Evaluation Of Availability of Food and Nutritional Requirement During Flood Related Displacement

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Abstract:

Floods are the most frequent natural disaster globally, causing widespread devastation, including loss of life and damage to infrastructure. In Pakistan, the 2022 floods, exacerbated by the country's existing food insecurity, severely impacted the already vulnerable communities, especially children and lactating mothers. Despite efforts by various national and international organizations, the floods amplified food and nutrition-related issues. Pakistan's pre-existing challenges, such as high rates of malnutrition and low rankings on the Global Hunger Index, were worsened. This paper evaluates the relief efforts during and after the floods, identifies gaps in response, and highlights the need for better coordination and targeted strategies to address malnutrition and food insecurity. Effective interventions are crucial to mitigate the impacts of future floods and improve overall nutrition and health outcomes for the affected populations.

Key words:

Floods, Malnutrition, Food Insecurity, Pakistan, Relief Efforts

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Introduction

Floods are one of the most frequent and devastating natural disasters across the world. Characterized by the overflow of water that submerges land that is typically dry, floods are caused by various factors, including heavy rainfall, rapid snowmelt, storm surges from tropical cyclones or tsunamis, and other climatic events. The damage caused by floods is wide-ranging, often resulting in the loss of life, destruction of property, displacement of communities, and severe disruption to public health infrastructure. As one of the most common types of natural disaster, floods have had significant impacts on human societies across the globe. From 1998 to 2022 alone, floods affected over 2 billion people, highlighting their global prevalence and the scale of their consequences.

Pakistan, due to its geographical location and climatic conditions, is highly susceptible to flooding, especially during the monsoon season. The country's varied topography, ranging from plains to mountainous regions, combined with its vulnerability to intense rainfall patterns, makes it prone to frequent and severe floods. In particular, the monsoon rains, which typically occur between June and September, result in the overflow of rivers and streams, inundating large swathes of land. These floods often devastate agricultural crops, disrupt transportation networks, damage homes, and threaten the livelihoods of millions of people.

The floods of August 2022 serve as a recent and significant example of the widespread destruction caused by such natural disasters in Pakistan. The 2022 floods were triggered by a combination of unusually high monsoon rainfall, climate change effects, and the country's inadequate flood management infrastructure. The floods affected nearly one-third of the country, displacing millions of people, destroying crops, and causing widespread damage to infrastructure. This catastrophic event resulted in the loss of thousands of lives, along with the destruction of homes, schools, hospitals, and other critical facilities. However, beyond the immediate physical damage, the floods also had a lasting impact on public health, particularly in terms of nutrition and food security. This dimension of the disaster, which is often overshadowed by the more visible effects of infrastructure destruction, is particularly alarming given the pre-existing vulnerabilities in the country's nutrition landscape.

Before the 2022 floods, Pakistan already faced significant challenges related to food insecurity and malnutrition. The country has long ranked poorly on global hunger indices, and its malnutrition rates have been high, especially among vulnerable populations such as children, women, and marginalized

communities. According to reports, the prevalence of malnutrition in Pakistan was alarmingly high even before the floods. In provinces such as Balochistan, Khyber Pakhtunkhwa (KP), Punjab, and Sindh, high rates of chronic malnutrition were reported, with nearly 96 percent of children under the age of 2 failing to consume a minimum acceptable diet. Additionally, at least 40 percent of children under the age of 5 were chronically malnourished, suffering from stunting. These pre-existing nutritional challenges worsened dramatically in the aftermath of the floods.

The floods of August 2022 not only devastated the food production systems but also exacerbated existing food insecurity in the affected regions. Floodwaters inundated vast agricultural lands, destroyed crops, and disrupted local food supply chains, making it difficult for affected communities to access nutritious food. The loss of livestock, which many rural communities rely on for both food and income, further compounded the problem. With agricultural production severely impacted, food prices skyrocketed, placing basic foodstuffs out of reach for many families, particularly those already living in poverty. Consequently, the nutritional status of communities, particularly vulnerable groups such as children and lactating mothers, deteriorated rapidly.

In response to the crisis, various national, provincial, and international organizations mobilized to provide relief to the affected communities. Humanitarian organizations such as the World Food Programme (WFP), UNICEF, and the Food and Agriculture Organization (FAO) played key roles in delivering emergency food assistance, healthcare, and nutritional support to the most vulnerable populations. However, despite the efforts of these organizations, significant gaps in the response efforts were evident. Many areas, particularly those in remote or hard-to-reach locations, faced delays in receiving aid, and the relief efforts were often inadequate to meet the massive scale of the crisis.

The impact of the 2022 floods on food security and nutrition highlights the urgent need for a comprehensive, multi-sectoral approach to disaster response, particularly in terms of addressing food and nutrition-related problems. While immediate relief efforts are crucial in alleviating the suffering of affected populations, it is equally important to ensure that long-term recovery strategies focus on building resilience in the food systems of flood-prone areas. This includes strengthening disaster risk management frameworks, enhancing food production and supply systems, and improving the nutritional status of vulnerable populations in the aftermath of disasters. More attention must also be paid to addressing the underlying causes of food insecurity and malnutrition, such as poverty, lack of access to healthcare, and inadequate sanitation, which exacerbate the impact of floods on nutrition.

