously threatened by periodical or unforeseen natural hazards. In a similar connection Millennium Development Goals (MDGs) commit to realize the target of ‘education for all (EFA)’ by 2015. Without ensuring schools and safe schooling and without educating students about ‘possible or probable disasters and how to respond to it’, it is difficult to respect and fulfill ‘right to life’ and ‘right to education’ of the present and the future generations.

United Nations Educational, Scientific and Cultural Organization, ‘UNESCO’s World Education Forum at Dakar (2000), recognized as Dakar Framework for Action acknowledges that around 875 million school children live in higher risk zones and a sizeable number is enrolled every year in schools located at naturally fragile zones. Such threats not only sustain rather grow up with the passage of time but international support lags behind to curb these down. (Wisner et. al. 2004, UNESCO & Ibid). United Nations Children’s Fund (UNICEF) and the (UNESCO) affirm that education can play significant role in building resilience and reducing vulnerability. It can build knowledge, skills, attitudes and prepare children to cope with disasters. Rehabilitation and return to life is also manageable through corresponding education (Ibid).

Building on Yokohama Strategy (1994) and World Conference on Disaster Reduction (2005) Hyogo Framework of Action (2005 – 2015) resolves to build ‘nations and communities resilience to disasters’. Within the ongoing 10 years, it expects, “substantial reduction of disaster losses, in lives and in the social, economic and environmental assets of communities and countries.” Nevertheless, It can never be realized without governmental involvement, national and international support and contribution from scientists and civil society across the world. Local authorities and respective communities need to be empowered by providing necessary information and resources to manage and mitigate risks. Disaster prone developing and under developed countries particularly those lacking ability and resources to respond and recover from
crises, need unusual attention. International development goals, including Millennium Declarations, will fail to show up without considering the crosscutting area of disaster management.

Thus, every possible humanitarian assistance is must to reduce risks and vulnerabilities in future. As pledged in the said ‘Framework of Action’ DRR elements be incorporated in the sustainable development plans to strengthen and implement International Strategy for Disaster Risk Reduction (ISDR) and to build disaster resilient communities and nations. North-south and South-South cooperation for financial and technological transfer and assistance is also important.

4 - IMPACT OF NATURAL DISASTERS ON CHILDREN AND SCHOOLS

“Disasters make us further landless, further poor, further vulnerable.
If I have got two acres of land, what shall I be left with to live on and feed my children after a cyclone hits my land.”
GBPS Teacher, Haroon Baloch at UC Khosaki, Badin.

Tender in age and physical strength, children are the most vulnerable group in the times of disaster. Unpredictability and suddenness of an emergency, multiplied with inexperienciality of young boys and girls, aggravate the risk of their injuries, deaths and disabilities. If a natural calamity hits during school hours, as did October 2005 Earthquake in Pakistan, damage and destruction turns far more catastrophic for children. The said tragedy claimed 17000 innocent lives in addition to 900 teachers and fatally injured 50,000 disabling several of them for the rest of their lives. It destroyed 10,000 school buildings and hurt 300,000 children in multiple manners. More than 80% buildings were raised to the ground in Balakot, Muzzaffarabad and Mansehara. Corresponding figures were equally appalling when Indian Ocean Tsunami knocked Sri Lanka in 2004. It engulfed 13000 children and strangled number of them for good. Horrible tides of water crushed 51 schools in Sri Lanka, 44 in Maldives, and smashed off 2135 schools in Indonesia, leaving 150,000 students without schools.

food deficit, Pakistan floods 2009, 2010 and 2011, affected hundreds of thousands of school going children directly and indirectly. Must be noted that approximately 1 billion children below 14 years of age live in high-risk seismic zones of the world.

5 – EDUCATION AND PSYCHOSOCIAL IMPACT ON CHILDREN

Children caught by disasters undergo number of horrible consequences. According to a study by Plan International, more than one-third death tolls comprise on children and even a higher figure counts for the surviving ones. The way governments and several other agencies react, their voices remain unheard and they are not involved in mitigation, response and recovery processes. Surviving children fall victim to abuse and exploitation by the offenders taking advantage of system-collapse and the disruption of law and order. Trauma, guilt, fear, anger, helplessness and many other psychological stresses get a hold of innocent affectees. Education discontinues and a sense of regularity and normality of life shatters. Their psychosocial, academic and other similar needs are often neglected. If at all, it is their physical needs that are taken care of. Children needing special care are highly ignored. Even aid agencies are likely to neglect several dimensions of children’s thorough needs.

Damaged and destroyed schools not only cause financial loss but they impair educational gains as well. Quality of education is, if in place, lost by loosing several days, at times months, of formal teacher-students contact and communication. Many students might not catch up later, if proper schooling environment is not available. Teachers go absent or themselves face challenges or undergo stress. In case records are missing, many more might fail proving their grades or continuity from the same or the next level. Without developing students’ resilience, parents, teachers and school communities remain ill-equipped and ill-prepared, failing to assist children for their psychosocial recovery. Disasters shatter children’s hopes, dreams, desires, creativities and fantasies for future.

6 – CONNECTING EDUCATION, SAFE SCHOOLING AND DRR

“Children have capacity to know several things simultaneously and know them better”,
M. Hanif, an FGD participant at GBPS, UC Khoski.

DRR and Safer Schools are declared as UNISDR’s Disaster Risk Reduction Campaign’s’ major themes for 2006 and 2007 by its secretariat and partners. The Campaign, entitled “Disaster Risk Reduction Begins at School” aims to inform and mobilize Governments, communities and individuals to ensure that “DRR is fully integrated into school curricula in high-risk countries and that school buildings are built or retrofitted to withstand natural hazards”. The International Conference on School Safety (2006) held in India (Ahmedabad) reaffirmed both HFA priorities
for action regarding education, innovation and knowledge to build safer and resilient culture at all levels\textsuperscript{x}.

Countries like Japan, Turkey, Italy, Indonesia, Russia and couple of others having incorporated the elements of preparation, response and mitigation suffer less harm and lower loss of life and other damages than those undermining curriculum and training to prepare children and communities to cope with disasters better. Principles and guidelines prepared by UNESCO and UNICEF also guide teachers and policy communities to adopt successful means and methods for developing disaster-conscious curricula. Extracurricular and non-education centered plan could also be adopted as did Cuba and Japan. Innovative, environment-friendly and socially compatible solutions can be dovetailed or tailor-made with the assistance of local experts.

Although schools safety and child protection in emergencies is widely recognized but children’s own participation in disaster risk reduction is an emerging realization. Children’s needs and preferences during or after the disaster are mostly addressed from adults’, experts’ or community’s point of view. Along with working for, working with children to minimize their vulnerability holds its’ own worth to secure them in the wake of disasters. In addition, women and children are usually lumped together as if they form a single chunk. The fact that school going children constitute a separate category must be accepted. Discussed together with women, their distinctive needs and preferences are overlooked in response to emergencies. Supporting mothers and guardians may or may not fairly address their needs (Ibid).

Only education holds the power of sustaining humankind and empowering her to succeed in worst of the crises. It is true that, wherever and whatever level you see, it appears to be stuffed with a range of information, instructions and learning material. But DRR is just not ‘another’ or ‘one more piece of learning’ that should be squeezed in already full menu of children curricula. It holds the potential of imparting knowledge and skill for survival of our future generations. Unless communities and educational authorities are sensitive enough, conscious and proactive schools and schooling will continue betraying our hopes for all the national and international goals of universal primary education. Unless we take collective responsibility to save them, students and teachers will continue to die within school boundaries from recurring disasters\textsuperscript{x}. 

\textsuperscript{x} Source: Extracted text from the document.
7 - SIGNIFICANCE OF MAINSTREAMING DRR IN CURRICULUM & CHILDREN’S POTENTIAL ROLE:

"Whichever the subject, disaster education must be the part of textbooks. Left bank of Sindh this year and right bank that year, almost half the Sindh remains affected all year round. LBOD and RBOD are other sources of looming threat". Tanveer Arain, Journalist in Badeen.

The pedagogy of disaster risk reduction will pull the issue from the margins of curriculum and learning as it presently remains. Being a practical knowledge and skill, it shall call for action-oriented, active and interactive learning. Informed by a framework of attitudes, values and dispositions DRR education is supposed to foster a range of skills and competencies enabling students to proactively contribute in disaster mitigation, act in a socially responsible and responsive manner, particularly when their communities and families face a crises. Knowledge about DRR is active, experiential and participatory that will scrutinize existing values, challenge attitudes and bring knowledge to life. Honing a skill needs practice. Therefore, DRR related values, attitudes and skills need to be practically tested and brought into school discussions”. Quite appropriately, Save the Children (2008) is heard quoting a child from Sri Lanka, "If children are taught disaster preparedness, they will bring a revolutionary change in the society as they are the future keepers of the villages and schools. Besides, children of today will become parents of tomorrow, which will ensure that they pass this knowledge to their children, making disaster preparedness a societal practice, which will keep on passing from generation to generationxiii."

As advocated by UNESCO, DRR should be communicated through education in a tripartite manner: saving children’s lives and preventing them from injuries as a top priority; ensuring less and less interruption of education during and immediately after the disaster, and reducing social, economic and cultural losses by developing resilient population that can manage swift recovery with minimum external support. Educating problem solving, critical thinking and developing social and emotional life skills can empower children themselves and the communities they live in. An adequate DRR education should take into account economic, social and environmental relationships tooxiii.

As outlined in its ‘action priorities’ HFA (2005 – 2015) already grants DRR a local, national and institutional value and recommends dealing with its' underlying factors, strengthening disaster response and using education and innovation to promote a culture of resilience and safety. ‘Collected and properly exchanged information and knowledge on hazards, vulnerabilities and disaster management can effectively build a safer, resilient and preventive culture’, it argues. Indigenous, traditional as well as modern knowledge tailored to the needs of high-risk countries need to be disseminated in simple and understandable form keeping into account their social and cultural tendencies. Communities, motivated by knowledge, information and capacities are likely to take actions in the wake of crises. It encourages, practitioners, academicians and scientific communities to work on DRR and promote dialogue and cooperation. Earth
observatories, space technologies and other related institutions should offer affordable and applicable information to the large public.

The ‘action framework’ suggests developing relevant policies, plans and replicable practices as well as training, research and most importantly DRR sensitive curricula for high-risk countries. Development of general and specific curriculum for schools is necessary for children’s safety and sustainable development. Local risk assessment and disaster preparedness programmes must\(^4\) be initiated in schools. It advises national governments to provide training and learning opportunities to the kids of their countries.

In the same context, volunteers recruited within and outside the schools and other institutions, can play significant role. Cultural and gender sensitive learning opportunities for vulnerable communities be made part of the education. Technical and scientific capacities to study the impact of geo-meteorological, seismic and climatic hazards can be developed only through education. Public consultation and education campaigns through media or otherwise should also be part of the national planning, the framework suggests. Capacities and knowledge of authorities and institutions alone can help minimizing hazard and managing disasters better. Training, technical material and institutional resources all can help communities to resist disaster\(^{xiv}\).

Engaging school administration, students, teachers and respective authorities in disaster prevention can guarantee safe learning environment. Simulations drills of expected and unexpected disasters should be part of the curricular and extra-curricular activities. Schools contingency plans should become part of national contingency plans. Minimum standard of education should be developed in disaster prone areas. Special children and children yet not attending schools be considered while developing teaching and learning plans\(^{xv}\).

8 – APPROACHES TO INTEGRATE DRR WITH SINDH AND PUNJAB’S TEXTBOOKS’

“First you need Schools before you endeavour to integrate DRR in curriculum”.

Nadir Shah, a 10\(^{th}\) Grade Student at Thatta.

Education communities, curriculum authorities, policy makers, experts and members of review committees ought to have a reasonable understanding of geo-physical conditions and different disaster probabilities in different areas of Pakistan. A sense of types and frequency of disasters an area might face may also solve part of the problems. Knowledge of the communities or groups of people already affected or vulnerable to a risk also holds some relevance? Concerned authorities better have have an idea why ‘children’ are most susceptible to an impending calamity. Knowing which schools in what areas and how many children study under riskier

\(^{xiv}\) Author’s emphasis
conditions is also relevant. Likewise considering the needs of special children is also inseparable.

