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The post-2015 development agenda

Pakistan stakeholder perspectives on a water goal and its implementation



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1 Introduction

The UN Conference on Sustainable Development (CSD) in Rio de Janeiro, in June 2012 (Rio+20) triggered a broad consultative exercise both within and external to the UN to consider the post-2015 development framework. The Rio+20 outcome document indicates the awareness and serious intent of the global community to develop a sustainable development agenda after 2015 through a consultative process that has buy-in from all countries. The UN CSD agreed to establish an intergovernmental process on Sustainable Development Goals (SDGs) to be taken to the General Assembly in 2015. The initial SDG consultations cover 11 themes including one on water. This has led to a number of preparatory processes and debates.

UN-Water, in collaboration with GWP as a partner, developed a recommendation paper to become part of the negotiations of the Open Working Group (OWG) to be held during 2014. On the basis of this paper a consultative process was initiated in 30 countries of the World. Pakistan is one of these 30 countries and was mandated to initiate the process with in Pakistan involving broader cross-sectors of stakeholders covering all sphere of life.

Pakistan National Consultation was held on 18th February 2014 at Karachi with the objective to obtain views on the post-2015 development agenda for water and proposed Sustainable Development Goals (SDGs). In order to initiate discussion, PWP invited over 70 delegates (Annex-I) from water and allied sectors providing them the following background publications for their information and to provide the material for discussion:

- UN-Water paper by the UN-Water Working Group on SDGs
- OWG meeting report of 24 May 2013;
- High Level Panel report;
- The Post-2015 Water Thematic Consultation Report “The World We Want”; 5) Output from the Budapest Water Summit October 2013.

Out of the above documents, the key input for the consultations is UN paper by the UN-Water Working Group on SDGs with the active participation of many UN members and partners, with valuable contributions of GWP. It sets out recommendations for a Water Goal and describes a set of five targets for water for thorough discussions and arriving at consensus for each partner country taking into consideration each country’s own perspective and needs. In the light of UNWater Paper and the Water Goal along with a set of five targets, a comprehensive program was devised for the National Consultation which is enclosed as Annex-II.

To initiate purposeful and focused discussions on each target, PWP derived five questionnaires out of the UN-Water Paper on five water related targets and at end of all five questionnaires, formulated 3-4 questions to be answered by the participating delegates taking into consideration the country’s needs and prevailing ground realities in each water sub-sector. The questionnaires are placed at Annex-III.

The National Consultation was attended by over 35 delegates presenting federal and provincial government departments, academia, non-government organizations, line agencies, public and private sector organizations and stakeholders. List of the participants is placed at Annex-IV.

The National Consultation commenced with recitation from the Holy Quran by a delegate Syed Mujahid Saeed. The inaugural session was chaired by Mr. Khalid Mohtadullah, Senior Advisor GWP/UNDP/IWMI/ICIMOD and co-chaired by Mr. NaseebUllah Khan Bazai, Secretary Irrigation, Government of Balochistan. After introduction of all delegates, Dr. Pervaiz Amir welcomed the participants and gave a brief introduction of the National Consultation and the process that would

be followed for focused discussions to arrive at a meaningful outcome specific to Pakistan’s water issues.

Sardar Muhammad Tariq, Executive Director/CEO, Pakistan Water Partnership (PWP) highlighted the process which was followed in meeting the Millennium Development Goals were set for each country in 2000 along with the MDGs set for Pakistan in 8 areas and the progress achieved by end 2013. He also explained the process which would be followed to meet SDGs for Pakistan to be achieved from 2015 to 2030.

Mr. Khalid Mohtadullah also highlighted importance of the process that needs to be followed to achieve water goal and targets in his inaugural remarks. He also mentioned that fixing realistic targets will definitely help Pakistan in attracting required funding from donors and UN-Agencies working in Pakistan.

At the end of inaugural session, Mr. Karamat Ali, Country Coordinator PWP requested the participants to choose one of the five SDG topics falling within their expertise. The nominated group leaders were provided TORs to conduct the group discussions with prime objective to get feedback on the proposed target and their relevance to Pakistan.

2 Comments on recommended SD Goal and Targets for water:

The audience were divided into following five (5) groups and proceedings of the groups were led by the Group Leaders as mentioned in the Table below to meet the reporting requirement.

Group	Description	Group Leader
Group – 1	Access to safe drinking water, sanitation and hygiene	Syed Ayub Qutub
Group – 2	Sustainable use and development of water resources in all countries	Prof. Imran Ali
Group – 3	Strengthen equitable, participatory and accountable water governance	Dr. Pervaiz Amir
Group – 4	Untreated wastewater, nutrient pollution and wastewater reuse	Sardar M. Tariq
Group – 5	Mortality and economic loss from natural and human-induced water-related disasters	Dr. Ghulam Rasul

After the lunch break, group work was presented by the group leaders in the panel discussion session chaired by Mr. Naseeb Ullah Khan Bazai, Secretary Irrigation, Government of Balochistan.

The outcomes of the proceedings of the five groups and their views to the questions as set out and synthesized are presented below:

2.1 Access to safe drinking water, sanitation and hygiene

2.1.1 How to establish Public-Private Partnership for investment and to improve services provision in WASH?

There is requirement to undertake Gaps assessment with respect to WASH. It should be Participatory PPP based. The group emphasized the need to promote social marketing of hygiene. Likewise sanitation has to be undertaken as a business model for widespread promotion in both urban and rural markets. Pakistan should take advantage of the good Micro finance models in vogue in South Asia (e.g. Grameen Bank Bangladesh, Akhuwat micro finance Pakistan) and tailor them to

sanitation and drinking water provision through small scale private investments. Reporting and publicity to encourage WASH should rely on Evidence-based policy advocacy.

2.1.2 How to improve and enforce governance to control water thefts?

The group emphasized the need for urban planning and social mapping of populated and sparse townships, cities, and villages. It also recognized the importance of capacity building e.g. strengthening of Water Boards/management bodies, re-mapping / planning of the schemes. An introduction of Strategic vanguard units in WASAs was recommended. Zone wise and full time water supply was stressed. Real time e-mobile monitoring for evaluation of resource use and transparency was urged.

2.1.3 How to convert waste into wealth?

Holistic and innovative thinking are a pre-requisite to help convert waste into wealth. The model must recognize human wellbeing and equity as essential elements guiding any model of change in the WASH sector. The group recognizes the importance of inter departmental cooperation and protocols. The pilot areas approach can be effectively employed prior to up-scaling successful experiences and technologies. All stakeholders need to learn from the best practice for re-use of waste. Widespread public interest campaign is launched through civil society and on media for water recycling at all scales from household, schools to widespread public awareness programs. Likewise construction of wetlands-sewage to farms is encouraged.

2.1.4 How to get the best value from civil society participation in delivering services to the poor?

Civil society can serve as a CATALYST for change by employing rigorously commissioned research that synthesizes lessons and enables formulation of consolidated networked Advocacy approach. It is important to address inequalities and inequities and promote ownership and exclusiveness. All-round accountability and transparency be ensured through use of modern social evaluation models.

