The Humanitarian Health Cluster Response to the Pakistan Floods
World Health Organization, Health Cluster Lead Agency
14 September 2010

1. Needs Assessment

(a) Assessment of Health Needs

The ongoing floods in Pakistan have resulted in a critical need for health services for the affected population which even prior to the crisis had limited access to services. The inadequate health infrastructure, coupled with large scale population displacement forced by the floods means an increased risk of diseases and disabilities. A priority is to ensure implementation of the essential package of health services, supported by disease surveillance.

Large numbers of people are being exposed to public health risks exacerbated by inadequate sanitation, compromised safe water supply, potential food shortages and malnutrition. More than 21 million Pakistanis have been affected, out of which 8 million are in need of immediate humanitarian assistance-including an estimated 1.5 million women of childbearing age. The pre-existing high rate of chronic malnutrition in children (30-35% are stunted), combined with food insecurity and increased risk of disease, threatens to substantially increase the numbers of children with acute malnutrition.

Communicable diseases are a leading cause of morbidity and mortality in flood affected areas, including acute watery diarrhoea/cholera, acute respiratory illnesses, malaria and skin disease. Pakistan has a high burden of infectious diseases, but it is the poor and marginalized populations living in unsafe dilapidated living conditions in the IDP camps, in makeshift shelters and flood affected areas who are disproportionately affected.

Maternal, infant and child mortality are already high (maternal mortality: 350/100,000 live births; infant (<1 year) mortality: 72/1000 live births; child (<5 years) mortality: 89/1000 live births) and disruption in primary and secondary level health services could increase deaths. An estimated 400,000 women in the affected population are pregnant, with 45,000 deliveries per month, many of which will be in an unsafe environment without access to a skilled birth attendant, an adequate referral system, and emergency obstetric care. About 4,500 women will need access to emergency obstetric services.

Patients with chronic diseases, such as TB, HIV, diabetes and cardiovascular diseases, face treatment interruption with consequential health risks. One in three adults over the age of 45 years suffers from high blood pressure; and 10% have diabetes. Following a disaster of this magnitude and severity, mental health problems are expected to increase. HIV/AIDS is a significant problem, with a concentrated epidemic among injecting drug users. HIV prevalence in this group is over 20%, reaching as high as 30% in Hyderabad and 50% in Sargodha. Efforts to maintain and expand services for these groups are needed.

(b) Assessment of Health Systems

Many health facilities have been damaged or destroyed. By early September, assessments of the four flood-affected provinces revealed that 436 of the 2957 health facilities surveyed were severely damaged or destroyed. Stocks of medicines, equipment and furniture in many facilities have also been destroyed or are unusable. Assessments are ongoing, so these numbers will increase. There is an urgent need to restore the functionality of health facilities, and to strengthen the local health system to cope with the influx of IDPs, through temporary health facilities or mobile clinics, and to rapidly expand the number of diarrhea treatment centers. It is essential to complete the assessment of damage to the health infrastructure and functionality of the health care delivery systems and to propose innovative strategies for health care delivery.

Adequate health information to understand the evolution of health problems and access to remaining services is still lacking as most of the affected areas are inaccessible due to the mass destruction of the infrastructure and means of communications.
The health workforce has been affected by the flooding. At least 35,000 Lady Health Workers (LHW) have been displaced. These skilled workers should be redeployed as soon as possible, either in temporary health facilities established for the camps, or added to the staff of the health facilities that are still functional but serving the increased patient load due to the internal displacement.

Management capacity of the local health systems in the flood-affected districts has virtually collapsed in the affected districts. The district health authorities are currently not able to cope with the impact of the disaster. Identifying the needs of the affected population, and managing the many national and international humanitarian health NGOs supporting the populations in the affected districts requires strengthening of the local authorities' governance role to avoid uncoordinated interventions that may undermine the future recovery of the health system.