One of the most critical areas of focus in flood response efforts is the protection and promotion of nutrition, particularly for high-risk groups such as children under 5, pregnant and lactating women, and the elderly. Malnutrition, especially among young children, has long-term consequences on physical and cognitive development, leading to lifelong health challenges. Therefore, ensuring that these vulnerable groups receive adequate and nutritious food during and after a disaster is vital to mitigating the long-term impact of floods on their health.

This paper aims to critically analyze the food and nutrition-related impacts of the 2022 floods in Pakistan, with a particular focus on the province of Khyber Pakhtunkhwa. The study will examine the roles and efforts of relevant government departments, international organizations, and local stakeholders in addressing the nutritional deficiencies exacerbated by the floods. It will also highlight the gaps in the response efforts and propose strategies for improving coordination and effectiveness in future flood responses. By identifying key lessons learned from the 2022 floods, this study seeks to contribute to the development of more robust and sustainable disaster response frameworks that prioritize food security and nutrition.

In conclusion, the 2022 floods in Pakistan underscore the need for a comprehensive approach to disaster management, one that incorporates not only immediate relief efforts but also long-term strategies for improving food security and nutrition in flood-prone areas. By addressing the root causes of food insecurity and ensuring better preparedness for future floods, Pakistan can enhance its resilience to such natural disasters and safeguard the health and well-being of its most vulnerable populations.

Problem Statement

Floods have a significant impact on food and nutrition-related problems in the affected communities. In the context of Pakistan, this impact was even more severe due to the country's already low ranking on the Global Hunger Index and the high incidence of malnutrition prior to the floods. Therefore, the August 2022 floods only exacerbated food insecurity in an already vulnerable community, creating a food crisis during and after the floods. This led to severe malnutrition, especially among lactating mothers and children. It is, therefore, imperative to analyze the current state of affairs, devise strategies to address this issue effectively, and explore alternatives to avoid such dilemmas in the future.

Scope of Study

The scope of this study is to critically analyze the food and malnutrition-related impacts caused by the recent floods in Pakistan, with a special focus

on the province of Khyber Pakhtunkhwa. The study will also explore the role of relevant departments within the KP government and other stakeholders in addressing nutrition-related deficiencies, the gaps observed in the system, and potential ways forward.

Literature Review

Numerous research efforts have been made by environmentalists and nutritionists to explain the impact of climate variations on food security, particularly by analyzing how climate change influences food production. Much of this research has been commissioned by international organizations such as WFP, UNICEF, and the Food and Agriculture Organization (FAO) of the UN, and conducted by professional researchers. Most of these studies establish a negative relationship between climate variations and food security.

Some research in this field has also been conducted by Pakistani researchers. For example, Asif (2013) analyzed the impact of climate variations on food security conditions in Pakistan, an agricultural country. Some studies predict that, due to global warming, the likelihood of floods in Pakistan will increase in the future. This could lead to a water crisis, food shortages, inflation in food prices, and trans-boundary water conflicts.

Pakistan is a prominent developing economy in South Asia, struggling simultaneously with poverty and hunger. The country envisions achieving food security, where people have economic and physical access to adequate food and health by the end of 2025 (Pakistan Economic Survey, 2015). Food security has become a key target for sustainability in Pakistan, as highlighted in the second United Nations Sustainable Development Goals (SDGs), which aim to end hunger by 2030.

Given the recent nature of the floods, there is limited scholarly literature on the impact of floods on the nutritional status of affected communities in Pakistan. However, many surveys have been conducted by international organizations such as WFP, UNICEF, and FAO, as well as national organizations like the Ministry of Planning, Development, and Special Initiatives, and the Ministry of National Health Services, Regulations & Coordination (MNHSR&C), and provincial organizations such as Scaling-Up Nutrition (SUN)-KP and the Nutrition Wing of the Directorate General of Health Services-KP. All of these surveys indicate an increased incidence of malnutrition following the floods, particularly among lactating mothers and children.

Research Methodology

This research was conducted primarily using secondary data. The data sources include scholarly articles by professional researchers available online, surveys conducted by relevant international, national, and provincial organizations, and news articles from prominent newspapers. Additionally, the research team visited SUN-KP and the Directorate General of Health Services to collect relevant information and data. Furthermore, some data was gathered telephonically from the Ministry of National Health Services, Regulations & Coordination (MNHSR&C) in Islamabad.

Floods

Definition and Causes

Floods are the most frequent type of natural disaster and occur when an overflow of water submerges land that is usually dry. They are often caused by heavy rainfall, rapid snowmelt, or a storm surge from a tropical cyclone or tsunami in coastal areas. Floods can cause widespread devastation, resulting in loss of life and damage to personal property and critical public health infrastructure. From 1998 to 2022, floods affected more than 2 billion people worldwide. People who live in floodplains or non-resistant buildings, or those lacking warning systems and awareness of flooding hazards, are most vulnerable to floods. Additionally, floods are becoming more frequent and intense, and the frequency and intensity of extreme precipitation are expected to continue to increase due to climate change.

There are three common types of floods:

1. Flash floods, caused by rapid and excessive rainfall, like monsoons in South Asia, which quickly raise water levels, overtaking rivers, streams, channels, or roads.
2. River floods, which occur when consistent rain or snowmelt forces a river to exceed its capacity.
3. Coastal floods, which are caused by storm surges associated with tropical cyclones or tsunamis.