District or provincial contingency plans, with inevitable component of children's needs and priorities, are also important. Contributing in and facilitating children to know it is also a perquisite. Finally, knowing technical and academic gap with respect to teaching and learning also holds implications. Only then it is possible to suggest what needs to be there in curriculum and extra-curriculum activities, where and what levels? How to integrate DRR is quite sophisticated and complex job. Therefore, it is pertinent to describe existing approaches in parallel to the analysis of Sindh and Punjab's curricula.

DRR integration across curriculum and grades needs to be systematic and thoughtful. While integrating concepts like prevention, preparation, mitigation, vulnerability and resilience, our understanding should exceed initial science of hazards and safety. Children need to know its' causes, consequences and what needs to be done before, during and after a disaster within schools and beyond its' boundaries. Teachers’ will and understanding, school environment, curricular and extra-curricular stuff all matter in a bid to protect children. Primary and middle school curriculum is meticulously studied, here below. Some of the best practices in region and/or other countries are also referred but in the passing

Each measure and method prescribed, holds its’ own downside and advantages, but I have explored and operationalized every aspect at length. Although the choice always remains with concerned authorities to opt or drop an approach but having a thorough analysis always helps making reasonable choices. Except one or two, all subjects of both provinces i.e. Sindh and Punjab, are completely reviewed and corresponding suggestions put forth. Workable ideas and examples also run along.

Although there lies some difference of opinion about which grades DRR Knowledge be integrated but there was, by and large, a consensus too. “In a grade when children are capable to register it and react in times of crises,” believed most teacher and concerned authorities. They suggest integrating DRR material no lower than 3rd grade. This is the age and grade when most children can make sense of certain problems around. Below that, pictures or images can work out but not details. “Means and methods should be different at primary and secondary level”, said a 10th grader, Marvi Parveen. A Girls School Teacher (Frahana) said, one “story, poem or article at each level from 3rd to 10th will be great”.

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55 Teacher Ameena Bohar, Government Girls Primary School said, Grade III is most suitable. Same was the suggestion of Akash Abbasi, Teacher GBPS, Makli. However, in Grade II, little poems or images could be placed, sasi some of the teachers.  
6 The suggestion extended by Teacher Abdulrasheed, GBPS, Village Jaffir Khaskheli, Nindo Sher Khan, Taluqa Badeen  
7 Student of a Private Language Academy at Thatta  
8 GGPS, Jeewnady Wala, Kote Adu
Keeping in mind girls’ drop out ratio in rural areas, earlier the grade, better it is some of the teachers think. In rural areas, after 5th grade, even before, number of girls are withdrawn from school for one or another reason. Maria, a 10th grade student from Thatta, suggests to “arrange separate training for girls in rural areas as girls specific issues can only be addressed that way.” Girls remain missing off and on, either to do household chores or to work in fields.

8.1 - Infusion or Permeation Approach:

“DRR must be part of the syllabus. Given training even better. It will improve our understanding as did lessons about dengue mosquito. Now we know what to do and how to react. That too can succeed”. Mushtaq Hussain, GBPS Basti Darkhawala,

‘Infusion’ or ‘permeation’ is one such approach that suggests infiltrating DRR into various subjects of existing curriculum. Curriculum is scrutinized to identify what can fit where, how and in which subject? The process could either be literal or holistic. Former one prescribes assessing what subject, say geography or social studies, is suitable for the purpose. The latter identifies textbooks intrinsic potential to place DRR in various subjects say, literature, science, even mathematics. Quite relevant and thorough but literal revision of the curriculum persuades experts to integrate themes like ‘cyclones’ or ‘earthquake’ in natural science or geography but provision of information and learning through this approach remains limited. With a holistic approach DDR elements are assimilated across all or most subjects even in those too that manifestly sound inappropriate. Under this approach, almost all the students can learn and perceive DRR messages from a range of perspectives. Learning is then, interfaced within different subject frames. Limited infusion communicates knowledge and skills to a limited scale and gradually confines it to select group of students, planning to specialize in the subject at a higher level.

Aiming, ‘proactivity’ and ‘resilience’ need to explore political, economic, cultural and societal structures aggravating or assuaging disasters and their effects. Except Indonesia and a couple of other countries, little systematic attempt is seen to contextualize indigenous coping and disaster mitigation skills in the curriculum (Ibid). I hereby, strongly propose to identify and incorporate local and traditional preparatory and mitigation measures into the school textbooks.

9 For example GGPS Peer Ali Shah Goth, School enrolment is 150, both boys and girls. In routine hardly 30, max 40 girls attend the school.
10 For example when I visited GGPS, Chack Tariqabad, Lyyah, girls students were missing. I came to know upon query that “it is cotton picking season and they pick cotton with their mothers during season and take those days off, when picking cotton. Teacher Mussarat (GGPS, Kachh Bahar Shah, Tehsil krore, Lyyah ) explained anothr reason for the missing girls from school. When she is too young, mother send them to school, better away to not to tease us. When she grows a bit and begins to make sense of things, parents pull them back form school. “She will take care of younger brothers and sisters”, better not to send to schools, mother prefer. Similarly Headteacher Rabia Basri (Rasti Multani, Rajanpur) also shared similar reasons for girls absence after or during Grade 4 or 5.
reinforcing what children already know as young members of a particular culture. With respect to periodical disasters, say floods, local people hold commendable insights. Similarly, traditions that multiply the risks or effects of a disaster must be discouraged by careful communication through textbooks and schooling.

Teachers, students and School Councils hold different as well as similar views about integrating DRR into the primary and secondary textbooks. As I describe and categorize their views and perceptions, it is important to draw analysis of the textbooks from Class I to Class VIII. For analytical convenience and extending workable proposals, maximum possible subjects are studied reverse chronologically in terms of Grades. Respective analysis excerpts the interpretation of an approach devised by UNICEF and other experts.

8.1.1 - Holistic Review of Sindhi, Urdu and English Textbooks:

Almost all primary school teachers, students and SCs in all Tehsils of Thatta and Badin (Sindh) had a unified opinion that DRR messages, if and when integrated, “it is Sindhi and Asaan Sindhi texts that is most suitable to serve the purpose. Sindhi is the universal language in Sindh. Teachers, students and parents all converse every matter in this language and it has the capacity to communicate several concepts and issues including DRR. Teachers, students and development practitioners will be more interested to build upon, if they go through the idea in their own language. Becoming a tradition, famous Sindhi poets, writers and scholars will be inclined to produce creative material on DRR.”

Not that emphatically, but more than half the teachers in Layyah, Muzzafargarh and Rajanpur (South Punjab) advocated the same for Urdu subject. “Teachers and students will not only understand and internalize it through this medium, they argue, but will be able to co-relate their traditional learning too, just because of lingual convenience”. Local language, including Sarakik give and take words from Urdu, says Teacher Abd-ul-Hameed from GBPS, Rojhan. Women Teachers at several schools also suggest Urdu language as the medium of communicating DRR things. If children know basics in Urdu, they will easily build upon form their own observations and experience. Sindhi and Urdu, therefore, are the best subjects to begin with.

8.1.1.1 - Sindhi and Asan Sindhi Language and Literature: “Being lingua franca in Sindh, Sindhi is the subject where multiple spaces could be identified to interject DRR concepts and messages for children’s learning and sensitization.” The opinion was shared by several teachers, experts, social workers\(^\text{11}\) and also some students\(^\text{12}\) in Sindh. School walls all over Sindh conspicuously read Shah Lateef’s sufi poetry, themes and messages way too different from those

\(^{11}\) All teachers in Bdin and Thatta.
\(^{12}\) M. Ali Gandro and Nadir Shah, Students of private Language Academy in Thatta City.
inscribed in Primary and secondary schools of Punjab. In 8\textsuperscript{th} class, lessons like porhyat parchar (thinking of the labourer, 9\textsuperscript{th}), maholyat (environment, 19), shehri bachao sikhya (civil defense, 22), afradi quwwat (human resource, 36) shehryan ja farz (citizens duties, 62) and insanyat (humanity, 86) are the lessons where DRR messages could be easily infused or permeated without going too far from their themes. Issues, already discussed here, are quite relevant to disaster risk responses, that children need to learn. ‘Shehrayn bachao khe sikhya,’ maholyat, and insanyat talk about environment, environmental degradation, nce of social work, stretchable straight on to DRR, preparation Sindhi Satyon Kitab DRR concepts and characteristics could be (fisherman, 58), monjho watan (my homeland, 61), mahole ji gadlan (environmental degradation, 84) and abadi ji rathabandi (population statistics, 88) in the passing, without affecting the temper of the lessons. Their content however seems only partially relevant.

Similarly in ‘assan sindhi satyon class lai’, gothani zindgai (village life, 23) and fitrat jo abhyas (studying nature, 64) can reflect certain dimensions of potential or probable disasters, their management and resilience to avoid bigger losses. Some of the lines in here, could be identified where we can hint of constructing disaster-resistant schools and residential buildings too. Say the essay on missali goth (ideal village, 13) in ‘Sindhi chhon kitab’ speaks of several features of an ideal village such as planned houses, sewerage, water supply, provision of primary and middle schools, hospital (veterinary and human), post office, sports ground etc. It also speaks of village fund to assist the poor. Every single necessity of life and almost all basic services are spoken about which is great. It is an appropriate context where disaster preparedness, resilient community, trained and risk responsive students and other characteristics of effective risk management could be inserted just as one more prerequisite of an exemplary village. In general, some of the cursory hints or references could be placed in shehr ji safai (keeping the city clean,16), especially about climatic impacts, malaraya (21), especially with reference to heavy rains, floods and water stagnancy in parts of Sindh and in the lesson about zarat (agriculture, 24) both drought and inundation can be explained to educate children about possible emergencies and how to deal with these.

‘Asaan Sindhi Chhon Kitab Lai’ has got one particular lesson, suthyo shehri (good citizen, 11) that is most relevant in this context. Disaster consciousness and volunteerism in emergencies could also be described as the essential qualities of a ‘good citizen’. Sughar zaal (sensible woman, 23) and parhayal manhroon (educated person, 28) are the other two lessons that are suitably there to accommodate some bits and pieces about disaster consciousness to be the characteristics of a ‘sensible woman’ or ‘good citizen’. Scouting girl-guide (32) in 5\textsuperscript{th} class hints of the scouting skills like suppressing fire, installing temporary shelters or camping and arrangement of water, food first aid, and other facilities in the case of war or social unrest.

\textsuperscript{13} Figure in braces, here and here after indicate the page number.
Removing the war context, I will suggest, most characteristics with an addition of just a few, will transform the spirit of the essay towards natural and manmade disaster and how to respond to, if confronted the situation. The essay is perfectly all right to coin in the ideas and issues of DRR, with a bit of expert reflection or revisiting the essays.

Gadyaj qomon jo idaro (United Nations, 44) is the next lesson where the introduction of Talemi, Scienci, Saqafti Idaro (United Nations Economic Social and Cultural Organization, 43) provides an adequate space to introduce its’ key role in mainstreaming DRR in education. Sheheri raza kar (city volunteers, 74) already mentions his/her role during all types of needs in emergencies like food, clothing, health, shelter, search and rescue for missing and troubled people. The only thing it misses out is the preparatory measures before a natural disaster. Elimination of war reference, once again, is strongly recommended to expand its scope and outcome. Devoid of war threats from whosoever, such lessons can not only turn useful in day to matters and effectively responding to natural disasters but will contribute in developing peaceful and constructive minds as well.