Access to essential services was limited prior to the crisis. Approximately 80% of the total health expenditure is from direct out of pocket payment and there is no functional social security system (two thirds of consultations take place in private facilities (mainly in urban areas). The affected population will have lost livelihoods and be less able to pay for health services in a country that relies mainly on such out of pocket payments for the financing of health services. Solutions will need to be sought with partners to remove financial barriers to enable access to services for at least as long as the humanitarian phase lasts.

Improving access to health services for the population must be context specific. Broadly, the population in affected districts falls into three categories: displaced; directly affected; indirectly affected. Displaced populations reside in different sites such as local schools, structured or spontaneous camps or out in the open. There are also those hosted by kin/friends from unaffected areas. There is wide variation in the proportions of affected and/or displaced population across districts. Displacement exposes people to new health risks: food insecurity, poor quality of water and sanitation, overcrowding in temporary settlements, exposure to infectious agents and vectors for which they lack immunity etc. IDPs and refugees are also more vulnerable, having lost employment, assets and social networks and having become, in some cases, completely dependent on aid.

2. Health Cluster Response in the Relief Phase

The current crisis unfolding in flood affected areas is the latest in a series of major disasters that has occurred in Pakistan in the past 5 years affecting millions of people and requiring a significant response capacity from the Health Cluster.

(a) General Objective

The objective of the humanitarian health response supported by the health cluster is to reduce the burden of avoidable death and illness through life-saving interventions among flood affected populations of Pakistan.

(b) Specific Objectives

Working closely with the MOH and health cluster partners, the strategic responses are directed towards achieving the following specific objectives:

1. Ensure access and reduce financial barriers to basic health care and ensure rehabilitation/ re-establishment of primary and secondary health services including: treatment of injuries, critical chronic treatments, mental health and psycho-social support, HIV/AIDS, acute malnutrition and referral systems for life threatening conditions.
2. Provide sexual and reproductive health services according to MISP standard as part of the essential package of health services.
3. Prevent, control and provide a public health response to communicable disease outbreaks.
4. Ensure water quality control, water-borne and vector disease control, sanitation and hygiene promotion, including prevention messages for proper health seeking behavior during patients consultations
5. Ensure development of national and local health emergency management capacities, including risk assessments, disaster risk reduction, emergency preparedness and safer hospitals, integrated in the early recovery and reconstruction process
(c) Health Deliverables

The key expected deliverables by end-October 2010 include:

- Scaling up of the early warning system of epidemic prone diseases in all the affected districts
- 8 million people covered by basic emergency health services, including maternal and newborn health services (delivered through community-based services, mobile teams, static units and referral facilities);
- Provision of essential medicines and supplies including for life threatening communicable diseases to cover approximately 8 million people;
- 68 Diarrhoea Treatment Centres functioning in 41 districts providing 2,000 beds/night;
- 3 million under five children vaccinated against measles and polio, and provided with vitamin A through emergency mass vaccination campaigns; and 1.2 million children under five reached with child survival interventions through the Maternal and Child Days campaign;
- Delivery of preventive and curative malaria activities in all the endemic areas in the affected districts.

(d) Inter-Cluster Approach

Members of the Health, Nutrition, WASH and Food Clusters came together to develop a joint strategy to ensure a more integrated, effective and timely survival response in priority flood affected districts. The joint strategy highlights the essential and prioritized life-saving activities from each of the four clusters’ strategies that will need to be implemented in a coordinated manner, and identifies principles for coordination and steps to be taken to strengthen joint planning across these clusters.

The overall objective of the strategy is to save lives and to reduce morbidity among flood-affected populations through the provision of food, life saving preventive and curative health and nutrition services, safe drinking water, sanitation and hygiene practices, for both the displaced population as well in the early phase of the return, when the vulnerabilities will remain extremely high and the availability of social services and water supply will still be limited.

An integrated approach is essential to address the factors that contribute to the main mortality risks (acute diarrhoea, acute respiratory infections, malaria, measles, malnutrition, and maternal and neo-natal mortality/morbidity), with a very strong component of community based interventions. Implementation of the strategy will be planned at the sub-national level to ensure integrated delivery.