Implications

Floods can have severe implications, with drowning accounting for 75% of deaths in flood disasters. Floods are becoming more frequent, and this trend is expected to continue. Drowning risks increase during floods, particularly in low- and middle-income countries where people live in flood-prone areas, and the ability to warn, evacuate, or protect communities from floods is weak or developing. Deaths from floods can also result from physical trauma, heart attacks, electrocution, carbon monoxide poisoning, or fire caused by flooding. Often, only immediate traumatic deaths are recorded, and the magnitude of the physical and human costs from floods can be reduced if adequate emergency prevention, preparedness, response, and recovery measures are implemented in a sustainable and timely manner.

Floods can also have medium- and long-term health impacts, including:

- Water- and vector-borne diseases, such as cholera, typhoid, or malaria
- Injuries, such as lacerations or punctures from evacuations and disaster cleanup
- Chemical hazards

- Mental health effects associated with emergency situations
- Disrupted health systems, facilities, and services, leaving communities without access to health care
- Damage to basic infrastructure, such as food and water supplies and safe shelter.

Floods impact both individuals and communities and have social, economic, and environmental consequences. The consequences of floods, both negative and positive, vary greatly depending on the location and extent of flooding and the vulnerability and value of the natural and constructed environments they affect. The immediate impacts of flooding include loss of human life, damage to property, destruction of crops, loss of livestock, and deterioration of health conditions due to waterborne diseases. Additionally, communication links and infrastructure such as power plants, roads, and bridges are damaged and disrupted, some economic activities may come to a standstill, and people are forced to leave their homes, disrupting normal life. Similarly, disruptions to industry can lead to a loss of livelihoods. Damage to infrastructure also has long-term impacts, such as disruptions to supplies of clean water, wastewater treatment, electricity, transportation, communication, education, and healthcare. Loss of livelihoods, reduced purchasing power, and loss of land value in floodplains can leave communities economically vulnerable. Floods can also traumatize victims and their families for long periods. The loss of loved ones has deep impacts, especially on children. Displacement from one's home, loss of property, and disruption to business and social affairs can cause continuing stress. For some people, the psychological impacts can be long-lasting.

Flooding in key agricultural production areas can lead to widespread damage to crops, fencing, and loss of livestock. Crop losses through rain damage, waterlogged soils, and delays in harvesting are further intensified by transport problems due to flooded roads and damaged infrastructure. The downstream effects of reduced agricultural production can often impact well beyond the production area, as food prices rise due to shortages in supply. On the other hand, flood events can result in long-term benefits for agricultural production by recharging water resource storages, especially in drier, inland areas, and rejuvenating soil fertility through silt deposition. Damage to public infrastructure affects a much larger proportion of the population than those whose homes or businesses are directly inundated by the flood. In particular, flood damage to roads, rail networks, and key transport hubs, such as shipping ports, can have significant impacts on regional and national economies.

In many natural systems, floods play an important role in maintaining key ecosystem functions and biodiversity. They link the river with the surrounding land, recharge groundwater systems, fill wetlands, increase the connectivity between aquatic habitats, and move both sediment and nutrients

around the landscape and into the marine environment. For many species, floods trigger breeding events, migration, and dispersal. These natural systems are resilient to the effects of all but the largest floods. The environmental benefits of flooding can also help the economy through increased fish production, groundwater resource recharge, and maintenance of recreational environments.

Pakistani Context

Pakistan is one of the most flood-prone countries in the world, mainly due to its physical and climatic characteristics. Three types of weather systems influence precipitation in catchments that produce floods in Pakistan:

1. Monsoon depressions originating from the Bay of Bengal (the most important system)
2. Westerly waves coming from the Mediterranean Sea (winter rains)
3. Seasonal lows from the Arabian Sea (cyclones)

Pakistan is exposed to frequent riverine floods, flash floods, and coastal floods. Historical records show that Pakistan has experienced almost all types of floods, with river and flash floods being the most common in terms of frequency and magnitude. The discharge in the Indus River and its tributaries fluctuates seasonally, with high discharges in summer due to snowmelt, glacier runoff, and monsoon rainfall, and low discharges in winter due to reduced glacier ablation and precipitation in the form of snow. Occasionally, the Indus River and its tributaries overflow their levees, causing heavy damage to human lives, crops, agricultural land, infrastructure, and other properties.

The Indus plain is home to more than 120 million people, where agriculture is a major source of livelihood. A significant portion of the population is poor and consists of tenant farmers. Since the country's inception, Pakistan has been hit by severe floods on average every four years. This increasing population, ecological degradation, and changing climate have multiplied the risk of flood disasters. It is estimated that Pakistan has suffered from frequent flood disasters, resulting in the loss of 11,239 human lives, including 1,985 deaths from the super-flood of 2010. That year, 20 million people were affected, over 100,000 km² of land was inundated, and the economic loss was recorded at US$10 billion.