Bian san bhalia karan (doing good to others, 5th, 18) is a poem that addresses larger common goodwill. A similar poem could be supplemented here or in some other grade to promote mutual support and cooperation during and after emergencies. Shryan ja zimadaryoon (citizens’ responsibilities, 4th, 61), again imprints citizens didactic response in the perspective of invasion from enemies, in addition to the significance of ballot and democratic system of governance. One line can conveniently be dropped here about his or her ex-ante and ex-post role in the face of natural calamities. Badhai maan taqat (unity is strength, 77) is another similar avenue to cut up some DRR related messages. ‘Asaan Sindhi Tein Class Lai’, can accommodate certain icons or pictures of cyclones, floods, whirlwinds, disaster-demolished-buildings and drought etc. while teaching Sindhi alphabets and simple words and expressions to kids.

Acho tan boota pokhyon (let us plant a tree, 3rd, 36) in the same text can educate students the trees’ defensive characteristic against floods, landslide, land-erosion and earthquakes, but unfortunately it is not there. Hawa (wind, 39) and pani (water, 60) further on can adjust few words regarding, ‘what happens when elements of nature get incensed or their inherent equilibrium is disturbed. A lesson on zilo jo intezam (district management, 65) does mention the role of shehri difa (civil defense dparment) while this term could quickly be replaced with the district ‘DRM Coordination’ and its potential roles. Sindhi Darsi Kitab (2nd) has got a lesson about bian ji madad karan (helping others, 20) and goth jo sair (visiting a village, 51) that are potential enough to convey the messages we are advocating for. Following the same approach certain words, icons and images with reference to natural disequilibrium and disaster can be placed in class One i.e. Sindhi Pehryon Kitab and Sindhi Darsi Kitab for Class One.

In consultation with the textbook planners, experts and members curriculum review committees, concrete ideas and expressions can be devised, carefully. It is obviously a meticulous job and

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14 Entries in parenthesis mention the class and page number where this essay, lesson or poem in placed in the text.
impossible to do without engaging all concerned circles right from planning down to placement in the required text.

8.1.1.2 - Analysis of Urdu Language and Literature Texts:

"Urdu is the best medium to communicate new ideas to children. It is simple to understand and transmit things further in this language".

Teacher Kalsoom Bibi from GGP and FGD participants from GBHS, Railway Road, Lyah

Essays like, mahole per insaani asraat (human effects on environment, 10th, 105, PTB) and similar ones 'insaan or us kaa mahole (man and his environment, 6th, 74) and mahole (environment, 3rd, 11) in the Textbooks of Punjab and mahole ki aaloogdi (environmental pollution 6th, 76), mahole (environment, 3rd, 11) in the Textbooks of Sindh, are impressive essays depicting contemporary challenges of environmental conservation, degradation and pollution. On their way to describe several causes and consequences of atmospheric pollution, the essays can also hint of mega explosions like factory fires, old and unsafe building collapses, oils spills, radiation and chemical blasts in conjunction with a-priori steps to eliminate the chances of accidents that might claim valuable human lives, tear down private properties and expensive infra-structures. In old syllabus (3rd Grade), there was a story titled sailab, but no more. Likewise, 4th Grade had an article, 'qudarti afaat and sailab ki tabahkaryan', that too is going to be removed in the new syllabus. "We used to read about jhhakkar (windstorms) and bagooley (twisters), kataao (land erosion) and roodkohi (flashfloods) in our school times", said a senior teacher Inayat Ali (GBPS, Jampur), which is no more there. To sum up, geography is a low priority in contemporary studies".

Shehri difa (8th, 73, PTB) is a very good essay in this reference but again, is somewhat, tilted towards war despite covering several other types of disasters. Drifting it apart from war connotation, one can plainly construct the background for natural disasters intertwined with DRR. Quite suitably, ‘flood’ is already there. Civil Defense, it mentions comprises on 5 departments to our surprise DRM coordination is not there. It could, I will suggest, easily be indicate here. Then comes the lesson on ‘Scouting’ (75) ornamenting a scout with several qualities and characteristics along with bravery and volunteering spirit. The Sindh Textbooks (5th Grade, 788) also has a similar essay, with similar features. Just adding his/her role during and after natural disasters will, perhaps, complete the profile of a scout. Why on earth a scout cannot help others during the times of natural disasters? Why his/her role is still being confined to its past as defined by its’ founder, Beden Powel back in 1940s. Times have changed and there is a dire need to redefine a scout’s role too.

There is also an admirable poem about ‘pollution’. If available around or written by someone, a poem about natural disaster will be a fitting addition here or in the 6th or 7th grade. In Asaan Urdu (8th, 65, STB), Islami mumalik ki tanzeem (Organization of Islamic Conference) has an essay on elaqai tawun barai tarraqi (Regional Cooperation for Development) describes several agreements between neighboring Muslim countries and Muslim countries in the world that are
supposed to work for their mutual economic, social, political and economic development. Although it does not but, it can also relate the need for mutual cooperation to combat natural disasters effectively and build people’s resilience. Interestingly Iran, Pakistan and Turkey the key members of RCD are highly risk prone and threatened from frequent earthquakes in particular.

Urdu subject of 7th, 6th and 5th grade (PTB) and Assn Urdu of 4th Grade (STB) has got no relevant essay or poem about natural risks or impending disasters. Suggesting to incorporate one goes relevant. Darkhto ney kaha in Grade 5, (50, STB) is a powerful story about the importance of trees and their contribution in protecting and conserving environment. A small phrase, as the trees address a child and explain their value for life on earth, could be extended to signify, how do they stave off human beings off from terrible harms of disasters. Arguing in favour of the idea, one of the teachers from Government Railway High School (Layyah), said, “If an interesting story like ‘Clever Mirchoo’ is there, why can’t we create something like that about the agonies of natural disasters.”

Razakar (volunteer) and hamari abaadi (our population) in Grade 4 (64 & 77) of PTB are other two lessons that are partially relevant to alert children about growing population as well as greater loss and management challenges in the wake of disasters. Suggestions for elementary level are the same as forwarded above.

8.1.1.3 - Textbook Review of English Subject:

Immediately after, it is appropriate to analyze English as a subject category. Although limited votes fell for integrating DRR in English, but its’ importance is increasing with the passage of time and new syllabus on cards has got all subjects in this language. Book 10th and 8th (Punjab and Sindh) contain nothing of the sort where one can suggest infusing or permeating DRR and relevant ideas or messages. Interestingly, the text in this medium too is only marginally different from Urdu and even Pakistan Studies or Social Studies carry quite similar content. Parts of that are literally a translation of each other and strive to promote patriotism, Islamicism, Islamic nationalism and glorify military. Both the provinces have almost entirely borrowed the content from each other. The same old ideologically driven, conservative stories and articles are there, meant to provide some entertainment and a bit of language comprehension.

All social science subjects like Social Studies, Pakistan studies, Urdu and English are either biased or silent about the existence or issues of Hindus, Christians, Sikh and other minorities in the country. Cultivating biases or ignorance towards minorities result in total or partial discrimination against minorities during humanitarian response to the disaster hit people. Most

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15 Insertion in parenthesis is by the author. Clever Mirchu is an entertaining story about poverty and parental love.
of them remain deprived of relief, rescue and rehabilitation services provided by the state institutions. Giving them respect as equal citizens and educating equal treatment through textbook can improve general social attitudes. Elevated to equal citizenry and equal rights will naturally remove discrimination against the poor and powerless minorities.

Dignity of Work in 10th Grade (28) can easily be replaced by describing a situation where students and volunteers help people in relief, rescue and rehabilitation work during 2009-2010 floods in Punjab and rain-hit calamity in Sindh 2011. Real acts and events can be collected to make it part of the lesson. In this way, problems and issues caused by floods can be explained and the story will serve both the purposes.

English Books of 6th, 5th, 3rd, 2nd and 1st Grade both in Sindh and Punjab (old syllabus) are too basic. Mainly, they attempt to teach students, English language by vocabulary building, common phraseology and suitable expressions in variant social situations. Therefore, it is inappropriate to suggest some infusion or insertion here, save sentences or dialogues debating or commenting on a natural disaster or climate change. English Book 4th (Punjab) has got three lessons, ‘what different people do’ (04), ‘Hina’s village’ (11) and ‘picture story’ (26) that can aptly put up DRR and/or CC messages and even elaborate them a bit. Relevant department workers, rescue personnel and disaster prepared villages are applicable ideas and analogous images can also be painted here. The new syllabus in Punjab, say English Book 1st and 6th, are a little enlarged but obviously the purpose remains the same, which is perfectly alright and need not to be changed. Nevertheless, certain icons, images, words, phrases and expressions can easily be inter-spaced to drop rudimentary perceptions and challenges one can face, in case of a natural mishap striking an area.

8.2 - Textbooks Review for Limited Infusion: Social Studies & Pakistan Studies

“Students must be explained the link between history and disasters that it holds”.
Rizwan Brohi, 10th Grade Student at Thatta Language Academy.

Despite a persistently felt need, it remains uncertain, how far the text-book led DRR messaging alone succeeds to develop dispositional skills and learning that it essentially calls for. Meant to transmit things objectively, the approach, obviously, precludes community’s role in disaster management and other practical skills and dispositions for resilience and safety. Although textbooks are always good in explaining causes and consequences of hazards and precautionary measures but they prove poorly equipped in fostering preparedness and mitigation skills. Textbooks and class culture promote passivity and by default inhibit active and experiential learning. Engaged citizenry and participation, however, develops with active participation in a process (UNESCO & UNICEF 2012).
So far, there is little evidence, at least in the context of natural disasters, that a child’s learning is fed into and built upon in another subject. Key messages, knowledge, skills and attitude is rarely mapped and reinforced across subjects all through the learning process. Except a few developed countries, there is little evidence for horizontal as well as vertical reinforcement of DRR learning across risk prone countries. Another problem with the ‘infusionist’ and ‘holistic’ approach is their mutual exclusivity. There is, however, a possibility to intermingle the two for better and greater learning. DRR knowledge can be integrated and reinforced across subjects like, Science Subjects, Social Sciences, Geography, Civic Education and a couple of others. Overall Curriculum Reform is another way to create, inter-alia, an enabling environment for DRR elements. The approach, (perhaps most suitable for Pakistan\textsuperscript{16} and part of my analyses is drawn from this perspective too) rapidly took room in some of the disaster prone countries like Japan and Indonesia (ibid).

Almost 50\% of the respondents in Punjab but a little above 30\% in Sindh identified Social Studies and Pakistan Studies as the best suitable subjects to juxtapose challenges posed by climatic change and natural disasters. Somewhat relevant issues are already part of the subject and the same subjects contain material about geography, environment, population and history akin to natural disasters. Here lies a precise review of the subjects:

Where ‘Social Studies’ and ‘Pakistan Studies,’ right from grade 10\textsuperscript{th}, 9\textsuperscript{th}, 8\textsuperscript{th}, 6\textsuperscript{th}, 5\textsuperscript{th} down to the elementary levels, are fraught with ideological messages about history, politics, system of governance and the like, some of the essays do reflect geophysical characteristics, the problem of population explosion, citizenship, resources management, climatic zoning and geophysical location of Pakistan. It also carries some material about South Asia and its’ land, water, drought, poverty, economy, trade and likely future of Pakistan in the region. Under the title of ‘Safety’ in 5\textsuperscript{th} Grade’s Social Studies (53, PTB) once again it is all about ‘civil defense’ and peoples cooperation with state departments, but only in the context of war, external aggression and effectively combating the enemy. Awami Khidmat ja idara in grade 5 (109) and Public Services in Social Studies, Smaji Abhyas and Moasharti Aloom in 5\textsuperscript{th}, Grade, (109 & 86, 101) as part of Sindh’s Textbooks, elucidate all departments of social services, save DRM that is highly important at present. It is extremely important to have one lesson about DRM, PDMA, NDMA and provincial Rescue services and social service departments.