2.2 Water Resources

2.2.1 How to improve institutions to ensure sustainable withdrawal and uses of surface and ground water?

There are several Institutions like IRSA, Irrigation Department, WAPDA mandated to address surface water but require massive improvement in infrastructure, human resource development and organizational restructuring to meet challenges of sustainable withdrawal. Monitoring of canal flows and groundwater management suffer from lapses of technology thus a need to strengthen monitoring and evaluation by using new technologies for measurements like remote sensing, satellite imagery and GPS etc. Despite implementation problems from highly deepened groundwater withdrawal and ill conceived tubewell installations, a regulatory framework is still necessary for conservation and use of groundwater with greatest attention to implementation of laws and application of rapid legal procedure to ensure just use of underground resources. At present time this is not in place. In face of existing deficits, growing of rice and sugarcane and other high delta crops as cash crops in critical area with less water intensive crops need to be rationalized within practical political economy and trade considerations., This is especially important in the wake of losing parity pricing especially the insecurity of energy availability and its rising price. Under initiatives to improve institutional performance for water measurement proper instrumentation for water flow measurement be installed at all relevant levels. IWMI has placed gauge in pilot project and this experience should be further evaluated and expanded as found appropriate. State has re-

model assessment and recovery of revenue collection and introduces proper institutional measures and links this to water supply and productivity.

2.2.2 How can we bring in new water pricing structure for agriculture, domestic and industrial water uses to cover upgrading, maintenance and services costs?

Water supply in all the sectors has to be improved. People are willing to pay more if services are improved. Private sector's involvement as service provider having facilities of volumetric delivery mechanism would go a long way in cost recovery and incentive to private sector.

2.2.3 How to address growing water demand and equity in water accessibility?

Water savings in all subsectors with recycle and reuse would meet the water demand to a great extent. The principle of 3Es i.e. Economic Efficiency, Social Equity and Environmental Sustainability will ensure more equitable distribution of water.

2.2.4 How to enhance storages?

Change emphasis from water sharing to benefit sharing that will help resolve upper vs. lower riparian tensions and spread benefits in an equitable manner. Rekindle debate on storage projects within a benefit sharing perspective and seek general consensus based on national interests and water security keeping in mind developments taking place in neighboring countries and challenges posed by climate change. Time is essence otherwise expect delays would result in huge cost over runs.

2.3 Water Governance

2.3.1 How to get consensus to formulate National Water Policy?

The group queried on the status of draft national policy and was informed that a policy document has been prepared and its latest version of Sept 2012 was sent to the Law Division. The Law Division has advised that input from all provincial governments be solicited. The group further debated the need for wide spread stakeholder consultation on the existing draft. It was proposed that finalization of the national water policy should not be hurried and should coincide with the 2015 date of initiation of UN process towards Post 2015 Development Agenda.

2.3.2 How to include stringent water governance laws in the National Water Policy to ensure equity, control extraction and pollution?

It was agreed upon in the group that the draft policy document should be further improved to include statements incorporating water laws that ensure equity, control, and extraction mechanisms and addresses pollution. The group further recommended that an addendum be added to the existing draft and ensure water governance laws are adequately reflected in the policy document.

2.3.3 How to effectively implement National Water Policy?

The group recognized inadequacy in the present implementation structure and noted the need for establishing special national water policy implementing agency e.g. national water commission. It was emphasized that such an agency be managed by technical professionals of national and international repute. Given the change in legislation brought under 18th Amendment, the role of provinces and their representation in the proposed agency be should be prominently reflected.

2.3.4 How best to strengthen coordination and improve capacity so the water sector can deliver the targets?

The group proposed five areas to help strengthen capacity building and M&E in the water sector. The role of modern GIS and remote sensing technology be applied to monitor the implementation of development works proposed under the national policy. Capacity in water law, governance, benefit sharing, water pricing and reform in present legislation be addressed through enhancing institutional and academic capacity building. Greater stress be given to addressing the regulatory framework for rationalizing water charges (Abiyana) and electricity rates for pumped water be given highest priority. Pakistan be further exposed to international best practices and wide spread sharing of IWRM base approaches including emerging technologies.

2.4 Managing Waste Water and Pollution

2.4.1 How to convert waste into wealth?

The suggested approach was based on financial returns that could be achieved from waste such as installation of bioplant for generation of power, proper marketing of liquid and solid resources, and judicious use of recycled water, protection of aquatic life and reduction of losses in terms of productivity resulting from human health problems.

2.4.2 How to follow principle of 3R: Reduce – Recycle – Reuse?

The group was of considered view that the introduction of proper pricing mechanism, rationalization of competing uses of water, reduction of water uses in agriculture sector through introducing modern technologies would result in quantifiable reduction in water uses. Similarly water wastages needs to be reduced in all sub-sectors along with introduction of town planning bye laws for rain water harvesting and reuse of wastewater. To make the process more cost-effective Indigenous technologies should be introduced for recycling.

2.4.3 How to bring in private sector into the business of solid and liquid waste collection, recycling and reselling?

To attract private entrepreneur into business of solid and liquid waste, adequate financial return on investment has to be ensured along with out-sourcing of services and creating favorable environment for investors focusing on taxation regime.

2.4.4 How to minimize and control pollution in all sub sectors?

The group was of the view that adequate and effective environmental laws do exist which need to be implemented in letter and spirit. In case of existing industrial units, introduction of incentives such as tax relaxation and handsome rewards to be given to the industries which incorporate recycling and reuse technologies. Similarly violators need to be heavily penalized. The services of both media and civil society should be obtained for knowledge dissemination focusing on reduction in use of chemical fertilizer/pesticides and encouragement of organic manures in agriculture sector along with introduction of on-site biological treatment in the rural setup.

2.5 Mortality and Economic loss from natural and human-induced Water-related Disasters

Pakistan faces 5 types of extreme event challenge induced by climate change. In the area of floods it faces flooding induced in areas including: Riverine, Hill Torrents, Flash, Urban, GLOF, Cloud burst etc. Likewise droughts show repeat visits with both prolonged and seasonal occurrences. Pakistan's

coastal belt is prone to Cyclones and Tsunami with large scale impacts on human populations leading to temporary migration and huge loss of life and property. Ground Water Depletion and water logging and salinity add to the miseries of large scale populations harming their livelihoods and leading to marginalized grouping with severe consequences for extreme and abject poverty.

2.5.1 How to put in place an effective forecasting and post-disaster management Plan?

A system exists in which meteorological service is responsible to issue forecast and disseminate to NDMA, PDMA and Media that is regularly being upgraded through provision of modern satellite access and weather radar installations. However, the level of accuracy of forecasts along with their lead times has to be improved and internationalization of weather through worldwide weather sources be tapped. More clear roles and responsibility of various key stakeholders (PDMA, DDMA, PMD, SUPARCO, etc.) should be specified with clear short, medium and long term goals. There is a National Disaster Management framework in place but requires much investment to be effective at the grass roots level. With recent enhancement in Capacity building of DDMA improvements are taking place. However, the role of early warning and improved coordination amongst all relevant public, private and civil society organizations will have high pay-offs and receive priority attention. Pakistan's super floods of 2010 and earlier 2005 earthquake provide plenty of experience to address vagaries of natural and human induced disasters. Creating resilience will require communities to be engaged in community based adaptation at all levels especially in the 8 hotspots prone to climate induced and natural hazard zones.