Flood 2022

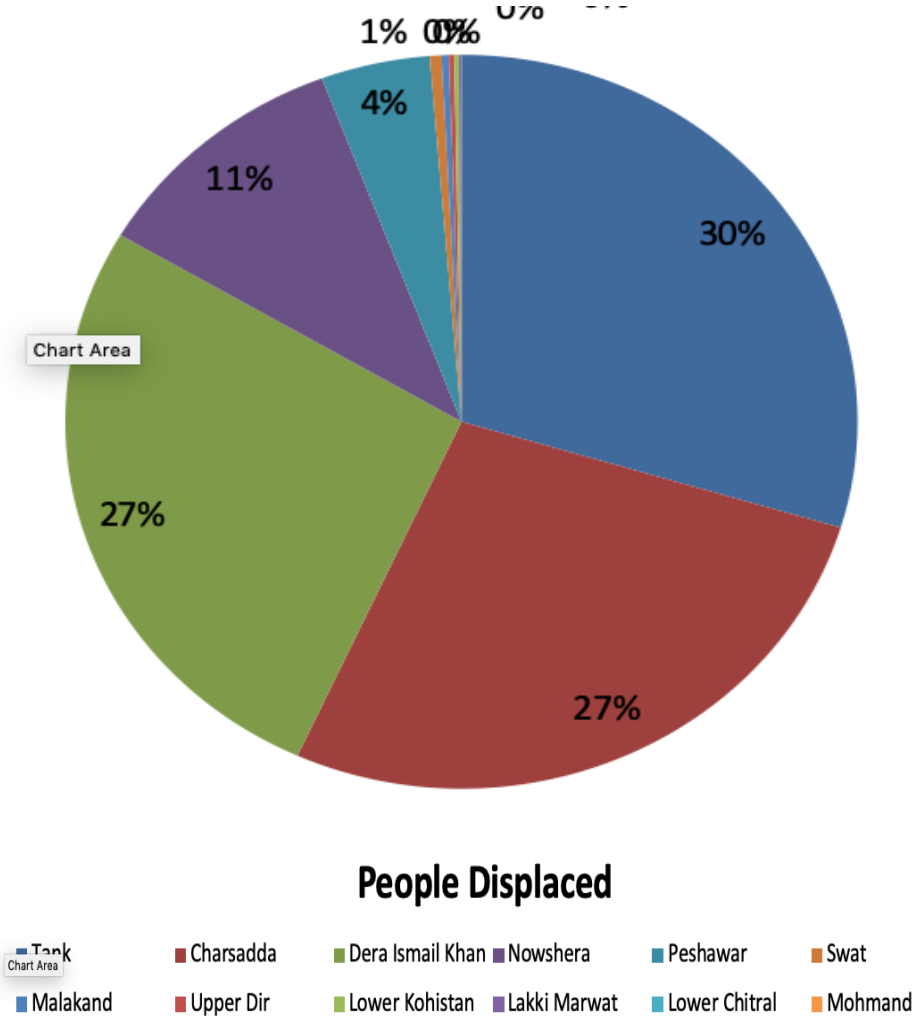
The 2022 floods in Pakistan were the deadliest since 2010, with more than one-third of the country submerged and at least 33 million people affected. 1,739 people died, including 647 children, and 12,867 were injured. The National Disaster Management Authority (NDMA) reported that 72 districts out of 160

were affected, with damage to more than 5,000 km of roads, over 1.1 million houses, and the death of over 800,000 livestock. Government officials estimated reconstruction costs and economic damage at $30 billion, equivalent to about 10% of the GDP. A needs assessment led by the Ministry of Planning, Development, and Special Initiatives, in collaboration with the Asian Development Bank, the European Union, and relevant UN agencies, estimated damages to exceed $14.9 billion, with economic losses reaching $15.2 billion and estimated rehabilitation needs of $16.3 billion.

Flood 2022 in Khyber Pakhtunkhwa

The unprecedented flooding in Khyber Pakhtunkhwa during the year 2022, with the Malakand division being the worst hit, played havoc with the province as dozens of people, including females and children, were reported killed. In some districts, entire villages were washed away by the gushing waters. 309 people died and 600,000 others were displaced by floods. Among them were five children in Upper Dir who had been returning home from school. 326,897 houses were damaged due to floods and landslides, and 7,742 cattle died from collapsing sheds. In Swat, a newly built hotel collapsed due to excessive flooding. In Lower Kohistan, five people stranded in a hill torrent were swept away; four of them were killed, and one was rescued. In Balakot, eight nomads were killed due to flooding in a tributary of the River Kunhar. Twelve people were also killed in flooding in different areas of D.I. Khan due to flash floods from hill torrents.

Large-scale destruction of property, including famous hotels, houses, shops, private buildings, and government installations, was reported from various parts of the province. Thousands of acres of standing crops and hundreds of thousands of cattle were also destroyed by the gushing waters, and dozens of bridges, including those linking main cities, were washed away. The residents of low-lying areas and those residing close to riverbeds in all the districts were directed to shift to the safest places at the earliest. The Deputy Commissioner of Nowshera, while issuing a high alert, said a flood wave of 300,000 cusecs was expected to pass through the River Swat at Nowshera, causing floods in the Nowshera district. Even the main GT road was expected to submerge up to three feet. Most of the population of Nowshera was evacuated amid rising threats of high flood.