The degree and scope of frequently recurring themes is different at different levels but ironically, overall thrust and topics are more or less the same across grades and provinces. Given the changing climatic effects and increased frequency of natural disasters, there is an urge to extend one more topic or chapter to explain these emerging issues. Obviously, what Pakistani state and society need to cope or combat the issues will become natural bent of the topic, serving the urgency. The subject is ideal to build children’s conceptual foundation in this arena. Some of the cities, their history, and geography, say Lyyah and Thatta, are already part of the local syllabi. Their periodical or accidental vulnerability to floods (Lyyah and Muzzaffargarh) and

\textsuperscript{16} The comment is of this author.
cyclone or sea encroachment (in case of Thatta) will be a fair addition explaining the town’s profile. I don’t think natural threats to a city can be ignored while describing its’ complete profile.

8.3 - Centralized Competency Based Approach

Bent to work out a solution, if a governmental authority instrumentalizes education to increase general social understanding of the phenomena and minimize risks, the method is known as ‘centralized competency based approach’. Often the approach is adopted at the higher education levels. Usually a government body identifies key DRR concepts and theories as well as skills and competencies and works in cooperation with key stakeholders to built things in the curriculum. Module development, career subjects, teachers training, grades and scope follows that. Based on this experience and assessment, further plans for resource allocation, expansion and specialization are laid out after. Government’s support to launch such academic programs and training makes it relatively a successful venture, quickly leading to implementation, piloting and rapid stepping up to scale. Obviously, it is, somewhat, a quick-fix solution that sometimes marks immediate success and when government, the centralized body or donors loose interest, the programme suffers (UNESCO & UNICEF 2012).

As mentioned afore, we shall confine our analyses to the Primary or Secondary level books and schooling. Redundant, therefore, will it appear to argue further in this regard. However, ignoring it was also inappropriate. Regional Conferences and plans in the country are already arguing in similar lines and a couple of academic and training endeavours are already functioning in this regard.

8.4 - Dedicated Subject Approach:

A separate subject needs to be introduced to address the issues of climatic change and disaster risk management in schools. But the question is, who will teach it?

Only two teachers are there in the whole district of Thatta who can finely teach all subjects.”

GBPS Teachers from Nindo Sherkhan & Jaffir Khaskheli (Badeen),

Developing a ‘Dedicated Subject’ is another approach to integrate DRR into the curriculum. This approach suggests carving out entirely a new subject within the curriculum, dedicated to all the social, technical, economic and scientific aspects of climatic change, disasters and DRR. For example, Georgia has adopted it in the form of ‘Head of Class hour’. Similarly, the Russian Federation also introduced ‘Basics of Life’ as a stand-alone subject at the primary and secondary level.

The approach advocates creating a new but stand alone subject devoted to award substantial room in curriculum for teaching DRR with reference to the risks, types and intensities of disasters in a particular country or the region. Adequately fitting into the subject, specific
theories, skills and responses become a core component of the subject. Winning political commitment, persuading curriculum experts and authorities, and arranging required amount of resources cause serious challenges to materialize the approach. With respect to this approach, what is conspicuous to speculate is that other plans and efforts to 'infuse' DRR in other subjects or entire curriculum receives a set-back. Sometimes it becomes an excuse to refuse integrating DRR in other subjects saying, ‘one subject already addresses the phenomena why bring it here and there.’ (Op. Cit).

Worthily, several teachers, experts and even some students\(^\text{17}\) were heard of proposing to carve out a new subject on it, during the fieldwork. Under the circumstances, it seems very difficult, at least in near future that dedicated subject can be integrated in our textbooks, and it is even less likely to be done at the primary or secondary level any sooner. Nonetheless, ‘Geography’ and ‘Natural Science Subjects’ are there where we can advocate allocating a chapter or two to describe natural, technical, social and economic dimensions of natural disasters. Combining indigenous and recently developed approaches in this arena, ‘disaster risk reduction’ and ‘school safety’ both can be achieved together.

Locally available indigenous knowledge should also be made part of it. For example, “noticing weird attitude of birds, snakes and animals, the people of Tharparker desert can smell a drought”, says Saleem Tonyo\(^\text{18}\). “With a glimpse of clouds’ their hue and flow above Suleman Mountains, we can judge, how fast and riskier the flashflood can be for our village. This something impossible for the new generation to judge,” says teacher Abdul Hameed of GBPS\(^\text{19}\), Jampur. “We are born and brought up with flashfloods and know their names courses and behaviour. Unusual rains affect us more than flashfloods”, says Teacher Abd-ul-Shakoor (GBPS, Rojhan\(^\text{20}\)), as “we know when it might come and which way will it proceed through”. In riverine areas of Layyah and Muzzafargarh floods hit certain villages almost every year and people themselves manage their own and school’s survival. That knowledge and insight can be further learnt from old and wise people, developed and taught to the students in formal class environments.

At least half the teachers in Punjab and a little less than one-third in Sindh advised to integrate natural disasters in Natural Science or Geography, ‘where it is has got a natural affinity too’, they argue. Punjab’s new syllabus (2012-2013) has got the subject of Geography in 10\(^\text{th}\), 9\(^\text{th}\), 7\(^\text{th}\) and 6\(^\text{th}\) Grade and Sindh has got it in 9\(^\text{th}\) and 10\(^\text{th}\) Grade. Earth structure, rock formation, volcanic and tectonic mechanisms and movement is already there. Population, environment, rivers and human effects on nature are also part of the subject. The subject also describes physical locality, soil, rocks, surface, subsurface and oceanic vicinity of Pakistan too. Here is the right place to explain scientific logic and underlying factors that cause or might cause disasters in nature. Less or more probabilities and likeliness of specific disasters in specific areas can

\(^{17}\) A separate subject is better said, Teacher Khilid Hussain Memon, GBPS, Goth JInd Khan Chhalgari, Badeen. Samreen Shah, a 10\(^\text{th}\) Grade Student at Thatta Language Academy also offered a similar suggestion.

\(^{18}\) Information shared by Saleem Tonyo, Social Worker at Thatta.

\(^{19}\) Full name and location of the School is GBPS, Marheywala, UC, Bukhara Sharif, Jampur.

\(^{20}\) Union Council, Bangla Hidayat.
also be mentioned in a go. Prerequisite and a-priori measures to minimize the risks can be explained naturally besides explaining scientific aspects of the phenomena.

Interaction between nature and human beings, food, life and continuity of life, wind, water and water impurities, soil, energy, earth, earth surface and earth movement, changing landscape, environment and environmental pollution are part of the 8th, 7th, 6th, 5th, and 3rd class syllabus of Sindh and Punjab Textbooks. I am sure, one more topic about natural disasters, its growing concern around the world and in Pakistan can easily be supplemented to help children have reasonable understanding of the phenomena. In higher classes if they decide to specialize in the subjects, they can chose a ‘dedicated subject’ and build upon. Gradually it will develop a sufficient pool of experts and then institutions in the country in future,

Saeed Chishti, DRM Coordinator Layyah, for instance extends a workable suggestion in the following words: “I remember, as students, we used to have some izzafi (additional) subjects that we chose out of our own interest. We loved reading it as there was no exam or assessment for that. DRM can be created as an additional subject without making it complementary part of the syllabus. Students will surely opt for it and will avidly read it. One learns more without mental stress”...But, he comments further, “Education Department is too lethargic in that case. Perhaps they do not believe in things like DRR, resilience or preparatory measures. With EDO Education’s single circular to the Deputy Commissioner (DC), we can readily extend our support; can train a teacher, preferably, Physical Training Instructors, who can transfer the learning further. Unfortunately, we never received one. They would like us to do it directly on our own initiative. Things do not work that way. There should be a system and process”. Likewise, “communication between PDMA and PTB is simply missing. God forbid, when another disaster happens, they will run here and there.”

8.5 - Extra and Co-Curriculum Integration Approach:

Many studies across the world highlight the significance of integrating DRR elements into the extra-curricular and co-curricular activities. School assemblies in the morning, students clubs, after school or vacation activities, school trips, drills, exhibitions, special events and ceremonies, competitions and community meetings are the avenues to transmit DRR messages to students at all levels. However, careful crafting is required to feed certain elements from the formal curriculum and create others. The approach does carry certain advantages but, as witnessed in the field of environmental education, the said approach diverts or distracts policy advocates and experts from negotiating required reforms in the curriculum. Social, political and economic dimension to address vulnerabilities are undermined. A systematic equation of addressing disaster i.e. “Disaster Risk = Natural Hazard x Vulnerability/Capacity of Societal System” is not followed (Op Cit).

DRR skills, drills and dispositions are instilled successively in phased manner to expand them later. Teachers and Physical Instructors (PTs) are also given the required training to include it in their already planned drills and exercises. Multi-media, new learning and training manuals,
required material, new pedagogy for extra and co-curricular activities and innovative techniques and methods are developed and shared for the said approach. National and international NGOs and specialized initiatives and projects can particularly be helpful to make this a tradition (ibid). Once again, it is not possible without the support of Education Department and Provincial Governments. It is a fertile arena and one of the most pertinent arena to built in DRR knowledge and improve relevant skills, behaviours and practices. Practical interfacing is also possible to communicate things through this approach. For instance “don’t talk, don’t run, don’t push, don’t go back, swimming and building evacuation skillsxvii and principles while facing a sudden disaster can effectively be taught to young students only though drill and mock exercises.

Committed leadership, required material and equipment, piloting and long-term NGOs support is must at least in the piloting phase so longs as it becomes a firm tradition in schools, at least in those areas, heavily prone to natural catastrophes. One must be cautious to let it not become a smokescreen and undermine the messages integrated into the textbook. It should rather complement and reinforce the text. Unless the respective Provincial Ministries of Education in Sindh and Punjab and District Education Departments plan and support all schools, it will not go beyond certain ceremonial activities. Piloting by NGOs and donors is fine but the process will halt once the funding dries up. Institutional ownership therefore is must. It might prove interesting and entertaining in the beginning but movement to scale and regularity is not possible without government support.

“Besides familiarizing students with certain bits of DRR in the text, if a teacher informally allocates even 10 minutes a week to the subject, children can be mentally prepared. Every next opportunity he can provide the same opportunity to one or another student to speak on the subject. But first teacher himself needs a training”, says a Teacher from GBPS, Jampur. “There is a whole nomenclature of flashfloods and catchment areas, adds Teacher Inayat Ali from the same school, that kids can be explained informally”….In Teacher Shaiista Bukhari’s (GGPS, Jampur21) opinion, ‘extra-curricular activities also begin from textbook content’.

Example of a DRR Game, ‘Disaster Master’ introduced by UNESCO22: “Disaster Master” is an educational board game that deals with natural disaster understanding and prevention. The game conveys messages written on the answer cards that help you understand what natural disasters are and how appropriate actions can reduce the impact of natural disasters. It prepares children on each of the 6 key hazards of Pakistan by educating them on: What is it? Why does it occur? How to recognize it? What to do before the disaster? What to do during the disaster? What to do after the disaster? 

Rules of the Game: Number of Players: 2 or more. In classroom settings, it can be played in teams so that the entire classroom participates. What you need: i) game board, ii) picture cube, iii) question cube, iv) 36 answering cards, v) tally sheet. How to play:1: Determine the order of the players. The first player tosses the disaster picture cube and sees what kind of disaster picture he lands on. The second toss of the question cube determines which question to answer written on the inner web-shaped disc. Turn the inner disc so that the natural disaster picture is in line with the question. The teacher or moderator of the game finds the card matching the question. He/she decides whether the answer the player gives is correct. If the answer is correct, the player gets to keep the card worth one point and the play moves to the second

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21 Full name of the School is GGPS, Bukhara No.2, Tehsil Jampur

22 http://unesco.org.pk/documents/ndm_Disaster_Master_Game.pdf);
player who will roll the two dice to determine which question to answer. If the first player’s answer is incorrect, the same question is passed on in the determined order of play until it is answered correctly. If no player correctly responds to the question, the answer to the card is read by the teacher/moderator and the card goes back into the pile to remain in play. When a question is answered correctly, the regular order of play resumes with the second player rolling the dice. When the cards are used up, layers count the number of cards they have and record the total on the tally sheet. Players then move on to the Bonus Questions round. Bonus Questions: At the end of the game, players have a chance to win bonus points by answering the Bonus Question written at the bottom of each card. Each player selects bonus questions from two of their cards to be read aloud one at a time to the rest of the players. Whoever answer each question correctly, first wins two bonus points. These points can be totaled on a tally sheet. The player with the most points at the end of the game becomes the winning Disaster Master.