3. Health Recovery Strategy

(a) From humanitarian response towards integrated recovery and rehabilitation

In the aftermath of the flood, interventions were aiming at saving lives through a range of activities planned in the Pakistan Initial Floods Emergency Response Plan (PIFERP) with 57% percent of health sector requirements funded (US$32.09 million): (1) Support to health situation and public health threats monitoring including the diseased early warning system (DEWS); (2) provision of essential primary and critical secondary health care with fixed and mobile strategies, mass immunization (measles and poliomyelitis polio), and response to outbreaks including setting up of Diarrhoea Treatment Centres and implementation of environmental health interventions; (3) support to MoH for effective coordination including logistic and technical support with 5 hubs set up in the four provinces. The revised PIFERP (an additional US$ 203,1 million) would be requested for 12 months including the completion of humanitarian intervention and early recovery components (for displaced and returnees population).

(b) Needs in recovery phase

Needs would be identified and streamlined taking into account the pre-crisis inequality and inequity in health facility coverage, pre-existing health situation, the pre and post-crisis situation of the health system (different components), the actual public health threats due to the flood, and also taking into account on modality return pattern.
(c) Strategy to address the needs

The strategy will be guided by key principles including equitable access to quality essential health care by affected and vulnerable population, with high performance and accountability.

A detailed District Master Plan (for each district and province) for the recovery is required with participation and commitment of federal, provincial and district health authorities with the NDMA, PDMA and humanitarian cluster lead agencies. The recovery strategy will have a short term (taking into account plan developed by humanitarian partners) and a long term components. The short term (early recovery: up to 12 months) aiming at addressing the urgent needs for displaced population and returnees, by sustaining and improving the functionality of health systems for essential care provision with alternative interventions (mobile team, mass vaccination, minimal rehabilitation etc). These activities would be scaled down for a full recovery strategy at medium and long term (12-36 months). Prioritization criteria should be a minimal coverage, based on a service availability mapping, for displaced or returnees of essential health services package (PHC, EmONC), response to disease outbreak), taking into account other sectoral recovery for care provision and accessibility (water, electricity, roads, etc).

A comprehensive approach aiming at revitalizing the all health system (governance, human resource re-deployment, supply chain and medical products, health information, financing) should be taken with support from usual health technical partners (UN and other Agencies).

Finally the recovery of the health system should take into account the disaster preparedness and risk reduction components: a comprehensive disaster preparedness plan that includes risks monitoring system; capacity building, contingency plans with a provisional budget, supported by an institutional framework and standard operating procedures.
Annex: Approaches and Activities

Objective 1: Preserve and restore access and reduce financial barriers to basic health care and ensure rehabilitation/ re-establishment of primary and secondary health services (including treatment of injuries, critical chronic treatments, mental health and psycho-social support, HIV/AIDS, acute malnutrition and referral systems of life threatening conditions)

A flexible approach will be adopted to provide essential health services to the affected population through existing health facilities, establishment of health outposts, development of mobile medical teams and ensuring effective referral support. An important aspect of improving access will be outsourcing the provision of health care to international and national non-governmental organizations that are currently engaged in providing health services in the flood affected districts.

In recent years, health services delivery at Basic Health Units has been outsourced to government-led People’s Public Health Initiative (PPHI). An essential package or set of health services had been developed earlier by WHO and the Ministry of Health. The package is a balanced mix of health promotion, preventative and essential curative health services. The Inter Agency Emergency Health Kit which is comprised of essential medicines and supplies shall be provided in adequate quantities and should be used at all service delivery points and by mobile teams to ensure efficient and effective delivery. It is essential that the delivery of medicines/supplies to PPHI be agreed with the Department of Health.

The essential package of services will include treatment of common ailments such as diarrhoeal diseases; acute respiratory infections; skin infections; eye and ear infections; integrated maternal, neonatal and child health services; provision of immunization services; nutrition and growth monitoring; continuing prevention and care for people infected and affected by HIV including the provision of ART to those already on treatment, prevention and treatment of malaria, dengue fever and tuberculosis; mental health and psychosocial support; health promotion and education. Continuation of critical treatment of priority chronic diseases will be ensured by active tracing of patients and supply of required medicines. These include TB, HIV, diabetes, CVD. In addition, minor surgical procedures, laboratory and X-ray facilities, and pharmacies will be provided at selected health facilities.