Source, PnD, KP

Extent of Damage to Districts

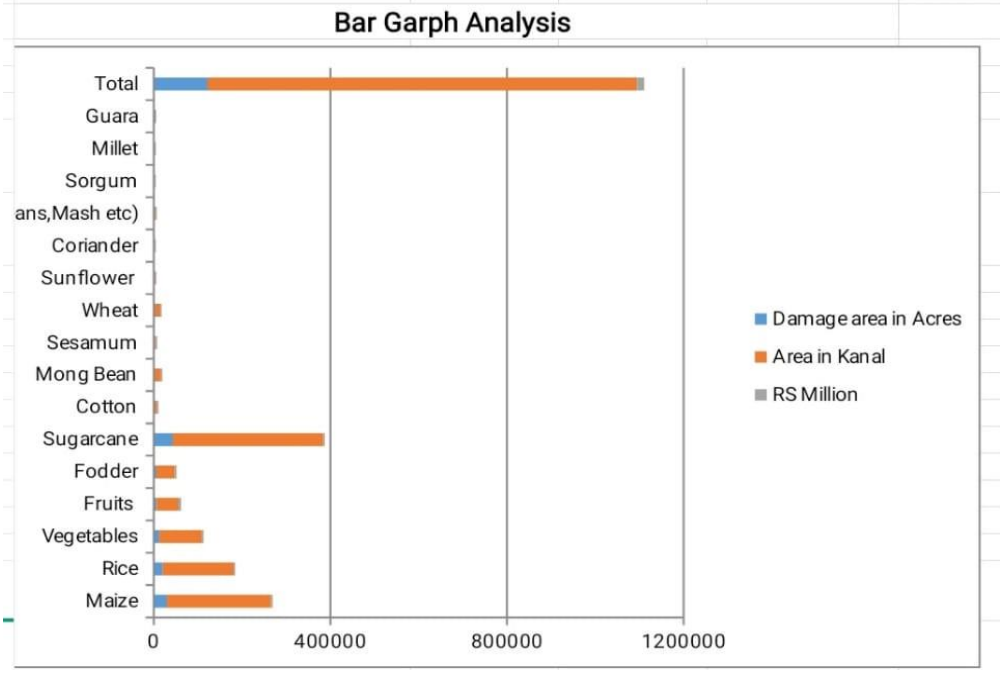
District	Type of Damage
Charsadda	Partially Damaged
Kohistan Lower	Completely Damaged
Kohistan Lower	Partially Damaged
Kohistan Upper	Partially Damaged
Kohistan Upper	Completely Damaged

Nowshera	Completely Damaged
D. I. Khan	Partially Damaged
D. I. Khan	Completely Damaged
Chitral Lower	Partially Damaged
Shangla	Partially Damaged
Lakki Marwat	Partially Damaged
Lakki Marwat	Completely Damaged
North Waziristan	Partially Damaged
Kurram Upper	Partially Damaged
Tank	Partially Damaged
Tank	Completely Damaged
Swat	Partially Damaged
Karak	Partially Damaged
Dir Lower	Partially Damaged
Dir Upper	Partially Damaged
Chitral Upper	Completely Damaged
Chitral Upper	Partially Damaged
SW Mehsud Belt	Partially Damaged
SW Mehsud Belt	Completely Damaged
Abbottabad	Completely Damaged
Abbottabad	Partially Damaged
Kolai Palas (Kohistan)	Partially Damaged

Source, PnD, KP

Extent of Damage to Crops

Crop Name	Damage area in Acres	Area in Kanal	RS Million
Maize	29528	236222	1534
Rice	20118	160945	1641
Vegetables	12160	97277	3656
Fruits	6198	49583	6012
Fodder	5373	42984	743
Sugarcane	42661	341290	2294
Cotton	788	6300	104
Mong Bean	1764	14114	42
Sesamum	484	3870	33
Wheat	1568	12542	19
Sunflower	245	1958	13
Coriander	55	440	13
Cereal (Mong,Beans,Mash etc)	365	2920	31
Sorgum	32	259	2
Millet	89	711	2
Guara	213	1702	32
Total	121640	973118	16171



Source, PnD, KP

Legislation and Organizations

Legal Framework

Pakistan is one of the many nations that has been confronted with growing environmental concerns. The diverse range of issues that affects Pakistan meant that the nation must adapt its legislative framework in a way to accommodate the increasingly problematic and sometimes dire environmental scenario. The following are some of the important legislative instruments pertaining directly or indirectly to flood control and mitigation measures in the country.

National Calamity Act, 1958

The National Calamities Act of Pakistan 1958 was the only legal document to regulate the relief, rehabilitation and reconstruction. This was only the reactive legal document functioned throughout the country for a long time. Under this regulation, there was an emergency relief cell within the cabinet division. Again it is referring just relief/compensation in either disaster or post-disaster phase. Under the Calamity Act, in each province there were relief commissioners, who supervised and coordinated the relief and rehabilitation efforts. Few provinces have also developed Disaster Plans such as the NWFP Disaster Plan 1978, where a list of hazards are available to which the province is susceptible. Similarly, it has also elaborated the Government line departments and their primary and secondary responsibilities in the disaster phase. Under the Act, the Provincial Board of Revenue was made responsible for collecting damages data and records of compensation.