In the Schools of Rojhan and Jampur (District Rajanpur), puddles of water were still standing or it had just retreated. Whatever children and teachers knew about disaster risk management was either the outcome of their personal experience, word of mouth or some training from NGOs. In most cases, unfortunately, the learning was not transmitted to the students further, several teachers themselves admitted. ‘Drill’ and ‘assembly in the morning’ are almost regular activities in primary and secondary schools. It is the best platform to communicate DRR messages from time to time.

“DRR training never came as an institutional learning formally or informally,” almost all EDOs, DEOs and Teachers acknowledged. What they only receive from Education Department is a circular ‘to clear up water or get the school vacated from affectees seeking shelter, once the disaster is over’. If teachers are provided training, they say, “we can integrate it into extra-curricular activities and that can be partially helpful”. But in some schools, students are so poor, spaces are so limited, over-all school environment is so unfriendly, said some teachers, that ‘there is hardly any co-curricular activity possible’. Most of the students sit on earth, either to keep warm in winter or have fresh air in summer. One of the Head teachers (name and school’s identity withheld) is reported of warning her students, “if you take slides or swings, I will break your legs.” (The playing facility was provided by Save the Children). Local people say, she was planning to take the stuff back to her house once the flood phase or the project was over.

At times, the classrooms are not functional to use them properly. Broken furniture, disposable stuff or seepage make it difficult to use classrooms properly. Scores of schools, particularly in

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23 School teachers in Muzzaffargarh, Lyyah Thatta and Badin had had some training either from Doaba Foundation or HELP (in South Punjab) or from LHDP (Sindh) a few of them from Plan International too. Say LHDP made a Child Protection Committee in coordination (in Goth Jind Khan Chhalgari, Badeen) with Plan and teacher were its members.

24 For instance teacher the whole staff (5 teachers) of GGPS Jeewandy Wala, Kote Adu, acknowledged receiving training from UNICEF and Doaba Foundation but prioritizing other things, they could not transfer this learning back to the students.

25 Qazbano Sani, GGPS, Peer Ali Shah Goth, Badeen.
rural areas of Sindh, have got one room only and that too in a dilapidated condition. Several 
schools are occupied by neighboring landlords for their personal of social activities, from time to 
time. Other teachers (Ms. Shamshad and Ms. Mumtaz\textsuperscript{26}) say, “no doubt students love it but 
extra-curricular activities are manageable only if number of students per teacher is manageable. 
One teacher against 80 students is too many and too much to cover the syllabus, let alone 
extra-curricular activities”. But even for extra-curricular activities, there must be a training\textsuperscript{27}.

Wall chalking in and outside school walls, can be one of the best means to communicate DRR 
related skills and advices if carefully drafted and written on school walls.

Effort, in consultation with school management and local 
education department, can be made to pen down several 
relevant messages. Interestingly teachers\textsuperscript{28} in a couple of 
schools told me that ‘whatever is written down here is done 
by the painter himself. Who tells him, I asked. “He has got a 
parchee to reproduce similar messages in all schools in 
the district. So, he does it. We just order pay him the 
charges”. Anyway, but wall chalking is one of the most 
easily manageable thing as part of a non-curriculum based 
communication.

8.6 - Symbiosis or Hybrid Approach:

Another approach, partially relevant to the above, is known as “symbiosis”.Usually preferred for 
higher classes, but it is partially relevant to operationalize it in our case too. The approach 
draws from ‘the resemblance’ between DRR and other cross-curricular activities meant to 
develop social awareness and empower students as good citizens of a state. Cross-curricular 
activities carry through DRR knowledge and simultaneously enrich it too. DRR is embedded into 
the life skills including, civic sense, citizenship, environmental education and prerequisites for 
sustainable development. Climate change as an integral component of DRR also finds home in 
with symbiotic programming for education. Entrenching DRR, climatic change and other similar

\textsuperscript{26} GGPS Jeewandey Wala, Kote Adu, Punjab.
\textsuperscript{27} Teachers Haq Nawaz and Ghafoor Ahmed (GBPS, Raqba Nabb Shah, Rajanpur.
\textsuperscript{28} School and Teachers’ names withheld.
strands in the co-curricular activities is relatively easier task. Lending it depth and substructures, the scope and purpose of DRR can further be broadened. There is, nevertheless, a risk of losing intrinsic spirit and significance of DRR by grafting it cross curricular. The central notions of ‘risk’ and ‘safety’ for instance, might lose meaning and significance (UNICEF & UNESCO 2012).

Given the lack of departmental commitment and poor school management and prolonged bureaucratic process even for trivial decisions, it is not easier to assume in Pakistan. As an experiment, certain messages from lessons like ‘civil defense’, safety, ‘scouting, ‘volunteer’ or ‘citizens duty’ can be lifted to act or perform in co-curricular activities such as theatre, skits, drama or entertaining dialogues. In case of success, the idea can be replicated in other schools and areas.

Besides aforementioned approaches, multiple techniques of revising curriculum are also suggested in theory, each with its’ own advantages and disadvantages. Text-book-driven approach essentially involves curriculum authorities. In our case, these are Provincial Textbook Boards, Directorate Schools, Curriculum Wings, Textbook Review Committees and Provincial Ministries of Education, particularly in post 18th amendment 2010 situation. NGOs and Independent experts are also advised to consult. Textbook revision is centralized and if the ministry and textbook authorities are convinced, DRR might be integrated across board.

‘Special DRR Event Approach’ can also be employed in conjunction with ‘symbiotic’ or ‘hybrid’ approach. The approach suggests to organize special events as part of cross-curricular activity. It works as catalyst to influence curriculum development, reforms or inserting elements in the existing curriculum. The approach is helpful when ‘overburdened teachers’ find it difficult to assume responsibility of building-in ‘disaster-related information into an ‘overcrowded curriculum’. It creates extra-pedagogical avenues to enhance DRR learning. Conducting special events builds momentum, even for school’s development and community partnership. The disadvantage, on the other hand is that ‘special events’ might prove divisionary affairs, halting required progress being detached from mainstream teaching and learning(Op Cit).

In a country like Pakistan, DRR related curriculum can best be broadened by the ‘hybrid’ or ‘symbiosis’ approach without mutually excluding each other. National and International days, marking the significance of knowing the art of handling natural disasters and minimizing its’ risks is recommended across board by men and women teachers in all boys and girls schools visited. They help out, to some extent, to realize the need for learning DRR skills. By and by, it should become a national tradition in all schools like other national days and events, observed every year. Sometimes, a genuine reaction is also noticed. EDO literacy, Noor Bux Khaskheli from Thatta, says, “Teachers are already overburdened; already doing a lot. They have been turned into a ‘task force’ that does everything without reward. They run vaccination campaigns; do census, work as poling officers in elections, support affectees in floods; facilitate Benazir Income Support Programme (BISP), help people get Watan Card, Id. Cards, ration cards, do population surveys, school surveys and what not. Now we hearing about DRR training and the stuff like that".
8.7 - Supplementary Reading Material (SRM):

"Making it (DRR) part of the book, somehow is very good, as is the information about Dengue Virus. There are poems, speeches and stories. We keep reading it with interest. Get to know what is good what is bad and how to control spreading virus. Cleanliness has also improved in our school".

5th Grade student from GBPS, Kachh Baharala, Krore, Lyyah).

Changing or transforming the textbooks, whatever aim, approach or purpose lies behind is a challenging task. In a country like Pakistan, where Islamicist and indoctrinated lobby is quite influential, what of striking a radical shift, adding or incorporating minor things becomes a herculean task. The egregious process of introducing a progressive text (2006-2007) is yet not complete. Under the circumstances what several experts and some of the teachers suggest is to print certain messages as a supplementary material. Back cover of the book is identified as an ideal space for that. Some of the successful experiments with other issues are already being made.

Several teachers and curriculum authorities admitted that schools’ and education department is only confined to ‘disaster response’ and ‘rehabilitation’ to a certain extent. No planning or policy discussion, about reflecting emerging challenges like CC or natural calamities in education, is found there. Driven by foreign funding, some trainings or academic contribution has been made by UNESCO and UNICEF or some NGOs like Save the Children, GTZ, Plan, Oxfam, Right to Play and local NGOs like Doaba, LHDP and HELP etc. When funding dries up, they stop assisting without institutionalizing the process. One after the other, natural crises occurred post 2005 earthquake, when syllabi revision was either over or half way through. Integrating new themes midway through is always difficult, technically and politically. Conversely, there is one way out, and that is to develop some quick and crispy supplementary material and house it across curriculum.

Government of Punjab has already made a successful experiment by spreading information about ‘dengue virus’, its’ source and how to stop it spreading. Most teachers and students, whom I spoke to, appreciate it. In several textbooks, from Grade 3 to 10, a descriptive and illustrated essay is consigned, though out of joint to the main subject. But it has largely served the purpose. Both children and the students have had a reasonable understanding about the issue on ground. Other civic and moral messages are also placed at the back of the book, more specifically in the newly launched textbooks. Child labor, sharing food, cleanliness, garbage disposal, maintaining health, benefits of exercise, using footpath to walk, and respecting traffic signals, norms of play, avoiding graffiti etc are there. Similar essays and illustrations can be designed and printed across curriculum on the backcover or on first few pages, to begin with. With the support of UNECSO, UNICEF and local NGOs and experts, textbook authorities can further build upon.
Having done curriculum classification cum analysis, it is pertinent to share teachers’ views, perceptions and experiences also. In nutshell, almost every teacher is seriously disappointed from, inefficiency, corruption and irresponsible attitude of the Education Department, School Management and its’ helplessness amidst floods in particular. School is the first safe abode captured by affectees. On average, every school remained closed two to three weeks after the summer vacation during floods (2009, 2010, 2011); reason being water inside school compound or affectees prolonging their stay in schools’ buildings. All they receive from the Department is duties at camps without an increment or incentive. Some of schools were left-back so messed up by the affectees that it was impossible to reopen them immediately.

Teachers from several schools29 complained that affectees damage school buildings, floor, furniture, everything. Desks and chairs, even doors and windows are consumed as fuel wood30. Washrooms become un-useable. Walls scratched and whitewash comes off. School stuff like dusters, chalks, taps, handpumps, motorpumps, fans, bxes, solar panels and many other articles go stolen31. In one of the schools even electric wiring was stripped off.

We ourselves, with the support of students or SC, had to clean it and make it workable, say several teachers from schools affected by recent floods in Rajanpur and Muzzaffargarh. Thanks to SC funds and NGOs32 that we could make them workable again. Many teachers argue that schools need not to be occupied by the affectees, refugees or IDPs. “Once they come under their use, it becomes difficult getting it evacuated back. We were teaching in one classroom, said the staff of GBPS, Nabi Shah, while in varanda, women were talking and kids were crying back in 2010 floods”, said Teacher Riaz Ahmed from Raqba Nabishah, Rajanpur. In Banliga Hidayat, Rojhan, teachers and student spent several days dewatering the school compound with their own household utensils. Water was still stagnating in the backyard. Not entirely meant to assist affectees, there is immense political pressure from MNAs/MPAs on EDOs/DEOs to provide school buildings to the affectees. It helps improving their image and seek votes later.33

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29 Government Girls Primary School, Meer Ali Shah Goth, Badeen, Teacher Ameena Bano and her colleagues.
30 Look a our doors and furniture. Affectees did it last year (2011). DEO Literacy, Noor Bux Khashkeli, Thatta.
31 For Example Solar Panel from a couple of Schools provided by HELP in Rajanpur and by Doab in Lyyah were stolen during or after the flood hassle.
32 Reference to Doaba, HELP, LHDP in their respective areas.
33 DEO Planning, Rajanpur
Most Teachers suggest not to provide schools to affectees. Government rather needs to have separate arrangement to assist them. On the other hand, this is also true that school is the only safest and nearest building available in most flood affected areas. All DRM Coordinators think that Schools should be further built as safer places to house affectees during disasters.