2.5.2 How to prepare a resilient society to contact drought and floods?

The group noted the time and spatial dimension of water in Pakistan along the Indus system. Much attention needs to be given to ethical education in the curriculum. Water security can only be created through creation of storages through reservoirs. This is an immediate urgency area but despite recognition has failed to take-off due to conflicting interests and want of huge financial resources. International experience with watershed management and rainwater harvesting must be introduced according to needs of each agro ecological zone in Pakistan. Both supply and demand management of water require balanced approach. A much needed overhaul is required in the regulatory framework with clear governance guidelines implemented and monitored both for software and hardware solutions. Incorporate clear guidelines for watershed management, rain water harvesting and spell out pre requisite measures for introducing structural and non structural changes that improve rapid and technically sound decision making.

2.5.3 How to reduce mortality and economic losses?

Strengthening and further investing in an effective early warning system, dissemination and relief operation will have high-pay-offs. Pakistan requires technology to predict and forecast flash floods while its flood forecasting capacity for river flow induced and trans-boundary impacted floods also needs to be improved. There is a need to engage in campaigns that focus on restoration of natural water ways. Disaster risk reduction activities need to sustain during peace time and stock building made a regular feature to deal with upcoming challenges of drought. Post disaster rehabilitation be given equal emphasis and not taken as a onetime activity through compensation mechanisms. Better training and education of public with Mapping of disaster prone areas will go a long way in preparing the public to cater to such vagaries. A long term sustainable master plan needs to be prepared to meet natural disaster of all sorts

A WATER GOAL MAKES ECONOMIC SENSE

- A. Targets and Resources to universal access to:
 - a. Safe drinking water up to 100% @ 0.75% per annum.
 - b. Sanitation and hygiene up to 90% @ 1.2% per annum (adjusted for increase in population).
- B. Improve by (15%) the sustainable use and development of water resources in Pakistan.
- C. All countries strengthen equitable, participatory and accountable water governance (5% improvement in use efficiency through investments).
- D. Reduce untreated wastewater by (2.5%), nutrient pollution by (5%) and increase wastewater reuse by (7%).
- E. Reduce mortality by (90% through investments in Early Warning Systems and DDR) and economic loss by (25%) from natural and human-induced water-related disasters

Pakistan will require a sustained 2.5-3 % allocation of its GDP (US \$ 150 billion) to the water sector. It will have to organize external funding for almost 25 billion dollars for its two major storage projects on the Indus. Securing Pakistan's water future is possible provided what is planned is implemented at all levels of decision making.

The Karachi meeting provided much broader ownership. The Planning Commission of Pakistan while appreciating the Karachi process requested the PWP to organize if possible also finance the event with in-kind support provided by the Federal Government. Following Planning Commission request, PWP held a stakeholder's consultation of over 250 participants on 27 February 2014 in the Planning Commission Auditorium, Islamabad (Programme at Annex-V) to further the national process as a follow up of the first national meeting held in Karachi on 18 February, 2014. The objective of the Islamabad consultation was to review and vet the outcomes of the Karachi Meeting with maximum number of stakeholders from federal, provincial government, academia, donor agencies, welfare organizations, non-government organizations, individual experts, etc. The Federal Minister for Planning, Development and Reforms presided over the stakeholders' consultation. In his opening remarks, the Minister underscored the emerging crisis situation in the water sector by stating "within next 10 years water will become the foremost formidable change for Pakistan surpassing energy and will determine the pace of economic development". This statement set the tone for the meeting where deliberations undertaken in Karachi were shared with the audience. There was general consensus on the recommendations made in Karachi under the following five themes:

1. Access to safe drinking water, sanitation and hygiene
2. Sustainable use and development of water resources in all countries
3. Strengthen equitable, participatory and accountable water governance
4. Untreated wastewater, nutrient pollution and wastewater reuse
5. Mortality and economic loss from natural and human-induced water-related disasters

In the group sessions, there was great emphasis given to the need for addressing the water security issue with suggestions to take immediate and emergency decisions to make Pakistan water secure through major investments in building and repairing the ageing infrastructure. All stakeholders warned about the serious consequences of delayed decision-making in the light of climate change challenges which were undermining national development by seriously cutting into economic

growth of the nation. Similarly, the need to provide water for a burgeoning population was highlighted. Since almost 93% of water use is in agriculture any growth in demand for drinking water, industry and environment would have to come from agriculture. The need to conserve water in agriculture and prepare for waste water recycling was stressed especially in the urban centres. The group also asked the government to work in a coordinated manner to ensure long term sustainable development. Issues emerging from trans-boundary river water sharing on Indus and Kabul rivers were debated and the need to engage all concerned parties emphasized. Likewise broadening the benefit sharing paradigm for resolving water conflicts domestically was underlined. As pre requisite lower riparian provinces need to be made more water secure.

Participants of the stakeholders' consultation in Islamabad endorsed the post 2015 agenda of the United Nations and urged the Government to engage with the UN system through its representative in New York. It was further emphasized that Pakistan Water Partnership would take up further consultations at the provincial level to achieve consensus and broader ownership for sustainable development targets to meet the post-2015 water agenda and incorporate these into the 5 year development plan that is under preparation. The meeting concluded with recommendations for a National Water Summit to fast track the water agenda in Pakistan and provide guidance and support to the Government.

As a move forward, Pakistan Water Partnership plans to present these recommendations to the Federal Planning Commission for forwarding it to the Foreign Office and subsequently briefing the Pakistan's permanent representative to the United Nations to present it to the UN emphasizing the need for including water on the Post-2015 development agenda of the United Nations.