Pakistan Environmental Protection Act, 1997

The Pakistan Environmental Protection Ordinance, 1983 was amended via the Pakistan Environmental Protection Act, 1997. The Act approved comprehensive national environmental policies and ensured their implementation within the framework of a national conservation strategy as may be approved by the Federal Government from time to time. This role is particularly important in the context of increased development and industrial activity, as there is a need for firm consideration of the appropriateness of any proposed activity. It has divisions dedicated to the environment, urban development, and wildlife and is responsible for the coordination of its derivative institutions, such as the Pakistan Environmental Protection Council (PEPC) and the Environmental Protection Agency (EPA).

KP River Protection Ordinance, 2002

The Ordinance was promulgated in 2002 to prepare land use and zoning

plans for the catchment area of rivers. In addition, it directed that no person shall construct public or private property within two hundred feet of the high-water limit on either side of the rivers and their tributaries.

National Disaster Management Act, 2010

The Act was promulgated in 2010 with the aim to lay down guidelines to be followed by the federal and provincial governments for dealing with different disasters, including floods. It also arranged to oversee the provision of funds for the purpose of mitigation measures, preparedness, and response in case of disaster. The National Disaster Management Authority was established under this Act. The Act has established three levels for disaster risk management in the country: national, provincial, and district levels. The National Disaster Management Authority works at the federal level, the provincial disaster management authority at the provincial level, and the district disaster management authority/unit at the district level.

Miscellaneous Acts

Prior to the promulgation of the Pakistan Environmental Protection Ordinance, 1983, Pakistan had some laws containing provisions for environmental protection that had an indirect impact on flood mitigation and control measures. These laws dealt with land use, water quality, air quality, noise, toxic and hazardous substances, solid waste and effluents, marine and fisheries, forest conservation, mineral development, energy, public health, etc. They were not effective, as punishment for violations was mild and easy to circumvent. The laws included:

1. The Pakistan Penal Code, 1860
2. The Canal Drainage Act, 1873
3. The Punjab Local Government Ordinance, 1979
4. The Motor Vehicles Ordinance, 1965; and The Motor Vehicles Rules, 1969
5. The Factories Act, 1934
6. The West Pakistan Fisheries Ordinance, 1961
7. The Forests Act, 1927
8. The Boilers Act, 1923
9. The Pakistan Petroleum (Exploration and Production) Rules 1986
10. The Antiquities Act, 1975
11. The West Pakistan Epidemic Diseases Act, 1959, etc.

Relevant Organizations

Effective enforcement of environmental legislation is contingent upon the availability of adequate staff and financial resources, the administrative and political will of the enforcement agencies, and the level of awareness of

environmental laws. It is common, however, to find situations where responsibility for enforcement of laws is divided amongst a number of government agencies that pursue conflicting interests, thereby delaying or forestalling the implementation of these laws. In response, for enforcement to be effective, developmental planning processes have to be closely coordinated. Many federal and provincial organizations are directly or indirectly concerned with flood management activities. These institutes are responsible for the construction of structural and non-structural entities to control floods and rescue, relief, and rehabilitation operations. Non-structural measures mainly pertain to the establishment of modern flood forecasting and warning systems to provide timely and reliable flood information to the flood mitigation agencies and to the public.

Federal Flood Commission (FFC)

The Federal Flood Commission was established in 1977 and assigned the task of preparing the National Flood Protection Plans (NFPPs) on a countrywide basis. Its specific jobs were to construct flood protection and river embankment works, standardize designs and specifications for flood protection works, evaluate and monitor the progress of implementation of NFPPs, improve the weather data, and create understanding and adaptability among the locals and prepare a research program for flood control and protection. The approach followed by the FFC encompasses both structural and non-structural measures.

Provincial Irrigation and Drainage Authorities

The Provincial Irrigation and Drainage Authorities are an upgraded form of the Provincial Irrigation Departments with the extended scope of irrigation and drainage management. The Provincial Irrigation and Drainage Authorities play an important role in flood mitigation by performing design, construction, and complete maintenance of river training and flood protection works. These also provide the flow measurement of rivers, canals, and drains for flood forecasting. In addition, their role in crisis management is to prepare flood emergency plans before, during, and after the floods.

Water and Power Development Authority

The Water and Power Development Authority is involved in the flood forecasting process by providing river and rain data from its telemetric gauge sites within the upper catchments of Indus and Jhelum rivers. The safety of the Mangla and Tarbela dams is the top priority for this data collection. It is also involved in providing inflow and outflow data from various dams and barrages.

Pakistan Meteorological Department

The Pakistan Meteorological Department provides services of flood forecasting and early warning together with the generation of weather data and its dissemination to the relevant agencies. The Pakistan Meteorology Department has so far installed 97 weather stations all over the country to record rainfall and other weather elements. One of the core areas of Pakistan Meteorology Department is the Flood Forecasting division. This division is fully equipped with Doppler radar to remotely sense and measure the quantitative precipitation over the catchment area of major river systems. Such 10-cm Radar facilities are available at Lahore and Mangla, whereas 5-cm radar at Sialkot, Islamabad, Dera Ghazi Khan, Rahim Yar Khan, and Karachi, which cover almost all the catchment area of major river systems in Pakistan. The Flood Forecasting Division is also applying a mathematical model on the Indus river system for computing the stream hydraulics and to identify vulnerable areas for issuance of early flood warning.

Crisis Management Institutes

These are the institutions that offer help to the general public during and immediately after the floods.