DRM Coordinator (Rajanpur), Mushtaq Bhatti, says, for example Harrand (a remote rural town in the west) is flooded, it is almost impossible for the affectees to reach Chack Shaheed (a safer place close to the main town). “If it rains how can a boy or a girl can reach from Umer Kote to Bangla Hidayat swashing through muds and puddles, Teacher Abd-ul-Shakoor extends a similar comment in Rojhan”.

In Haroon Ahmadani’s (Teacher at Village Qaisar Khan Ahmadani, Badin) views: “There is nothing of the sort (means DRR) in the textbooks. Teachers themselves are unaware, how to react in a similar situation. Children need to know, how to save life and how to help the helpless. However, “mere passive reading about the aspects and probabilities of disaster rarely helps, thinks Teacher Abd-ul-Shakoor (GGBPS, Rojhan).” In case, American Cyclone (means Sandy) hits the coasts of Sindh, we have no idea what to do? Syllabus is the source of everything.

If it needs to be integrated there, it must be in a proper manner. Otherwise, it will never be effective”. Qazbano, Head Teacher, Peer Alishah Girls School³⁴ said, “nothing specific about disaster is out there in the text. The same old stuff like ‘civil defense’ and self protection in case of supposedly attack from neighboring country is being stuffed into little minds”. “Depending on grades, challenges posed by disasters and preventive measures should be presented in scientific yet by simple methods, as is done in Bangladesh. How to construct schools, houses and save food for crises etc are the kind of messages to be conveyed,” said Hameed Khaskheli³⁵.

Education department remains silent on the matter of its’ re-opening and rehabilitation. In Lal Eisan and Bhakkar, a couple of schools were rehabilitated by army monitoring cell but mostly by Doaba foundation. In Jaati and Sajawal, it was LHDP that facilitated reopening several schools. Usually, teachers have to write applications urging the department to help evacuating refugees

³⁴ District Badeen
³⁵ Head Mistress, Government Girls Middle School, Agro Well Colony, Badeen.
or affectees getting schools functioning back. In rural areas of Thatta and Badin, not a single primary schools had its four walls and most schools had one room, two at max without four walls.

Reviewing and issuing new syllabus was never discussed with us, most teachers complained. Our experience might provide certain insight in this regard, they stressed. Children, said a teacher in Badin are motivated by incentives. “Essay competition, role plays, audio-video aids, theatres or mock exercises could be followed by some prizes to motivate students for better learning (J.M. Kathari, Head master of GBPS, Thatta City). “Radio, he further said, is also a successful means to communicate DRR messages. Plan International’s programme on the subject has been very successful. Each school needs to be provided one mega phone to declare an emergency. Other than building DRR concepts in the text, training also matters. They can communicate these messages ahead. Otherwise, children rush here and there out of fear and elders say prayers or keep calling for prayers in the mosque speakers”.

“Information that we need here in Thatta, is very different what people might need to know in the north. Effects of earthquake are little known to rural Sindh. However, toofan (wind storms) are in plenty and commonly known. Drought affected desert dwellers cannot know a different face of disaster than cyclone battered people of delta and the cost”, says Saleem Tonyo. Naturally our children need a different know how than what children need to know in other areas,” said Meer Mohammad, FGD participants at Village Qaisar Khan Ahmadani. “Periodical refreshers of teachers that used to be there are no more. All has been left to NGOs now. Things are degenerating day by day”, says EDO Elementary (female) in Thatta. Precisely In the words of Teacher Ghulam Shabbir, “both integration in syllabus as well as training is essential to institutionalize it, otherwise, it will simply remain fluid or on officers’ discretionary choice and sporadic. “Even training, says Teacher Abd-ul-Shakoor from Rojhan, does not help unless there are necessary equipment and supplies. My students just told you how many days we spent in dewatering our school’s main entrance. Look at the big puddle in the backyard of our school. Dirty water still rests there for months. I myself have got a two days training from ‘Save the Children’. What use it is if essential services are missing”.

36 Ghulam Shabbir, Teacher GBPS, Goth Jind Khan Chhalgari, Badeen, held similar opinion. Allahdino Khaskheli GBPS, Village Jaffir Khaskheli, Nindo Sher Khan, Taluqa Badeen, also extend a similar suggestion.
37 Saleem Tonyo, Social Worker in Thatta
38 M.Saeed Chishti, DRM Coordinator. District Lyyah.
10 - SCHOOL COUNCIL’S ROLE & PERCEPTIONS REGARDING DRR

It is a pleasant sign that SCs are found almost in every schools, however their role is quite quite limited. In most cases, its’ members are neither that active nor hold reasonably sufficient information or empowerment to influence decisions in favour of the students. No way out but to say, they are no more than rubber stamps, endorsing whatever school teachers or head teacher says. It is I must say neither maneuvering not exploitation, as such. Most members are either illiterate or too busy to properly know the affairs of the school.

Anyway, it will take some time to have influential SCs. In the wake of floods 2010 and 2011, however, they offered maximum possible cooperation to get the schools back to functioning, which is a great support to school. In times of crises, it truly works as a bridge between school teachers and the community. Post 2009-2010 floods, more so in Lyyah and Rajanpur, SC fund was mostly used for repair and maintenance of schools.

In UC Nindo Sher Khan SC was planning to raise the school’s ground with the funds available. About DRR thing, only those who participated in LHDP, Doaba or HELP’s training have some systematic understanding, on how to help children or the school during floods or other forms of disasters. “If it comes through syllabus, many in the village will know it”, said Moladino, member SC, GBPS, Jind Khan Chhalgari.

11. CURRICULUM REFORM PROCESS IN PAKISTAN: OPPORTUNITES AND CONSTRAINTS FOR DRR INTEGRATION

Reforms and implementation process, is perhaps, the best opportunity to incorporate emerging issues and challenges into the curriculum. Coincidentally, curriculum review and improvement began in (2001-2002), the same decade fraught with natural disasters and emergencies as well as political crises in Pakistan. As part of Education Sector Reforms Action Plan (ESRAP 2003), National Education Census (NEC) and National Education Policy Reform (NEPR) process (2005-2006), Government of Pakistan completed the revision and improvement of Primary and Secondary School’s (from Grade I to XII including CEC and Literacy) natural and social science
subjects in 2006-2007. Surprisingly enough, except Grade 1, 2, and 3 & Grade 5 & 6 and couple of Secondary level subjects in Punjab, new syllabus has yet not been completely rolled down on ground. In case of Sindh, not a single book has been perhaps replaced with the new one in Sindh. Politically driven permission to more than one publishers to print the curriculum caused serious delay. Curriculum authorities, reportedly, are now planning to get them directly printed. The process, is much slower than Punjab.

Along with being exclusionary and outmoded, as maintained by the latest National Education Assessment System Reports (2006-2008), emerging natural challenges such as climatic change and increased frequency of floods, avalanches, earthquakes and cyclones were, seldom discussed in the old textbooks. Relatively progressive in its' content and outlook, the National Curriculum (2006-2007) was circulated in a limited circle for seeking suggestion on its' various themes and subjects. Relatively progressive and modern, the new syllabus, however, is being welcomed by independent experts as a sign of hope. In practice, what of general masses, even teachers, head teachers EDOs, DEOs and AEOs never received it. There is no question of teachers rural and remote area teachers having had a look of the new contents

Corroborating, for instance, Rajanpur’s DEO Elementary, said, that “I got to see proposed syllabus of Class 3rd but out of my personal effort and interest. Save periodical management issues, curriculum or policy matters are not discussed with district education management. Even EDOs Education have no idea what is the spirit or substance of the new syllabi. Their role has just been confined to mange schools”. A very limited number of civil society organizations, technically working in the field of education, say Idara Taleem-o-Aghahi, Sahee, Pakistan Education Network, could receive it on personal request. Designed to be progressive and analytical the new curriculum (2006-2007) acknowledges ‘integrating life skills across subjects’ and ‘ensure vertical and horizontal connections’ between the subjects in National Education Policy 1998 - 2010.

Despite that, climatic change, disaster risk reduction, preparatory measures, risk reduction and mitigation – as it is evident from PTB’s new textbooks of Social Studies (8th), Urdu (6th), English Language (5th) Urdu (3rd), Urdu (2nd) Pakistan Studies (5th), General Science (4th), History (6th) and Geography (6th), are still neglected dimensions of teaching and learning at primary and secondary level. STB has yet not rolled down a single text replacing the old one. All of its' syllabus is either of 2002 printed under the 2005’s notification.

Three years after its' official notification, as declared by the Ministry of Education and agreed in the 11th Inter-Provincial Education Ministerial (IPEM) Conference (2007) the new syllabus was supposed to be implemented in the academic year 2010-2011. Despite official announcement of implementing reformed curriculum in the new academic year 2008, the centralized process of review, reforms and implementation (under the 1976 Act of Curricula, Textbooks and Standards of Education ) was yet not complete that ‘education’ was dissolved as the ‘provincial subject’ in 2010 as a corollary of 18th amendment. Devolution of education to provinces is a historic and

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39 Muhammad Ramzan
long demanded act, but it decelerated the implementation process in provinces. New textbooks are being developed and distributed in a phased manner both in Sindh and the Punjab province (First Phase was meant to replace old books for Grades I, VI, IX & XI). Teachers training - inevitable to effectively introduce new syllabus - has yet not been formally initiated (Ibid).

Curriculum reforms and implementation is a systematic and complicated task. Coming out of multiple demands and controversies, once, the process is completed, it is difficult to revise it that conveniently, although ESRAP (2003) pledges to do it every five years. History however is witness that once the syllabus is changed, it gets stalled for years. It is therefore the best time at present for Civil Society, particularly the organizations working in DRR education to influence provincial textbook authorities and experts to integrate DRR elements in primary and secondary level textbooks. Unfortunately, the new textbook material, even the relevant subjects like Geography, Pakistan Studies and Social Studies, are oblivious to the growing concerns of natural disaster.

Multiple methods and approaches of integrating DRR have been shared. It is still the right time to influence provincial ministries of education, curriculum, textbook and school authorities and experts to integrate DRR in the primary school syllabus by one or another approach, whatever possible at this stage. Once the idea and an approach is accepted by policy makers and decision making authorities, improvement is always possible in future.

12. DISTRICT EDUCATION MANAGEMENT & TEXTBOOK AUTHORITIES’ RESPONSE:

“Talking to us does not carry much worth. All powers lie with the Textbook Board. It is mere facilitation that we can offer and we do. In case, it is (DRR) institutionalized from the top we will welcome. In-fact the whole department is vulnerable. All we receive is a circular rolling down from Minister, to Secretary, to EDO and to us. “Get the building vacated from affectees”. School Staff Raqba Nabi Shah, Rajanpur40.

Textbook and curriculum authorities have got their own understanding as well as problems to share. Before we analyze the situation and approach any conclusion, it is best to know the state of affairs with respect to the textbooks in the words of authorities themselves. Here are their views about integrating DRR or CC into the text:

“Mainly the department works as a helping hand in the wake of a disaster. We provide school spaces and sometimes teachers to help displaces or affectees. “What we normally do is to discuss, how to manage a crises or what role can the Department play in it, say to facilitate flood affectees or affectees of any other disaster. We are not supped to incorporate

40 GBPS, Raqba Nabbi Shah, Rajanpur.
humanitarian response theories in the curriculum”, was an understanding shared by Secretary Education, Punjab, M. Aslam Kamboh.