Annex 1: List of Participants

Full Name	Organisation	Position
Dr. Javed Akhtar Shaikh	WHO Sindh	Operations Officer
Dr. Wali Muhammad	WHO Sindh	Provincial Coordinator DEWS
Dr. Ali Rasheed	SHEHRI CBO	Executive Member
Dr. Afia Salam	Freelance	Journalist
Syed Muhammad Shayyan Shah	Provincial Disaster Management Authority	Deputy Director
Mr. Nazir Hussain Mughal	PCMU, Karachi	Director Engineering
Mr. Zulfiqar Ali Nizamani	Sindh Irrigation Department	Director Regulation
M. Ayoub Shaikh	Karachi Water and Sewerage Board	CEC-IV
Syed Ayub Qutub	Institute for Environment Development Action Research (PIEDAR)	Executive Director
Maj. Ghulam Rasool Shakir	AJK DRAPP	Project Director
Ali Dehlvi	World Wildlife Fund Pakistan	IM CCAV
Prof. Dr. Imran Ali	Karachi School for Business and Leadership (KSBL)	Professor of Business Policy
Mr. Mujeeb Ur Rehman Panizai	Chief Minister Secretariat, Govt. of Balochistan	Deputy Secretary S&GAD
Dr. Ghulam Rasul	Pakistan Meteorological Department, Government of Pakistan	Chief Meteorologist
Mr. Khalid Mustafa	The News International	Development Journalist
Mr. Faiz Kakar	IUCN-Balochistan	Manager Balochistan Programme
Syed Muhahid Saeed	Irrigation Department KPK	Superintending Engineer
Ms. Nosheen Usman	World Health Organization	Environmental Health Officer
Dr. Muhammad Tahir Anwar	Ministry of National Food Security & Research	Director General, FWMC
Ms. Sanaa Baxamoosa	HISAAR Foundation	Assistant Manager Planning
Mr. Asif A Sherazi	Oxfam Novib	Humanitarian Advisor
Mr. Niaz Muhammad	Oxfam Novib	Program Coordinator
Mr. Fateh M. Marri	SWSIP, PID, Government of Sindh	Project Coordinator
Dr. Pervaiz Amir	Asianic Development International	Agricultural Economist
Mr. Ylli Dedja	WSIP- Project, FAO	Deputy Representative
Mr. Khalid Mohtadullah	Global Water Partnership (GWP)	Senior Advisor
Dr. Sono Khangharani	HISAAR Foundation	CEO
Dr. Qazi Talat M. Siddiqui	Federal Flood Commission, Government of Pakistan	Deputy Engineering Advisor (Civil)
Engr. K. A. Ansari	ACE (Pvt) Ltd	Executive Director
Kh. Waheeduddin	Associated Consulting Engineers - ACE (Pvt.) Ltd.	Managing Director
Dr. Muhammad Tahir Qureshi	IUCN- Pakistan	Advisor

Full Name	Organisation	Position
Mr. Naseebullah Khan Bazai	Baluchistan Irrigation and Power Department	Secretary
Mr. Abdul Wahab Kakar	Irrigation Department, Govt. of Balochistan	Director General, Water Management
Ms. Rawasia Tariq	Kot Najibullah	Housewife
Mr. Mahmood Akhtar Cheema	IUCN Pakistan	Country Head
Mr. Najeeb ur Rehman	P&D Dept, Govt. of Balochistan	Deputy Chief
Sardar Muhammad Tariq	Pakistan Water Partnership (PWP)	ED/CEO
Mr. Karamat Ali	Pakistan Water Partnership (PWP)	Country Coordinator

Annex 2: Karachi Programme

Pakistan National Consultations on the proposed
Sustainable Development Goal (SDG) on
Water for the Post-2015 Development Agenda – Phase 2

Pearl Continental Hotel, Karachi – 18 February 2014

0830 – 0955 Registration of participants

Inaugural Session	Chief Guest:	
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0955 – 1000	Recitation from Holy Quran	
1000 – 1010	Welcome and Introduction to the National Consultation	Dr. Pervaiz Amir
1010 – 1040	Presentation on UN-Water recommended Goal and Targets for helping to meet sustainable development priorities of Pakistan	Sardar Muhammad Tariq
1040 – 1055	Inaugural Remarks by the Chief Guest	
1055 – 1100	Announcement on Group Work Mechanism:	Mr. Karamat Ali
1100 – 1130	Tea/Coffee Break	

Parallel Sessions	Group Work	Group Leaders
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1130 – 1330	Each group will start by commenting in general on the proposed targets and their relevance to Pakistan.	
Group - 1:	Access to safe drinking water, sanitation and hygiene	Syed Ayub Qutub
Group - 2:	Sustainable use and development of water resources in all countries	Mr. Khalid Mohtadullah/ Prof. Imran Ali
Group - 3:	Strengthen equitable, participatory and accountable water governance	Dr. Pervaiz Amir
Group - 4:	Untreated wastewater, nutrient pollution and wastewater reuse	Sardar Muhammad Tariq / Mr. Qutbuddin Sheikh(tbc)
Group - 5:	Mortality and economic loss from natural and human-induced waterrelated disasters	Dr. Ghulam Rasool
1330 – 1430	Lunch and Prayer Break	

Panel Discussions	Panel Chair: Khalid Mohtadullah	Other Panelists:
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1430 – 1455	Rapporteurs to present Groups Outcomes	
1455 – 1600	Panel debate to agree feedback from the meeting regarding the recommended targets including: their importance for different aspects of water, their suitability and their viability - Suggestions for any missing issues for Pakistan Focused Discussions on Groups outcomes and implications of the proposed targets: <ul style="list-style-type: none"> Meeting any agreed targets will require actions from countries and will thus have implications, in particular for capacities, monitoring & reporting, funding, institutions and infrastructure Implications to provide an overview of what actions would be needed over a 15 year period in order to meet the targets 	Syed Ayub Qutub Prof. Imran Ali Mr. Qutbuddin Sheikh(tbc) Dr. Ghulam Rasool Ms. Farzana Saleem

- Viability of measurement of the indicators being proposed and the issue of monitoring and data availability

1600 – 1630 Tea/Coffee Break

Concluding Session	Chair: Mr. Naseebullah Khan Bazai, Secretary Irrigation, Balochistan
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Annex 3: UN Process Towards a Post-2015 Development Agenda: Pakistan National Consultation, Karachi, 18 February 2014

Group – 1: Access to Safe drinking water, sanitation and hygiene

The proposed full target for Safe drinking water, sanitation and hygiene (WASH) is: “By 2030: to eliminate open defecation; to achieve universal access to basic drinking water, sanitation and hygiene for households, schools and health facilities; to halve the proportion of the population without access at home to safely managed drinking water and sanitation services; and to progressively eliminate inequalities in access”. The target focuses on the progressive realization of the right to water and sanitation through increasing the number of people with access, improving existing service levels and progressively eliminating inequalities in access to services reflecting the established principles of the human right to water and sanitation, as recognized in Resolution 64/292 of the UN General Assembly in July 2010. The aim of the target is to encourage Governments to adopt ambitious targets for improving WASH service levels in order to reduce the global burden of WASH-related diseases, to improve productivity and economic growth, and to reduce inequalities between population groups.

Achieving the target will require actions covering the following elements:

- No Open Defecation: to eliminate open defecation
- Basic Access: to achieve universal access to basic drinking water, sanitation and hygiene for households, schools and health facilities
- Safely Managed Services: to halve the proportion of population without access at home to safely managed drinking water and sanitation services
- To progressively eliminate inequalities in access

The proposed target, its elements and indicators are aligned with the recommendations of international expert consultations facilitated by the WHO/UNICEF Joint Monitoring Programme (JMP) during 2011 and 2012. The target builds on the existing MDG Target 7C and addresses many of its shortcomings. Specifically, the scope of the new target is expanded beyond water and sanitation to include hygiene, and beyond the household to cover nondomestic settings. It also addresses priority concerns relating to safety, equality and sustainability. The suggested new target addresses open defecation and aims at a higher level of service compared to the MDGs.