The following means and options for service delivery are being proposed:

- **Removal of financial barriers during the humanitarian phase of the response**
- **Health outposts and service delivery points.** These will be established to provide services to the displaced population, especially those living in schools and camps. Where needed, health houses of Lady Health Workers will also be used as health outposts;
- **Mobile medical teams.** To support basic services delivery, mobile healthcare provision will be largely attached to vertical programmes or supporting NGOs. Mobile health care would be considered as a viable delivery option especially in the areas where a number of facilities have been damaged. These will be launched to access, as far as possible, difficult to reach populations in various districts where existing health facilities have been severely damaged. Each mobile team will comprise four members: a public health specialist, a medical doctor (preferably female), surveillance and environmental health experts, these should ideally be attached to a static center where they can report on a weekly basis
- **Static health facilities.** These include basic health units, rural health facilities and primary care clinics operated by NGOs. Their locations will be chosen on the basis of population densities to ensure highest geographical access possible. Existing facilities with minor damage will be repaired and made functional. Where facilities have had major damage, temporary facilities will be established in their direct vicinity, awaiting appropriate reconstruction in a later phase. These will be strengthened through provision of essential medicines and supplies for efficient provision of health services;
- **Referral support.** District Headquarters Hospitals (DHQ) shall be the hospitals for providing referral services to patients referred from primary care service delivery points. For this purpose, these hospitals will be provided with the necessary resources to effectively perform their referral function. In certain districts, DHQ hospitals have been badly damaged and made non functional [Nowshera, Jacobabad]. Effective measures are being taken to make them functional as soon as possible and, in the interim, alternative hospitals in the same or neighboring districts will be used to provide referral support. In addition, the tertiary hospitals should be prepared to receive complicated cases once roads open and accessibility improves.
Essential related activities include:

- Basic emergency rehabilitation of health facilities, including water supply and storage facilities and/or setting up of ad hoc temporary health facilities to allow immediate re-launching of essential primary health care services. This includes activities within the Minimum Initial Service Package (MISP) for reproductive health and the establishment of diarrhea treatment units, tracing patients on chronic treatment and ensuring continuation of services;
- Removal of financial barriers to access services for at least as long as the humanitarian phase lasts;
- Establishment of mobile clinics for areas with no access to health facilities;
- Support for referral to secondary health services of patients suffering life-threatening conditions and for emergency obstetric and newborn care;
- Provision of resources for referral system (communication equipment, transport such as ambulances, boats, bicycles, maintenance and resources for referral centre, etc.);
- Procurement and provision of essential medicines and supplies including those needed for life-threatening chronic diseases, and the supply of essential equipment and cold chain to health facilities, based on national standards;
- Support for management of complicated severe acute malnutrition and contribution to nutritional assessments and surveillance;
- Provision of psycho-social and mental health support;
- Prevent HIV transmission in health-care settings through adoption of standard precautions in all health related activities and the availability of safe blood transfusions;
- Ensuring that key populations at higher risk of exposure to HIV have access to HIV prevention; identify people receiving ART through existing health-care records or patient cards, if available, and ensuring that known injecting drug users have access to clean injecting equipment;
- Ensuring harmonization of humanitarian interventions to national standards and policies where possible or, temporarily, adapting these where necessary due to the changed circumstances;
- Deploying displaced health workers, and establishing standardized incentives to national health workers to avoid distortions of salaries;
- Apply or adapt the National Health Information System to request partners to report on essential health information required to monitor and evaluate progress and effectiveness of interventions. Seek innovative solutions to encourage adequate reporting coverage from all health partners;
- Review the existing health financing mechanisms and work with all stakeholders to reduce financial and other barriers to access essential services beyond the humanitarian phase;
- Support district level data management and analysis;
- After six months, review the district health plans, adapt them to the changed circumstances, including the mapping of health facilities and priorities for rehabilitation and reconstruction.