Responding to similar question, Chairman PTB, Shahid A. Bhutta said, “We are in process of improving the textbooks further. A group of education experts (around 7) possessing various capabilities, are helping us in reviewing the textbooks. It includes an advisor both form rural and urban areas with a better understanding of the situation on ground. At present, it is gender bias and extremist elements that we are removing from the textbooks. So far, there is no consideration of integrating DRR or stuff like that in the new syllabus. No active communication between Curriculum Wing and PDMA or NDMA exists, save an intermittent collaboration during emergencies. There is already a lot to do about several other issues and concerns. Things might improve on these lines but gradually, if at all. It is difficult to integrate several things at a time”. Director Humanities, Shahida Javed said in affirmative tones that, “We are planning to accommodate emerging issues, like DRR, extremism and others initially in zero-period i.e. post-exams time and timeslot before the beginning of a new session. How and what level, is not yet clear. Nothing formal in stores, let me make it clear”.

Continuing the debate, Director Curriculum Wing, Ashraf Mirza’s opinion is also important to share: “We are in the middle of materializing curriculum reforms proposed and agreed in 2006. Accommodating new areas of concern, at this stage, is quite difficult. The series of flood-induced disasters, happened post reform process. Only earthquake 2005 occurred earlier but things were already in process. Hence, nothing significant in this reference is being integrated in the new curriculum, except whatever was already there. There is a possibility, if at all, that we can print DRR aspects only in supplementary books and material but very basic. Formal insertion of lessons or stories, nevertheless, will take further time and due processes of consideration and approval. In response to coordination with PDMA, he replied rather sarcastically. “They are lords of their own regime and damn care about us people. When they secure some funds, just land into our offices. Otherwise, there remains a big silence”. “There is no periodical or official communication between the two departments. Technically, they should seek information from our department before venturing for a DRR related project in schools but they don’t. There are other institutes like Rescue 1122. Sometimes, it delivers talks at schools to educate appropriate responses to children if they fall victim to an accident”.

“Government of Punjab has given us the task of incorporating something about crises management or risk management like floods and earthquakes and my staff is working on it. In principle, during the implementation of a syllabus, it is difficult to incorporate emerging issues. In that case, what we do is to develop supplementary reading or teaching material (SRM) to address it. In the absence of relevant material in the text, we, sometimes develop booklets or other helping aids to indirectly address the issue, if there is a political and academic consensus. We made a successful experiment with the issue of ‘dengue virus’ upon the instruction of the Government of Punjab. Probably, we shall get something similar about DRR by the end of 2013. My staff is working on that,” adds Ashraf Mirza.
“I am not directly concerned, said, Aamir Hayat, Deputy Director - Curriculum Wing, but I have some idea that CW is planning to put up some pictures of Balakote and the buildings devastated by 2005 Earthquake in Islamabad on the back-cover of Social Studies books. There is also a plan to integrate a relevant essay somewhere in Social Studies above Grade 5. When? I am not sure about the time. Inner back of the book already carries multiple ethical or civic messages. DRR could be one of the suitable messages here. The cost that it incurs sometimes slows down the process. So far as I know, he said, there is little intra-departmental discussion or agreement over the matter”.

“Provinces are yet to take charge of the devolved processes in Sindh”, said Qadir Bux Rind, Secretary STB. “We are heavily occupied looking into the new curriculum guidelines provided by Curriculum Advisory Committee, from Islamabad. Not sure, what does it integrate and what not? Under the directions of Minister for Education, STB has just set up a Curriculum Development Committee to do the job. In response to similar queries, Abdussalam Khuaja, Chairman STB commented: “Development and printing of new textbooks is final and we have initiated the task of implementing them from Class I”. “At the moment what is remarkable with new textbooks is the removal of extremist, intolerant and hate material from the texts. As far as DRR is concerned, it is not there for sure. I personally believe it needs to be there but not below Class 3rd or 4th. It is the stage when kids may pick up its essence”.

Continuing the discussion, he further said that, “information about cyclones and other potential threats to Sindh, needs to be communicated to the new generation. However, it is mainly the responsibility of Literacy Department, where they discuss other matters say, a minimum level of uniformity in provincial text for student’s mobility and mutual convenience etc. Inter-board Curriculum Committee (IBCC) can discuss this aspect too and advise mainstreaming DRR in school curricula. Decentralized process of doing that with the help of PDMA, Literacy Unit and Curriculum might get something workable”.

New curriculum has yet not been implemented in Sindh, said Nazim Ali Mathlo, Member Curriculum Review Committee (STB) in a straightforward manner, “The new syllabus could not not be implemented for the last 4 years as STB has not approved any of the versions published. The textbooks that children are studying at present are prepared in line with 2002 curriculum guidelines, not the reformed version approved in 2006”. Coming to the point he said, “natural disaster and disaster management falls in the category of ‘contemporary issues’ as per curriculum development guidelines. It has got other issues like drugs and narcotics, environmental degradation, traffic and off course natural disasters and climatic change as well, each with its own significance. Which one to choose and integrate in the syllabus depends on the overall discussion and consensus within the curriculum wing. Personally, I support placing certain level of information as it is very important for Sindh. The province is increasingly facing natural disasters. Mangroves decline and sea encroachment is on the rise. Its’ environment is being by destroyed by unregulated industrialization, excessive urbanization and other factors”.

On the other hand, Imdad Hussaini, member Curriculum Review Committee (Sindh) holds different views: “You just cannot squeeze everything in an already overloaded curriculum.
Several economic, social and political upheavals keep happening around but it does not mean that every major event must be accommodated into the textbooks. You will end up with confusion. Curriculum is a systematic and sequential phenomena. Units, lessons, themes and subjects are systematically planned and carefully selected and developed for one or another grade. Right from Computer Science to khulfa-e-rashideen, we wish to integrate everything in the text. DRR elements could not be placed there just because some Donor's or NGOs desire so”.

Things can only change, said EDO education (Thatta), if there is a periodical discussion between PDMA and provincial Education Department. What of inter-departmental communication, even District Education Department has got very limited interaction with the provincial centre. All meetings are need based and only EDOs are invited in Karachi to discuss routine matters. New things hardly ever come under discussion. Endorsing unknowingly, DEO Elementary (Rajanpur), M. Ramzan comments. “PTB rarely listens to us. It is only routine matters that our EDO visits Lahore to discuss”. Reflecting the situation, Ramzan Parhayo, DEO Badin says: “What of enriching our textbooks with new dimensions like DRR and CC, political interference is almost killing already existing system. How to improve things, when each coming day the system slides into crises? The existing system needs improvement first, before we move towards new things.” “Let aside the availability of budget, it is DEOs and EDOs responsibility to demand School Based Budgets from the provincial department, which they don’t. All they are concerned is their salaries. While interacting with the Education Secretariat at Lahore, the can ask budget for DRR functions,” says a district account official in Punjab (name withheld).

Responding to the missing facilities in schools – including the physical safety against a disaster, G.A. Shah, Budget Assistant (P & D, Layyah) said, “EDOs, DEOs and AEOs education are all promotees from teaching positions. Most of them are administratively untrained and fail to understand technical procedures. Either they do not demand repairing and maintenance budget from us or at least not timey enough. Normally sufficient budget is available to improve, if not to build new ones, existing schools but lapses without use every next year”.

On the other hand, Saleem Tonyo thinks, “it is the Education Department and its needs, that P & D is least bothered about”. Teacher Surya Kosar said that EDO, P&D, (name withheld), says, “there is no need for further development. School services in Layyah are over developed”.

However, “I do agree, he added, with the incidence of massive corruption within District Accounts Office. For instance, former Accounts Officer (name withheld) always struck a deal with constructors, in this very office, before releasing budget. He was so corrupt that when transferred back to Lahore, he took away the cot with him, he borrowed from his clerk”. One of the EDOs P&D, (name and district withheld), argues that “location is one of the most important aspect of safe schooling and accessibility when the plan for constructing a new school is being approved. Most Schools are built on one or another landlord’s land under his calculated influence. Evil intentions of using it as his dera is part of its very foundations. Government insists to procure land for rural primary schools for free. (It should always purchase land with population and accessibility assessment). Teachers are mostly appointed under local
MNAs/MPAs influence. We do ask for feasibility of a School from EDO (Education) but of course, he too fails to resist political influence. It is not necessarily the school rather accessibility that causes much of the problem for boys and particularly for girls. Once again, it comes to the location of the school that usually goes unplanned”.

In one of the accounts and budgeting officials (in P&D Department) views “What of providing other facilities to schools and teachers the district’s budget runs in deficit every year. For the last 10 year teachers salary is being increased every year but the district remains under debt. Through statistical jugglery, we have to display the budget in plus. Although, schools get the highest (80%) of the whole district budget but it is because of its large establishment and salaries not for successive development. For non-salary budget a school hardly gets less 5 to 10% measly for against its repair and maintenance needs. SC funds is not part of district education budget, it is given as a special grant from the provincial ministry or education. How can they go for new curricular and extra-curricular activities like DRR?”

“By and large, disaster is the question of geography and what probable disaster an area might receive suddenly. Heavy rains threatens us more as does river-swelling to the riverine population. People sitting in Lahore fail to understand the geogaphy of an area situating between River Sindh and Suleman Mountains and significance of its’ knowledge for our people. Geography is connected with attitudes and civilization as it is with the kind of disasters it might suffer from. Lessons need to be planned accordingly,” the comment was made in the Focus Group Discussion at GBPS41, Jampur.

In the light of all the comments made by experts, more than one possibilities can be argues by civil society groups lobbying to integrate DRR in education at Primary and secondary level.

13. NDMA and PDMA’s STANCE ON THE PROPOSAL

“PDMA was the last entity to reach when Thatta inundated with floodwater in 2011. People were running around helplessly. “Save media hypes reliable early warning system is not seen around. Water takes at least one week flowing down from Sakkahar to Thatta. None of us had any idea before, when Thatta submerged last year….None of the six delta populations new of 1999 cyclone in advance. Possibly education can help”. Saleem Tonyo42 and Mr. Wafa, the Academy Teacher in Thatta.

“School curriculum program has been introduced in Pakistan to integrate disaster risk management particularly in hazard prone areas by The National Disaster Management Authority (NDMA), Sibte Abbas, the Direcoter, and Mubashir Hussain, respective official from UNDP,

41 Schools full name is GBPS, Marheywala, UC Bukhari Sharif, Jampur
42 Saleem Tonyo is a Social Worker in Thatta.
unfolded the information during my engagement with NDMA. Ministry of Education was persuaded to include elements of DRR in the education curricula and to mobilize stakeholders including the private Sector. We tried our best to ensure that DRR is incorporated in school curricula. Following Sri Lanka where Asian Urban Disaster Management Program and the National Institute of Education successfully integrated disaster management in its Geography subject at Secondary Schools level, we planned similar programme for our education system. But it can never be implemented”. Reportedly, the Ministry of Education is planning to implement a School Based Disaster Risk Management Programme with GTZ but the plan in not widely known even within the education department.

In a Regional Disaster Management Conference held at Islamabad (November 2012) NDMA Chairman Dr. Zafar Qadir was hear saying, “With an 8 to 9 months extensive effort, we have developed an effective response plan here in the country. It will surely help us in building a better future. We are formulating relevant policies and setting in practices. Our national response plan is now at the final stage of approval. We are building capacities and filling out gaps. Regarding Schools, they prove to be safe havens during disasters, therefore schools need to be developed and strengthened and we are working for that with respective departments and ministries. We are struggling to turn our schools into safer zones”.

“Mainstreaming DRR in education has been one of the NDMA’s priorities that it has been working from Day one, said Sibte Abbas Zaidi and Mubashir Hussain (UNDP). “Its education sub-group (formed with the support of UNESCO) has something in hand too. Actually, it is UNESCO that initiated the process and began generating will in concerned departments in the country. We dovetailed our proposal with the UNESCO led initiative back in 2009 and proposed the package with the support of UNESCO for incorporating DRR elements in the Curriculum at primary, secondary and higher levels. Certain education advisors were also members of the sub-groups developed with the assistance of UNESCO”.