For sanitation, the first priority is to eliminate open defecation which has profound harmful health and environmental impacts for the world’s poorest communities. The next step is to strive to achieve universal access to basic drinking water, sanitation and hygiene for every household, school and health facility. There is growing consensus that universal access is within reach for the post-2015 period but that it is nevertheless an ambitious target. This is particularly true for sanitation coverage which lags well behind that of drinking water, and hygiene, which is not currently monitored. On the other hand, universal access to basic drinking water, sanitation and hygiene is an obligation of States pursuant to the human right to water and sanitation, is essential for eliminating extreme poverty and necessary to achieve related ‘zero’ targets in health, education and nutrition.

During consultations a wide range of non-domestic settings were considered for inclusion but schools and health facilities were consistently identified as the top priorities. Having achieved universal access to basic services the next step would be for countries to progressively increase the number of people whose services are safely managed. The final essential element would then be to

progressively eliminate inequalities in access to services by disaggregating population groups (e.g. rich/poor; urban/rural; slums/formal settlements) and monitoring the difference in the rate of change between disadvantaged groups and the general population.

Detailed definitions and indicators have been developed to support effective monitoring of future WASH targets. These specify the maximum time that should be spent collecting water, the minimum quality of water provided, and the safe management of the services. The sanitation definition specifies which types of sanitation are acceptable, how many people could share a sanitation facility and arrangements for disposal of excreta. The hygiene definition specifies standards for hand washing and menstrual hygiene management facilities.

Minimum levels of service in schools and health centers are based on existing WHO standards. Based on feedback from ongoing consultations the existing list of definitions and indicators is being further refined and where necessary new ones added. The JMP working groups recommend building on and enhancing existing monitoring systems which are primarily based on household survey data and exploring how these might be combined with new emerging sources of regulatory data in the future. The formulation of the targets, indicators and definitions in this section are aligned with concerns revisited in Target C Water Governance.

Detailed illustrative targets and associated indicators:

Target A: Achieve universal access to safe drinking water, sanitation and hygiene			
Element 1: No Open Defecation “to eliminate open defecation”	Element 2: Basic Access “to achieve universal access to basic drinking water, sanitation and hygiene for households, schools and health facilities”	Element 3: Safely Managed Services “to halve the proportion of population without access at home to safely managed drinking water and sanitation services”	Element 4: Equality “to progressively eliminate inequalities in access”
Element 1 core indicators <ul style="list-style-type: none"> Percentage of population practicing open defecation 	Element 2 core indicators <ul style="list-style-type: none"> Percentage of population using basic drinking water Percentage of population using basic sanitation Percentage of population with hand washing facilities at home Percentage of health facilities with basic drinking water, basic sanitation and hygiene Percentage of primary and secondary schools that have basic drinking water, basic sanitation and hygiene. 	Element 3 core indicators <ul style="list-style-type: none"> Percentage of population using a safely managed drinking water service at home Percentage of population with basic sanitation whose excreta is safely managed 	Element 4 core indicators <ul style="list-style-type: none"> Data will be disaggregated by the four population groups urban/rural; rich/poor; slums/formal urban settlements; disadvantaged groups/general population The difference in rate of change for the disadvantaged groups versus the general population
Desired outcomes/country actions			
<ul style="list-style-type: none"> Water allocation decisions and water withdrawals that take into account both human and Governments integrate open defecation targets within strategies for improving child survival and nutrition and reducing extreme poverty. Governments adopt ambitious targets for improving WASH service levels in order to reduce global burden of WASH related diseases, to improve productivity and economic growth, and to reduce inequalities between population groups Governments adopt ambitious targets in order to reduce global burden of disease from diarrhea and other WASH related diseases, improve child and maternal health, improve nutrition, improve (girls) education outcomes and reduce (gender) inequalities. 			

Questions to be replied:

1. How to establish Public-Private Partnership for investment and to improve services provision in WASH?
2. How to improve and enforce governance to control water thefts?
3. How to convert waste into wealth?
4. How to get the best value from civil society participation in delivering services to the poor?

Group – 2: Water Resources

The target “Improve by (x%) the sustainable use and development of water resources in all countries” aims to promote decisions and actions that take into account both human and environmental water requirements, as well as the need to increase the long-term viability of natural supply systems. Given the diversity in levels of development between countries, this target enables each country to set its own desired progress according to its specific circumstances, responding to the call for the post-2015 development agenda to be adapted to national contexts.

Achieving the target will require actions covering the following three elements:

- Bringing freshwater withdrawals into line with sustainably available water resources; 2) Restoring and maintaining ecosystems to provide water-related services;
- Increasing water productivity for all uses.

As global water withdrawals continue to rise by approximately 10% every 10 years³³ (expected to be much higher in developing regions), it is becoming increasingly critical to bring water withdrawals into line with limited renewable levels of ground and surface water. Complementary measures would be required to balance demands from different users and uses, and to increase the amount of freshwater available for use by increasing storage capacity. Options for the latter range from natural water stores, such as groundwater aquifers, soil water and natural wetlands, to small artificial ponds, tanks and reservoirs behind major dams.

The overall improvement in human well-being in recent years has come with growing problems of habitat fragmentation and loss, biodiversity loss, increases in certain human health risks, and growing levels of water pollution. The Millennium Ecosystems Assessment stressed that the capacity of freshwater ecosystems to provide clean and reliable sources of water is in a state of accelerating decline in many parts of the world³⁵. The urgent need to restore and maintain ecosystems to provide water-related services on which we depend cannot be overstated.

Global water withdrawals of approximately 4,000 km³ annually are shared between agricultural (70%), domestic (10%) and industrial (20%) uses³⁶. Although it is widely known that water is a limited resource, water that is withdrawn often goes to waste through a combination of poor agricultural practices, leakages from supply infrastructure, domestic misuse and inefficient industrial processes. Changes in practices aimed at reducing waste and increasing water productivity are not only essential to secure sustained social and economic development, but can also lead to huge cost savings.

As shown in the Annex, the target and its three related elements are combined with a set of indicators to promote more sustainable use and development of water resources. The indicators build on MDG indicator 7.5, the ‘Proportion of total water resources used’ and extend this to determine if water is being managed in a sustainable way, balancing the social, economic and environmental demands with resource availability. The target is intended to stimulate responsible water resources development both in countries with adequate supplies and those with scarce resources. Given the central role of hydrological basins (surface and groundwater) in the

management of water resources, countries will need to establish mechanisms that are effective at basin level, including those that cover more than one country or state.