Objective 2: Strategies for provision of sexual and reproductive health services according to MISP standard as part of basic health care

Of the 20 million (approx) population affected, it is expected that about 412,800 women would be pregnant at any given time among this population. There will be approximately 45,000 deliveries per month, of which some 4,500 are expected to have complications requiring access to emergency obstetric services.

In previous crises in Pakistan, concerns were raised about lack of access for women and girls to health care. This was attributed to gender dynamics and cultural restrictions on mixing of men and women. In the current crisis, women who are separated from male family members and those who have lost culturally appropriate clothing are among those who may be at increased risk due to not being able to access health services.

It is important to ensure the provision of emergency essential sexual and reproductive health (SRH) services (including at least the minimum package of emergency services as outlined in the Minimum Initial Service Package (MISP). The MISP outlines priority actions to be taken in the SRH area to reduce morbidity and mortality.

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1 This calculation is based on national CBR of 30 (Unicef 2008 http://www.unicef.org/infobycountry/pakistan_pakistan_statistics.html) which implies that 2.4% of the population can be expected to be pregnant at a given time. (see table p.77 IAFM 2010 www.iawg.net)
Provision of the critical life saving interventions outlined in the MISP requires the following components:

- Ensuring safe access of women and girls to health care (not just for reproductive health);
- Supporting appropriate activation of Lady Health Worker cadre among the displaced population to reach women and children in their shelters with basic supplies including contraceptive materials; to treat minor ailments and injuries; to engage in health promotion activities with a focus on mother and child health and to serve as links between the health system and the affected population including through identification and referral of cases\(^2\) (It is estimated that 35,000 LHWs have been displaced out of 100,000 LHW in the country)
- Ensuring infection control measures are in place in health facilities including ensuring availability to health providers of materials for standard precautions for infection control and ensuring availability of safe blood supply and safe blood transfusion practice, including the provision of essential reproductive health kits
- Ensuring maternal and newborn care which requires the availability of the following services for 24 hrs a day: skilled care during childbirth for clean & safe normal deliveries; basic emergency obstetric care (BEmOC).
- Develop strategies to ensure appropriated measures for comprehensive health services deliveries.
- Ensuring adequate clinical management of rape (24 hr/day service) that includes trained health staff (including women), clear clinical management protocol, private examination space, documentation and treatment of injuries, presumptive treatment of sexually transmitted infections, emergency contraception, post-exposure prophylaxis (PEP) for HIV, collection of medico-legal evidence as appropriate, referral of complicated cases to higher levels of health care and referral to other services (psychosocial, legal, protection); Ensuring availability of prevention and treatment for sexually transmitted infections (STI) that includes making condoms available at no cost, provision of syndromic treatment for STI, capacity for testing and treatment of prevalent STI as soon as possible and the provision of antiretroviral drugs for HIV patients already on anti retroviral treatment and for those on PMTCT regiment;
- While family planning is not a component of the MISP, contraceptives to meet demand should be provided even in the emergency phase. This can be done through Lady Health Workers (as is the established practice in Pakistan) as well as through health facilities as part of post-partum care.

**Objective 3: Strategies for prevention, control and provision of a public health response to communicable disease outbreaks**

In anticipation of an immediate impact of the widespread emergence and transmission of infectious diseases, the Disease Early Warning System [DEWS] in Pakistan has been geared up in the flood affected areas. As of September 1\(^{st}\), the DEWS scaled up to 932 fixed health facilities and 526 mobile medical outreach sites reporting regularly, but only from 47 of the 76 affected districts. On 29th August alone it reported a total of 264,329 consultations. This is a remarkable achievement which shows also a rapid increase in the utilization of the health service delivery in the affected areas.

Priority health interventions need to be directed towards diseases that are endemic and particularly those which can potentially cause excess numbers of mortality and morbidity within a short span of time. A crucial initial step for a public health emergency response is to establish adequate disease surveillance systems that take into account the inherent disruption of the public health infrastructure of the affected country. At community and district level relevant information should be provided for proper and timely health seeking behavior on priority diseases such as waterborne, vector-borne, and airborne communicable diseases, and on how to prevent waterborne diseases through making drinking water safe, and to adhere to proper hygiene behavior and sanitation practices.