They stated further on that, “it was yet not shared with the Ministry of Education and Curriculum Wing”. Things, were at very early stage that we got 18th amendment, devolving education and other subjects to the provinces. An appropriate act, but it affected our efforts of putting things up with the curriculum authorities. Unfortunately, the proposed plan could not be implemented. The plan or the proposed ideas and issues are here with us but we cannot share anything which is not notified officially or not made public. UNESCO is in better position to share things like these. Even disaster response is a devolved subject and the process somehow should be completed by PDMAs and the provincial curriculum authorities. Anyway, UNESCO did provide certain material - intervention matrix - in to the federal curriculum authorities by that time but post 18th amendment, devolution things could not move forward that fast. Humanities, Social Science and Geography were the subjects proposed to accommodate DRR elements. What National Education Policy mentions, is to integrate was just the response not preparation or mitigation measures. Its preference was to have something, preferably, at the intermediate level”.

On the other count, there are several practical problems at provincial and district level where things have to be implemented. “DRM, is neither owned by PDMA nor by the district
management. Role of the Coordinator is not properly defined. I myself began coordination with communities, with health and education department, delivering training and knowledge transfer with the assistance of local NGOs like Doaba. What of DDMA even PDMA is functioning on adhoc basis. The day donor funds are over PDMA will collapse and the day my salary is over with PDMA district risk management will be over,” says M. Saeed Chishti, DRM coordinator at Lyyah.

DRM Coordinator Muzzafargard, Naveed Iqbal said, “within district management, we are alien entity landing from above and run by project to project funding. How can we support schools or EDO education with limited capacity and without any powers or institutionalized coordination from other departments? We do not have a single dewatering machine to clear water from low-lying schools. In certain cases army turns to be an active force, why because they have required machines and equipment. Even if meteorological prediction is right and early warning issued, we cannot offer any assistance, save running around empty handed. On top of that district administrations remains aggrieved with us just because our salaries are better. They rarely think of a range of facilities that they have got and we, don't " “Political interference is far too high. Decisions are done and revoked on personal basis. Things work on personal discretion. If a person on top is better, things work better. Otherwise, it is all mess”. DRM Coordinator, Rajanpur, Mushtaq Bhatti. On their way to advocated for mainstreaming DRR in education, all such problems must be kept in mind.

14 - BROADER POLICY AND PRACTICE RECOMMENDATIONS

Given the problematic state of education and systematic constrains, it seems difficult to seek a sea change to serve the purpose. Not all subjects yet landed on ground, but the textbooks have been rewritten under the reform process. It sounds difficult to influence the Ministry of Education (MoE) and Provincial Textbook Boards for a wholesale change, even if the scale and frequency of disaster demands that. With reference to the approaches and analysis drawn afore, following policy and practice reforms are advocated. However, without patience, diplomacy and long-run commitment it is hard achieve advocacy goals set forth.

- Respective NGOs and CSOs need to brainstorm with all the stakeholders to prioritize which aspects need to be addressed where and when. In nutshell, child-led disaster risk response (CLDRR) need to be made part of the disaster response practices. At the first stage, incorporating supplementary material, the way information about Dengue Virus was done, sounds suitable to address DRR concerns. Drills and exercises are also important to generate willingness and interest among children, parents and teachers. Introducing a building code and quality control is must to ensure that every new school is safe school. However large scale awareness and capacity building is the best option to begin with.
- Maintaining the lesson ‘qudarati afaat’ (natural disasters) already a part of class 4 in Punjab, is recommended rather enlarging and putting it in the textbooks of Sindh is also recommended;

- At the first stage extra-curricular and cross-curricular activities are recommended. Supplementary material to be printed in the beginning and end of the textbooks also sounds quite relevant and workable. Wall chalking of the DRR related skills and messages appear to be the simplest and quickest to be adopted;

- So long as a total reform takes place, as the process always takes time, teachers can be advised or formally trained to related DRR messages while explaining relevant lessons like mahole, mahole ki alodgi or gadlan, darakhton ki kahani, hamari abadi, civil defence, scouting, razakar, bian ji madad, sothyon shehri, shehryan je faraiz, missali goth, goth ji sair, acho tan boota pokhyon, safety and other lessons like that.

- Extended lobbying is required to persuade experts and provincial MoE to address the impending issues through ‘infusionist’ permeation, dedicated space, and ‘extra-curricular insertions’ methods to begin with and gradually improve it. UNICEF and GTZ are already convinced and contributing in several aspects of education and can readily stand by the cause. NDMA has even done some scratch work to build upon.

- Civil society organizations need to coordinate closely with teachers, members of SC, EDOs, DEOs and AEOs to engage risk prone area children in preparatory plans. Children must be heard while educating them adequate responses against likely disasters. Existing policies and practices need to be revisited from child rights and children’s own perspectives.

- Encourage school teachers, SCs and district education authorities to participate in DRR activities creating a level playing field to integrate DRR in the education material later, build upon and them generate a demand.

- Lessons about ‘human rights,’ ‘humanitarian response, child rights and child protection during emergencies should categorically be part of 6th, 7th or 8th Grades. Along with communicating universal rights and principles of ‘human rights,’ and ‘equality,’ they can effectively carry the messages of DRR, adequate responses during disasters and a-priori measures for preparation, early warning system and mitigation.

- Media groups, channels and newspapers need to be engaged to sensitize them to highlight child issues and child concerns to be addressed through textbook and other educational means. Networking and dialogue between likeminded organizations, including media houses and other stakeholders, need to be formed and strengthened to cast influence on the government in general and its specific institutional apparatuses.
- Exchange of ideas between education authorities, emergency health units, rescue 1122 & 15, civil defense, fire-stations and other emergencies need to be promoted. NGOs can facilitate schools to develop their disaster response plans. Set them milestones and actions steps both for students and teachers and revise them periodically. Task forces and school safety clubs, games, manuals and toolkits, awards and incentives are some of the means to educate kids and boost demand. Besides that, lobby with the education department to own NGO/CSO led initiatives.

- Good practices adopted by other countries like Indonesia, Bangladesh, India, Nepal, Sri Lanka, Vietnam and Japan should be introduced to attract governmental measures.

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Annexure - 1:

QUESTIONNAIRE, TOOLS AND CHECKLIST FOR
CURRICULUM REVIEW FOR DRR RELATED INFORMATION AND PROPOSED ADVOCACY STRATEGY

AND RESEARCH DESIGN

i - Check List:

Focus Group Discussion with the following Groups:

1. SMCs Including Teachers
2. School Children
3. Community, including Parents

Guideline for FGDS: The discussion shall be generated from the groups experience, general perception and seeking suggestions at the end.

Questionnaires And Guideline: Separate Questionnaire for each Group are given here below. Please do not dive straight into questions rather build rapport and generate discussion around these questions. Avoid straight questioning and respect local norms and values. Similar questions across groups are not repeated the respective research assistant is advised to ask himself and herself from his/her overall understanding of the research subject. Finally please make audio recording where possible or appropriate according to the situation or nature of interviews.

Questionnaire For FGD With SMCs And School Teachers:

1. Are there any DRR related essays, lessons stories in the curriculum?
2. If, yes what are they, how many and how do you explain them to students?
3. If no, do you think there is a need to and what should be the nature and scope of these lessons or stories?
4. Do you think there is a need for extra-curricular activities to sensitize students and teachers about DDR concepts?
5. Are there any elements of DRR or instructions to teachers from Sindh Text Book Board to incorporate certain DRR related messages or interpretations?
6. Do you have any direct or indirect interaction with PDMA?
7. If you realize the significance of incorporating DRR related material or information into the school curricula, what suggestions do you put forth in this regard?
8. Any training related to DRR through any agency?

Questionnaire for Children:

1. Do you have any idea or understand the threats on impeding threats from disasters such as heavy rains, cyclones, floods or earthquakes?
2. Relating with your experience or memory from the recent past what happened when a disastrous situation occurred in Badin or Thattha. What did you in that case? What was right and what went wrong, any idea?
3. Do you have any idea that how to react or response in case any natural disaster occurs in you area?
4. Are there any lessons with respect to natural disasters in your curriculum?
5. If yes, does the teacher explain it and how. If no, of you think there should be something about natural disasters in your curriculum?
6. What information about the forces of nature you already have?

Questionnaire for Community:

1. Do you think children have an idea about the forces of natural and particularly natural disasters?
2. Do you have any idea that some material or information is there or not there in the children textbooks about natural disasters and how to avoid deaths and destructions?
3. Do you think, there is a need to incorporate DRR related elements into the school text books?
4. If yes, what should be its nature and scope? What type of disasters need specific education or training in your area?
5. What could be the potential advantages (or disadvantages) of incorporating DRR messaged in curricular and extra-curricular activities?
6. What you think about the role of children during disasters? What parents expect from from their children to do during disasters?
7. How you think/visualize about the role of teacher before, during and after disasters?
8. How you visualize/think about the role of SMC before, during and after disasters? What role should SMC, teacher should play during disasters?

**Individual And/Institutional Interviews:**

1. PDMA Representatives, mainly dealing with mainstreaming DRR.
2. Sindh Textbook Board and its understanding about incorporating DRR info into the text.
3. District Disaster Management Authority (DDMA) and its plans to incorporate DRR into the texts.
4. District Education Department and its sensitivity and motivation about incorporating DRR into the texts books.
5. National Disaster Management Authority (Islamabad) and its plans to incorporate DRR messages into the syllabus.
6. Individual Experts: Inam Sheikh and/or Sartaj Abbasi (Education), Masood Mahesar (Disaster), Jami Chandio (Journalism), Rajab Ali Memon (Sindh Tarraqi Pasand Party).

**Questionnaire For Pdma, Ddma Representatives:**

1. Are there any plans or discussion within PDMA to incorporate DRR elements in children’s textbooks or teachers training?
2. If yes, do you have anything in black and white and could you please share it?
3. What is the nature of coordination between PDMA, STB, Provincial Education Ministry and Departments as well as District Education Departments?
4. Do you think the coordination, with respect to disaster related issues, is enough or there is a need for improvement?
5. If there is a need for improvement, what should be the key points or areas of communications in between?
6. How is your relationship with NDMA? Do you know about NDMAs plans to incorporate DRR related elements into the provincial textbooks?
7. If you yes, do you have any circulars or something in black and white with you and could you please share it?
8. What suggestions would you recommend to incorporate disaster related information in the kids textbooks and training to teachers and/or SMCs?

**Questionnaire About Sindh Textbook Board Officials Or Represenatives:**

1. What is the nature of coordination between STB, Provincial Education Ministry and Departments as well as District Education Department/s with PDMA or NDMA?
2. Do you think the coordination, with respect to disaster related issues, is enough or there is a need for improvement?
3. If there is a need for improvement, what should be the key points or areas of communications in between?
4. How is your relationship with NDMA and PDMA? Do you know about NDMA or PDMAs plans to incorporate DRR related elements into the provincial textbooks?
5. If you yes, do you have any circulars or something in black and white with you and could you please share it?
6. What suggestions would you recommend to incorporate disaster related information in the kids’ textbooks and training to teachers and/or SMCs?
7. In case a process is going on there? Do you have anything in black and white to share i.e. any manuscript or proposed lessons or textbooks?

Questionnaire for Individual Experts?

Note: Please ask all their views and suggestions about all the points raised to groups and individuals above and take careful notes.

ii - Tools For Extracting Information From The Community:

1. Collect basic information about the School: When it was constructed?, Area?, Infrastructure like toilets, water, four walls, strength of the students and teachers etc?? How safe is the school in the wake of a probable disaster?
2. Teachers qualifications and training for teaching and his DRR related existing knowledge and/or interest?
3. Medium of Instruction and how effective that could be to convey DRR related information?
4. SMCs role and interaction with the school teachers and DRR related understanding?
5. How interactive or engaged is the community with school and how can it help or constrain the school for DDR knowledge and preparation for any disaster in future?
6. Gender of the Teacher (male or female) and how helpful or constraining it could be with respect to communicating DRR information?
7. How frequent is the school’s interaction with the district or provincial educations departments and is their any realization or in formations about DRR that they do communicate or desire to communicate to the school staff and the students?
8. Review of the elementary school curricula to extract the DRR related or potential DRR related information;

Note: Questions where relevant shall be generated from potentially available or missing information from the syllabus.