Detailed illustrative targets and associated indicators:

Target B: Improve by (x%) the sustainable use and development of water resources in all countries		
Element 1: Bring freshwater withdrawals in line with sustainably available water resources		
Element 2: Restore and maintain ecosystems to provide water-related services		
Element 3: Increase water productivity for all uses		
Element 1 core indicators	Element 2 core indicators	Element 3 core indicators
1. Change in withdrawal-to-availability ratio (change in withdrawals as % of total actual renewable water resources, within sustainable limits)	1. % change in freshwater ecosystem area and condition (indicator of change in ecosystem extent and health, includes brackish ecosystems)	1. Change in agricultural GDP per agricultural withdrawals (agricultural water productivity)
2. % of basins with an allocation framework (balancing demands for all sectors, including the environment, from groundwater and surface water)	2. Threatened Species (Red List) Index and Living Planet Index (for relevant flora and fauna)	2. Change in industrial GDP per industrial withdrawals (industrial water productivity)
3. Storage capacity per capita/% of available water	3. Environmental water stress (based on deviation from natural flow/availability)	3. Change in electricity production per unit of water (energy sector water productivity)
		4. Change in withdrawals for domestic use per capita (domestic water supply and use efficiency)
Desired outcomes/country actions		
<ul style="list-style-type: none"> • Water allocation decisions and water withdrawals that take into account both human and environmental water needs and impacts of water use on freshwater ecosystems, ensuring sustainable withdrawals in the long term. • Ensuring ecosystem health and capacity to be able to supply water of a sufficient amount and quality for human uses. • Countries take actions towards increasing available supply and productivity in the main water use sectors. The productivity and efficiency indicators are used to set targets and inform decision-makers of priority intervention areas. 		

Questions to be replied:

1. How to improve institutions to ensure sustainable withdrawal and uses of surface and ground water?
2. How can we bring in new water pricing structure for agriculture, domestic and industrial water uses to cover upgrading, maintenance and services costs?
3. How to address growing water demand and equity in water accessibility?
4. How to enhance storages?

Group – 3: Water Governance

The target, “all countries strengthen equitable, participatory and accountable water governance”, aims to promote an enabling environment such that institutional structures relevant to water are effective and that its administrative systems function for the benefit of society as a whole. It underpins all the water targets and supports linkages to other development themes.

Achieving the target will require actions covering the following four elements:

1. Implementing integrated approaches to water management at local, basin and national levels including participatory decision-making;
2. Delivering all drinking water supply, sanitation and hygiene services in a progressively affordable, accountable, and financially and environmentally sustainable manner;
3. Ensuring regulatory frameworks are in place for water resources, infrastructure and services, and enhance the performance of responsible public authorities and their water operators
4. Strengthening knowledge transfer and skills development.

Water governance has been defined as “the range of political, social, economic and administrative systems that are in place to develop and manage water resources, and the delivery of water services, at different levels of society”. Its importance for the new development framework has been stressed by many international organizations, including the UN, OECD and World Bank.

The enabling environment, including effective institutions and management instruments, eases the formulation and implementation of relevant policies and plans. It responds directly to the Rio+20 outcome, which called for significant improvement in the implementation of integrated water resources management at all appropriate levels. Only through an integrated approach can the allocation of water resources benefit the many and not the few. Water governance is essential to balance available resources with demands from a multitude of often conflicting water users as well as ensuring critical eco-systems continue to maintain the resource base.

Participatory mechanisms and accountability will help to address disparities in service provision and help policy makers to focus on inequity and its deeper causes. A universal approach is proposed that tackles both inequalities and sustainability (ensuring intergenerational equity), and respects the human right to water and sanitation services.

Appropriate governance measures, such as regulation and enforcement of agreed standards, are essential to ensure overall quality of water bodies over time. Controlling pollution will improve water quality in rivers and lakes as well as support ecosystem functioning by reducing organic and mineral nutrients that deplete the oxygen supply.

Strengthening water governance will require a concerted programme of education, knowledge and skills development, including a focus on youth and women. The collection, analysis, and use of sex-disaggregated data, gender statistics and other social data are necessary to check that meeting the targets removes inequalities. Given the natural diversity in governance systems and levels of development between countries this target enables each country to set its own sub-targets according to its specific circumstances.

The governance indicators would cover aspects relevant to all countries acknowledging different contexts, and extend across all the targets. Measuring progress on governance will require an essentially qualitative analysis of a wide range of measures. This would be done using social science survey methods, such as structured questionnaires and house hold surveys, following up and improving on the survey on water resources submitted to the Rio+20 conference. The indicators would be an integral part of the survey covering the four elements that make up target C, given in the Annex. For example, the indicators would measure progress on strengthening governance issues in relevant institutions, assessing the ability to formulate and implement policies, laws and strategies, and improvements in relation to gender and disadvantaged groups to determine if progress is benefitting all social groups. The indicators would also measure progress on putting in place effective institutions and agreements for national and international basin management.

Detailed illustrative targets and associated indicators:

Target C: All countries strengthen equitable, participatory and accountable water governance	
<p>Element 1: Implement integrated approaches to water management at local, basin and national levels including participatory decision-making</p> <p>Element 2: Deliver all drinking water supply, sanitation and hygiene services in a progressively affordable, accountable, and financially and environmentally sustainable manner</p> <p>Element 3: Ensure regulatory frameworks are in place for water resources, infrastructure and services, and enhance the performance of responsible public authorities and their water operators.</p> <p>Element 4: Strengthen knowledge transfer and skills development.</p>	
Element 1 core indicators:	Element 2 core indicators:
<ol style="list-style-type: none"> 1. Percent of countries implementing IWRM plans 2. Percent of countries with strategic planning and participatory decision-making processes 3. Percent of transboundary basins and aquifers with cooperative management frameworks 4. Percent of countries with national policies supporting integrated disaster risk management (including drought and flood policies), as part of national development plans 5. Proportion of communities which have implemented risk strategies 6. Monitoring and evaluation systems that include surveys on governance issues (building on Rio+20 status report) 	<ol style="list-style-type: none"> 1. Percentage of population using water and sanitation service providers registered with a regulatory authority (disaggregate rural and urban) 2. Percentage of population in the poorest quintile whose financial expenditure on water, sanitation and hygiene is below 3% of national poverty line (disaggregate rural and urban) 3. Ratio of annual revenue to annual expenditure on maintenance (including operating expenditures, capital maintenance, debt servicing) 4. Ratio of annual expenditure on maintenance (including operating expenditures, capital maintenance, debt servicing) to annualized value of capital assets.
Element 3 core indicators:	Element 4 core indicators:
<ol style="list-style-type: none"> 1. Number of countries with regulatory frameworks and enforcement capacity 2. Proportion of responsible water authorities and water operators for which operational performance is measured and reported 	<ol style="list-style-type: none"> 1. No. of institutions using relevant education and training materials in local capacity building programs. 2. No. of capacity building networks using multidisciplinary skills of competent members to scale up capacity building and actively support implementation programs. 3. No. of countries with knowledge management systems in place that ensure access to the best of international and local knowledge and measure the effectiveness of capacity building services through locally developed indicators and monitoring systems.
Desired outcomes/country actions	
<ul style="list-style-type: none"> • Countries have an enabling environment established that supports an integrated approach to water resources management and cohesive policies across the range of water users (sectors) and at different administrative levels (regional, national, basin, local). • Water and sanitation are embedded within National Development Plans and budgets. 	