Emergency Relief Cell

The Emergency Relief Cell works at the federal level and mainly deals with the planning and assessment of relief requirements for major disasters. The scope of their activities covers stockpiling of basic necessities needed during an emergency, establishing emergency funds, and assisting international donors in their relief efforts. The provincial governments and local administrations provide relief for disasters. The National Disaster Plan from 1974 covers procedures, organizational set-up, and standard procedures for the monitoring of disaster operations.

Pakistan Army

The Army provides necessary help to civil authorities to carry out rescue and relief operations during and after floods. The Army also takes part in pre-flood season surveys and inspections of the flood protection works. It is the responsibility of the provincial government to provide all support equipment (boats, life jackets, vehicles, tents, etc.) to the Army for these operations. During the flood season, the Army sets up flood emergency cells at each corps headquarters. In the case of major floods, the Army is responsible for actuating controlled breaching of predefined flood bunds to divert the peak away from the cities. Although there exists no standard procedure, the breaching is decided based on existing and forecasted flood stages with the mutual consultation of local officials of civil administration, irrigation department, and army.

National Disaster Management Authority (NDMA)

NDMA is an autonomous and constitutionally established federal authority mandated to deal with disaster management in Pakistan. It constitutes and enforces national disaster policies at federal and provincial levels and collaborates closely with various government ministries, military, and international organizations to jointly coordinate efforts to conduct its disaster management. During floods, NDMA procures relief supplies and coordinates bilateral in-kind donations for distribution through the Army and other civil agencies. It also provides data and relevant information during the flood for guidance and coordination among relevant agencies.

Provincial Relief Departments

The Provincial Relief Departments are responsible for flood preparedness, rescue, and relief plans. The department arranges surveys to ensure that all flood protection bunds are satisfactorily maintained before the flood season. It also sets up flood warning centers and flood centers at district and union levels. The Relief Department functions through control and coordination of the personnel and resources of other government departments, generally organized in the form of committees.

Provincial Disaster Management Authorities (PDMA)

The National Disaster Management Ordinance insisted on the establishment of a Provincial Disaster Management Commission (PDMC) as well as Provincial Disaster Management Authority (PDMA) to cope with the challenges of Disaster Management in a professional and efficient manner. Both the organizations have been mandated to effectively set up a system to look after disasters and calamities, whether natural or man-induced, and coordinate with the key players. Previously, the Provincial Relief Commissionerate had been responsible for the relief, compensation, and rehabilitation of people affected by natural disasters. With the establishment of PDMA, the functions of the Relief Commissionerate have been incorporated into the new organization. The Provincial Disaster Management Authority works in close liaison with the NDMA and all other relevant agencies for effective control and management of floods.

District Disaster Management Authority/Unit

In order to involve local organizations in planning and implementation, the district disaster management authority (DDMA) has been in the process of being established at the district level. In Khyber Pakhtunkhwa, there is a district disaster management unit instead of authority. As per the plan, the

Head of the local council at the district level shall be the chairperson, Deputy Commissioner/District Coordination Officer as secretary, whereas District Police Officer and Executive District Health Officer are the ex-officio members. The power and function of the District Authority include the preparation of the district disaster management plan, coordinating, and monitoring the implementation of the National Policy, Provincial Policy, National Plan, Provincial Plan, and District Plan. In addition to this, DDMA shall ensure that the vulnerable areas in the district are identified, and measures have been taken for their prevention and mitigation at the district level.

Flood 2022 and Nutrition Sector

Pre-Flood Nutrition Status of Pakistan

Global Hunger Index and Pakistan

The Global Hunger Index (GHI) is a tool that attempts to measure and track hunger globally as well as by region and by country. It is prepared by European NGOs, namely, Concern Worldwide and Welthungerhilfe. The GHI is calculated annually, and its results appear in a report issued in October each year.

In the international ranking of the GHI 2022, Pakistan ranked 99 out of 116 nations, with its hunger categorized as 'serious.' Pakistan faces a scenario in which it is largely food-sufficient but not food-secure. We have been facing chronic food insecurity, with appalling implications for the nutrition and health of children. Approximately 43% of Pakistanis are confronted with food insecurity, 18% of whom are acutely insecure, as estimated by the World Food Programme (WFP). The incidence is twice as high among the rural population, with three out of five households being food-insecure. A similar trend is observed with malnutrition among children. We have 82% of children who are deprived of a meal when they need one, as shown in a recent WFP survey. Moreover, 18% of children under five suffer from acute malnutrition, and 40% in the same age group suffer from stunted growth. According to WFP, affordability is the greatest barrier in achieving a nutritious diet, as a majority of Pakistanis are incapable of affording nutritionally satisfactory food.