Outbreaks can be prevented, provided the disease surveillance system can detect a disease threat early enough so that it triggers prompt and appropriate response. In Pakistan, the disease early warning system (DEWS) set up after the massive earthquake in 2005, is functioning well and public health capacities have been built on risk analysis, threat detection and response to any public health emergency using surveillance data from the DEWS.

Due to the ongoing situation in the aftermath of the flooding and expected heavy rains in many parts of the country, the emergency situation is anticipated to worsen. Floods may indirectly lead to an increase in vector-borne diseases through the expansion in the number and range of vector habitats. Standing water caused by heavy rainfall or overflow of rivers can act as breeding sites for mosquitoes

\(^2\) [http://www.emro.who.int/pakistan/programmes_phc.htm](http://www.emro.who.int/pakistan/programmes_phc.htm)
and enhance the potential for exposure of the disaster-affected population and emergency workers to infections such as dengue, and malaria.

In Pakistan, malaria is endemic, the second most frequently clinically suspected disease entity, with almost 4.5 million probable cases reported from district health systems in 2008 alone. Due to the stress it places on the national health, it constitutes a national health priority. The parasite and vectors are showing resistance to common antimalarial drugs and insecticides, putting Pakistan in a group of high burden countries of WHO’s Eastern Mediterranean Region. The provinces of Baluchistan, Sindh, Khyber Pakhtunkhwa and the Federally Administered Tribal Areas have the highest malaria burden. Districts and agencies bordering Afghanistan and the Islamic Republic of Iran account for 37% of the malaria burden with an annual parasite incidence (API) exceeding 4.5/1000 population per year.

Essential related activities include:
- Mass communication and social mobilization to prevent disease outbreaks including provision of adapted healthcare education messages targeting priority communicable diseases as well as sexual and reproductive healthcare or any other relevant diseases.
- Ensuring provision of Oral Rehydration Salts and access to safe drinking water for the household during home based care and during transportation to a healthcare facility.
- Epidemiological surveillance and disease control through the Disease Early Warning System (DEWS)
- Strengthening case management:
- Establishing or strengthening systems to enable monitoring and ensuring water quality and environmental health:
- Supporting malaria prevention and vector control measures;
- Supporting emergency mass vaccination campaigns (such as measles, polio, etc).
- Working closely together with, and building capacity of district and provincial health authorities in maintaining DEWS after the humanitarian phase.

Objective 4: Strategies to ensure safe water, sanitation and hygiene promotion

For effective prevention of the above mentioned communicable diseases, health promotion actions will offer the best opportunities. Here sectoral engagement and coordinated action towards ensuring safe drinking water, effective sanitation, actions reducing environmental factors and enhancing community capacities to improve their coping skills will prove crucial. Health promotion actions go beyond education, communication and behavior change but aims at providing supportive environment in terms of legislation, community engagement and sectoral action to improve health and prevent the occurrence of diseases.

As noted above, there are essential strategies needed to ensure environmental health in delivery of specific services.

Water and environmental sanitation will be critical to the overall response and containment of outbreaks. Acute Watery Diarrhoea (AWD) is among the problems that represent major human health risks in flood affected areas. The receding waters have left dead animal carcasses and debris around the living human population posing potential threats of disease outbreaks due to different vectors e.g., flies, mosquitoes, mice, etc. The Water and Sanitation [WASH] Emergency Cluster has been instrumental in providing water tankers, emergency latrines, hygiene kits, jerry cans, plastic buckets, water purification tablets, soaps etc.

The flood affected areas environmental health response strategy is aimed at reducing avoidable mortality, morbidity and for restoring the delivery of an equitable access to safe drinking water, adequate sanitation and hygienic conditions as quickly as possible in a sustainable manner. It is directed at ensuring evidence based actions, gap filling and sound coordination.