Questions to be replied:

1. How to get consensus to formulate National Water Policy?
2. How to include stringent water governance laws in the National Water Policy to ensure equity, control extraction and pollution?
3. How to effectively implement National Water Policy?

4. How best to strengthen the coordination and improve capacity so the water sector can deliver the targets?

Group 4: Managing wastewater and pollution to protect water quality

In addition to adequate volumes of water, social and economic development is also dependent on good water quality. Human activity is the main cause of pollution that makes water dangerous, expensive or even unusable. This part of the proposals concentrates on the need to limit pollution, manage wastewater and protect and improve the quality of water thus enabling needs to be met safely.

The proposed target reflects the growing urgency for effective wastewater management and prevention of water-related pollution. Managing the human and environmental impacts of poor wastewater management and increasing the re-use of wastewater for productive purposes has significant public health, environmental and economic benefits. The Rio+20 outcome document stressed the need to adopt measures to ‘significantly reduce water pollution and increase water quality, (and) significantly improve wastewater treatment’. The health and poverty reduction benefits are linked to, and significantly enhance and reinforce, those from targets A and B, particularly regarding water quality and reducing waterborne and water-washed diseases.

While sanitation, wastewater management and water pollution are often closely linked, the structuring of this target into three interrelated components highlights the importance of taking a holistic and comprehensive approach to wastewater.

To date, these aspects of water management have received less attention than they need, consequently in many places the action will start from a very low base. For this reason, the level of ambition has been limited and should be considered a minimum starting point. Many countries will be in a position to take a more ambitious approach.

The full wording of the target is: Reduce wastewater pollution and improve water quality by reducing untreated domestic and industrial wastewater by (x%); increasing wastewater reused safely by (y%); and reducing nutrient pollution by (z%) to maximize water resource availability and improve water quality.

Achieving the target will require actions covering the following three elements:

1. Element 1: Reducing untreated domestic and industrial wastewater (including point source agricultural) by (X%);
2. Element 2: Increasing wastewater reused safely by (Z%);
3. Element 3: Reducing nutrient pollution by (Y%)

The first element of the target, wastewater treatment, seeks to stimulate the management of the wastewater component of the water cycle to ensure that wastewater and the pollutants in it are contained and collected safely and are then treated, so that when the used water is discharged it does not contaminate its receiving water body. The target has two components that correspond to the most prevalent situations. The first is municipal wastewater, which is usually a mixture of domestic and industrial wastewater. The second is the wastewater created by identifiable and contained sites in industry and agriculture and usually referred to as “point sources”.

The second element is to ensure that used water can be used for other purposes and is recognized as being a valuable water resource.

The third element of the target, reducing nutrient pollution, ensures that the overall quality of water bodies improves over time as a result of effective wastewater management, including from “diffuse or non-point” agricultural, industrial and domestic sources. Additional and important health benefits also result from positive impacts on the environment. These include improved water quality in rivers and lakes since decreased eutrophication of freshwater and coastal areas improves ecosystem functioning in these areas and, by extension, provides improvements in ecosystem services that support beneficial social and economic activities.

There is growing recognition that the management of domestic wastewater - especially in the urban setting - is crucial to realize the health and environmental gains possible through providing basic sanitation facilities. Protection of water quality from all sources of untreated wastewater, be they domestic, industrial or agricultural, is a prerequisite for ensuring, sustainable development, poverty alleviation, job creation, human and ecosystem health and people’s wellbeing. This concern and recognition was very clearly expressed at Rio+20 and requires countries to act.

Indicators are proposed that promote improved wastewater management and pollution prevention by addressing: (i) public health protection (ii) protection of the environment (iii) promote the reuse of wastewater and sludge, (iv) support the multiple opportunities of water, nutrient and energy recovery. It is suggested that the indicators are prioritized to address: a) pollution from urban wastewater that comprises both domestic and industrial components, b) point source pollution from large scale industrial and agricultural activities, and c) diffuse pollution, primarily from agriculture. The indicators are designed to help the progressive realization of improvements and to be appropriate to the local context and to the nature of the receiving waters, while avoiding the creation of perverse incentives or objectives that may not be in the national best interest.

As with the other targets, this target both supports and is supported by the other components of the water goal. For example, it aims to ensure water quality by collecting and treating the pollution arising from sanitation and hygiene, but can only do this if the appropriate governance systems are in place.

Detailed illustrative targets and associated indicators:

<p>D: Reduce wastewater pollution and improve water quality by reducing untreated domestic and industrial wastewater by (x%); increasing wastewater reused safely by (y%); and reducing nutrient pollution by (z%) to maximize water resource availability and improve water quality.</p>	
<p>Element 1: Reducing untreated domestic and industrial wastewater (including point source agricultural) by (X%); Element 2: Increasing wastewater reused safely by (Z%); Element 3: Reducing nutrient pollution by (Y%)</p>	
<p>Proposed core indicators</p> <ol style="list-style-type: none"> 1. Proportion of the population for whom all domestic wastewater is treated to national standards in either collective or individual facilities. 2. Proportion of industrial (and point source agricultural) wastewater flows not collected in public systems that is treated to national standards. 3. Proportion of the flows of treated municipal wastewater that are directly and safely reused 4. Proportion of the flows discharged by industrial wastewater treatment plants that are safely reused. <i>(This indicator does not include water directly re-used without leaving the factory)</i> 5. Proportion of receiving water bodies meeting water quality standards (nitrogen & phosphorous as a minimum) 	<p>Proposed Supporting indicators</p> <ol style="list-style-type: none"> 1. Proportion of the population connected to collective sewers or with on-site storage of all domestic wastewaters

Desired outcomes/country actions

- Stimulate action in countries to ensure the collection and treatment of used water and related pollutants arising from domestic water users and from ‘point sources’ of industry and agriculture so as to protect human health, the environment and ecosystems.
- Countries take actions towards increasing the amounts of used water that are re-used or recycled for beneficial purposes, thus contributing to satisfy sustainably all water needs
- Countries put in place policies and regulations that lead to prevention of pollution and a reduction in the negative impacts of diffuse pollution, starting with, but not limited to the priority to reduce nitrogen and phosphorous pollution.

Questions to be replied:

1. How to convert waste into wealth?
2. How to follow principle of 3R: Reduce – Recycle – Reuse?
3. How to bring in private sector into the business of solid and liquid waste collection, recycling and reselling?
4. How to minimize and control pollution in all sub sectors?

Group – 5: Water-related Disasters

Floods, droughts and windstorms are the most frequently occurring natural disaster events and account for almost 90% of the 1,000 most disastrous events since 1990. The number of people affected and estimated damages from water-related disasters continue to increase³⁸ and are a constant feature of news reports. Governments are obliged to take disaster risk reduction measures to protect, respect and fulfil the human rights guaranteed by international human rights instruments. The Rio+20 outcome document highlights that they also pose huge economic risks with costs estimated at USD 1 trillion from 2000 to 2010. Climate change is anticipated to increase the frequency of heavy precipitation over many areas of the world, and to intensify droughts in some seasons and areas. Water management and development strategies have a pivotal role in reducing the exposure and vulnerability of people and assets to water-related extremes. The proposed target is thus closely linked to the water resources management targets discussed above, in particular the governance target.