The quality of drinking water is closely related to outbreaks of water-borne diseases. In the context of flood affected communities, Acute Watery Diarrhoea (AWD) is the major problem since it is endemic in Pakistan and the poor environmental conditions in flood affecting areas represent a major risk-vulnerability mix.

The Environmental Health response strategy aims to direct the focus and effort of the government, WASH and health cluster partners on the humanitarian response interventions for the flood affected population. It aims for active participation in the implementation of the WASH and health sector
response, relief, early recovery and rehabilitation operational needs as well as in the longer term health sector reconstruction process. This response strategy also aims to ensure effective inter-cluster coordination with WatSan cluster partners in addressing environmental health threats and prevention of water-related and water borne diseases and ensuring provision of safe water and proper sanitation in all health facilities.

Environmental health interventions are community based programs. The environmental health team will involve communities to develop, plan, implement and manage appropriate interventions. This will be done through: interviews, rapid assessment, formal and informal meetings with leaders and invited community members and information sharing with communities and introduction of organization.

Essential related activities include:

- Targeted water quality monitoring and control in all accessible affected areas to block the spread of water borne diseases;
- The provision of safe water supply in healthcare facilities and mobile clinics and adequate sanitation and healthcare waste management equipment in assessed healthcare facilities;
- Cross match water-borne disease surveillance with water quality surveillance results and undertaking immediate response measures whenever needed (provision of chlorination tablets at community level, health promotion etc);
- Environmental health assessment of all health care facilities in affected districts;
- Regular water quality monitoring and control in all affected areas to block the spread of water borne diseases;
- Capacity building of the Government’s water supply departments regarding water quality monitoring and treatment in collaboration with Pakistan Council of Research in Water Resources;
- Regularly attendance at WASH cluster coordination meetings and sharing information especially to coordinate AWD outbreaks response;
- Vector control activities which should be started directly as soon as the flood waters recede.

Objective 5: Strategies to develop national and local health emergency management capacities, including risk assessments, disaster risk reduction, emergency preparedness and safer hospitals integrated in the early recovery and reconstruction process

Large numbers of resettling IDPs and returnees, at the end of immediate flooding, may easily overwhelm the affected and damaged local health systems. In addition to the current flood and crises, the people of Pakistan are the risk of disasters in the future.

An essential strategy with subsequent actions will be to ensure implementation and strengthening of health emergency management capacities, including disaster risk reduction and emergency preparedness plans at all levels. This involves identification of high risk populations and areas, mapping out capacities of the health sector, enforcing plans and standard operating procedures as well as ensuring timely response to emergencies as they arise - including stock piling and pre-positioning of essential medicines and medical supplies. Core elements of health and disaster risk reduction, such as safer hospitals, should be integrated in recovery plans. Implemented targeted rehabilitation and reconstruction plan will be developed after the Damages and Needs Assessment process has been finalized.

It is essential to set the foundation for a sound recovery of the health system within the framework of “building back better”. It is also important to promote the development of District Master Plans for the Health Sector that will guide the early recovery effort elaborated by joint commissions of district and provincial health authorities in coordination with the NDMA.

Specific activities include:

- Strengthen national and local health emergency management systems focusing on risk assessment, disaster risk reduction and emergency preparedness, integrated into the recovery process;
- technical and financial support for personnel/units in Ministries of Health to enable them to coordinate health emergency management programme development and implementation;
- community health disaster risk management applying primary health care approaches, including risk communication and health promotion, strengthening role of Lady Health Workers, community nurses and other local health workers in high risk areas.
• dissemination of good practice and technical guidance translated into local languages
• rapid skill and knowledge enhancements through in-country training courses and workshops;
• Continuing assessment, restoration and retrofitting of damaged health facilities in accordance with building standards
• Assessment of the safety, security, vulnerability and preparedness of existing health facilities for natural hazards and action taken to reduce vulnerabilities through retrofitting and emergency preparedness
• Reconstruction and construction of new or replacement facilities which take account of local hazards and comply with up-to-date building standards for the design, construction and operations of health facilities
• Information systems to identify new construction, repairs or improvements to existing health facilities