The target is formulated as “Reduce mortality by x% and economic loss by y% from water-related disasters”. This is accompanied by the following elements at national level:

1. Increased knowledge and understanding about communities at risk from water-related disasters, especially those likely to arise from climate change;
2. Adoption of integrated disaster risk management, including an appropriate mix of structural and nonstructural approaches, to reduce mortality and economic losses from water-related disasters;
3. Adoption and implementation by countries of monitoring and people-centered early warning systems for communities most at risk from water-related disasters; and
4. Application of an end-to-end preparedness approach to water-related disaster management which sees the needs of user communities being met, to the last mile.

The proposed target elements focus on actions to build resilience in order to reduce losses of human life and economic damage. The target includes risks from a wide span of water-related disasters, including natural hazards of storms, floods, and drought, as well as anthropogenic hazards such as releases of hazardous materials and other forms of serious water pollution.

The target builds on abundant evidence that planning, preparedness and coordinated responses greatly improve the resilience of communities to natural hazards and should thus form the basis of cost-effective investment strategies to meet the targets. To avoid preventable losses associated with

disasters, the focus of communities, governments and development partners should be on shifting resources from disaster response and relief to enhanced preparedness. The proposed targets follow proven disaster risk reduction strategies endorsed by the internationally agreed Hyogo Framework for Action. The keynotes of the proposed approach are community-level participation and preparedness, with facilitation and support from national policies and basin-wide cooperation

Four core indicators are proposed; firstly, mortality due to water-related disasters, broken down by vulnerable groups and by gender; secondly, the estimate of direct economic losses from water-related disasters, as a percentage of GDP; thirdly, the proportion of at-risk communities with effective people-centred early warning systems for water-related disasters; and finally, the percentage of all countries that have assessed their risk of water-related disasters and have set up plans and strategies for integrated disaster risk management, including monitoring systems and preparedness. Links between these elements and a number of the other water targets can readily be drawn. For example, the impact of serious drought on plans to expand drinking water coverage, or the effect of serious flooding on the spread of water contaminants such as raw sewage.

Amongst other things, use of these indicators will require modeling of demographic changes and remote-sensing to determine land-use and estimate exposure to water related hazards. Agreement will need to be reached on a common system for classifying the severity of water-related hazards, such as floods. Indicators for drought risk will need to consider socio-economic as well as environmental factors, and disaggregate the relative weights of these factors. Appropriate baselines (e.g. on a counterfactual level of mortality) will need to be developed³⁹. Generating these and other kinds of data will pose statistical challenges in the early years of monitoring progress against the goal.

Detailed illustrative targets and associated indicators:

<p>Target E: Reduce mortality by (x%) and economic loss by (y%) from natural and human-induced water-related disasters</p>
<p>Element 1: Increased knowledge and understanding of nations with respect to communities at risk to water-related disasters, especially in a changing climate;</p> <p>Element 2: Adoption of integrated disaster risk management, including an appropriate mix of structural and non-structural approaches, to reduce mortality and economic losses for water-related disasters;</p> <p>Element 3: Adoption and implementation by nations of monitoring and people-centered early warning systems for communities at most risk to water-related disasters; and</p> <p>Element 4: Application of an end-to-end preparedness approach to water-related disaster management which sees the needs of user communities being met, to the last mile.</p>
<p>Proposed core indicators</p> <ol style="list-style-type: none"> 1. Mortality due to water-related disasters and mortality within vulnerable groups and by gender 2. Direct economic losses due to water-related disasters, as percentage of GDP 3. Proportion of at-risk communities with effective people-centred early warning systems for water-related disasters. 4. Proportion of nations that have assessed their risk of water-related disaster and that have established plans and strategies for integrated disaster risk management, including monitoring systems and preparedness.
<p>Supporting indicators</p> <ul style="list-style-type: none"> ▪ Number of total victims per disaster (persons) ▪ Gender of victims per disaster (male/female) ▪ Age of victims per disaster (year) ▪ Income of victims per disaster (USD) ▪ Direct economic losses per disaster (USD)

Desired outcomes/country actions

- At-risk communities implement hazard-specific early warning systems and evaluate effectiveness of their systems with respect to lead time and accuracy of forecasts and efficiency of dissemination.
- Countries understand trends in disaster impacts and are able to make informed decisions as to investments in disaster risk mitigation and preparedness. Leaders are aware of the impact of disasters to vulnerable groups and are able to tailor policies to address the specific root causes of vulnerability in their country.
- Economic losses reduced and livelihoods improved for vulnerable communities

Questions to be replied:

1. How to put in place effective disaster forecasting and management, and post-disaster management plan?
2. How to prepare a resilient society to combat drought and floods?
3. How to reduce mortality and economic losses?

Annex 4: Islamabad Programme

National Consultation on Water in Post-2015 Development Agenda

P-Block, Pak Secretariat, Islamabad – 27 February 2014

Inaugural Session	Chief Guest: Prof. Ahsan Iqbal, Federal Minister, Planning and Development, GOP	
1030 – 1035	Recitation from Holy Quran	
1035 – 1045	Welcome and Introduction to the National Consultation	Mr. Naseer Ahmad Gillani
1045 – 1100	Comments by Heads of UN agencies	
1100 – 1130	Inaugural Address by the Chief Guest	
1130 – 1145	Tea/Coffee Break	
Technical Session-1	Session Chair : Mr. Hasan Nawaz Tarar, Secretary, Planning and Development, GOP	
1145 – 1200	Access to safe drinking water, sanitation and hygiene	Syed Ayub Qutub
1200 – 1215	Sustainable use and development of water resources in all countries	Mr. Khalid Mohtadullah
1215 – 1230	Strengthen equitable, participatory and accountable water governance	Mr. Shams ul Mulk
1230 – 1245	Untreated wastewater, nutrient pollution and wastewater reuse	Dr. Sher Jamal
1245 – 1300	Mortality and economic loss from natural and human-induced water-related disasters	Mr. Ahmad Kamal
1300 - 1330	Wrap up by the Chief Guest	
1330 – 1430	Lunch and Prayer Break	
Technical Session2	Session Chair: Mr. Saif Ullah Chattha, Secretary, Ministry of Water and Power, GOP	
1430 – 1440	Overall water situation in Pakistan	Chairman IRSA
1440 – 1550	Flood Forecasting situation in Pakistan	Mr. Hasnain Afzal, Member (WAPDA)
1450 – 1500	Outcomes of the five targets	Dr. Pervaiz Amir
1500 – 1530	Open discussions	
1530 – 1545	Concluding Address by Session Chair	
1545 – 1600	Tea/Coffee Break	
Concluding Session	Session Chair: Raja Hasan Abbas, Secretary, Climate Change Division, GOP	