Despite Pakistan being ranked 8th in producing wheat, 10th in rice, 5th in sugarcane, and 4th in milk production, a 2019 report of the State Bank of Pakistan (SBP) showed that nearly 37% of households in Pakistan are food insecure. In the three years since the SBP's report, matters have only worsened. Food price inflation in Pakistan has been in double digits since

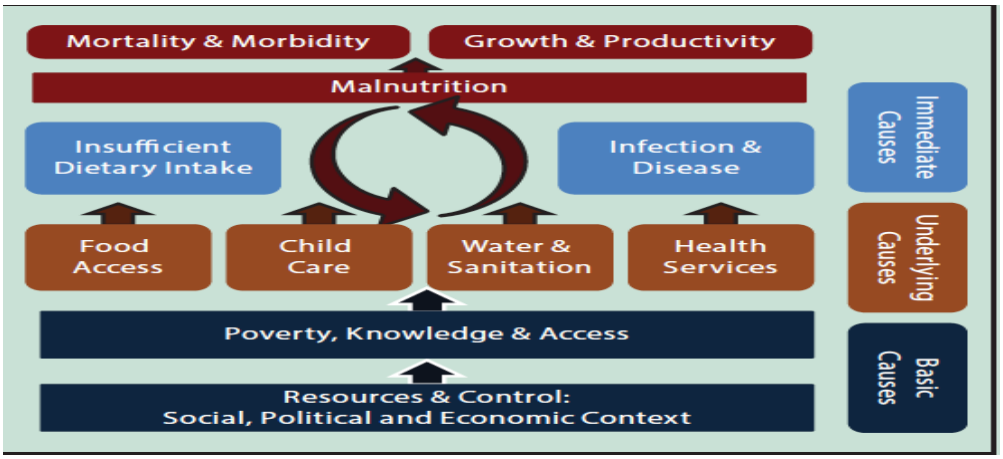
August 2019. The cost of food has been 10.4-19.5% higher than the previous year in urban areas and 12.6-23.8% in rural areas, according to figures published by the Pakistan Bureau of Statistics.

So how does a country with one of the largest agrarian economies in the world find itself unable to sufficiently provide food for nearly 40% of its population? For decades, agriculture has been neglected, and people's earnings have been hit by one economic crisis after another. On top of this, particularly in the past decade or so, climate change-related disasters and changes in the environment have resulted in our already neglected agriculture becoming less competitive.

Nutrition Status

Widespread undernutrition determines a range of negative consequences impacting the welfare of individuals and families, as well as the economic and social development of the nation. This economic, social, and human burden is largely preventable and can be significantly reduced by the application of proven, affordable, and effective nutrition interventions.

Optimal nutrition is fundamental to achieving sustainable development and promoting resilience in any society. Over the past two decades, the Government of Pakistan has recorded significant achievements in the development sector; however, progress in nutrition has presented mixed results. Pakistan continues to suffer from high rates of malnutrition. The last National Nutrition Survey (2011) found that 44% of children under five were stunted, 32% were underweight, and 15% were acutely malnourished. Micronutrient deficiencies and maternal malnutrition were also shown to be on the higher side. Malnutrition not only adversely affects the country's Gross Domestic Product (GDP) but has serious implications for the country's most important asset – the future human resource.



Due to various humanitarian vulnerabilities in different provinces of Pakistan, a review of the most pertinent scenarios has been conducted. Pakistan has a global acute malnutrition (GAM) rate of 17.7 percent, exceeding the emergency threshold. Drought-like conditions are affecting 5 million people in Sindh and Balochistan provinces, and monsoon rains and floods in all provinces are contributing to the worsening of the situation. The proportion of food-insecure households, already high in Pakistan (71%), and the lack of access to basic services, including health and nutrition, are the main factors likely to worsen malnutrition.

Impact of Russia-Ukraine War on Food Security in Pakistan

Russia and Ukraine are known as the breadbasket of the world and are the fifth-largest exporters of wheat. The war between these countries has disrupted agricultural production and trade from one of the world's major food-exporting regions. The contribution of Russia and Ukraine in the global food market for wheat and barley export was 30%, which derailed with the advent of the crisis, as Russia suspended all grain exports until August 2022, along with blocking the Black Sea ports.

For Pakistan, the situation was anticipated to worsen against the backdrop of the Ukraine-Russian conflict due to the disruption of the food supply chain, since Ukraine has been the main wheat supplier to Pakistan, exporting around 1.2 megaton of wheat, along with Russia also supplying 0.92 megaton of wheat to Pakistan for the period 2020-2021. Pakistan imported around 80-90 percent of its total wheat imports from Russia and Ukraine in 2020, and therefore, the war has meant that the country is likely to face longer timelines and higher prices with regard to wheat that needs to be imported.

In light of the foregoing, the nutritional status of Pakistan was far from satisfactory even before the floods of 2022. Therefore, the conditions were only worsened by the devastations caused by the floods.

Post-Flood Nutrition Status of Pakistan

A strong causal relationship exists between disasters and undernutrition. Slow and rapid onset crises and disasters can impact nutrition levels both directly (i.e., loss of agricultural production and assets) and indirectly by reinforcing some of the causes of undernutrition (increased poverty, scarcity of safe water, disruption of livelihoods, inadequate nutrition behaviors), particularly in developing countries. Following a disaster, infants, young children, and pregnant and lactating women are particularly vulnerable, with

maternal undernutrition having serious impacts on the health of the fetus and newborn baby. Undernutrition not only impairs the development of children but weakens their immune systems, making them more susceptible to disease and being an underlying cause of 3.5 million preventable child deaths annually.

The Integrated Food Security Phase Classification (IPC), also known as the IPC scale, is a tool for improving food security analysis and decision-making. It is a standardized scale that integrates food security, nutrition, and livelihood information into a statement about the nature and severity of a crisis and its implications for strategic response. It was developed by the United Nations Food and Agriculture Organization.

Prior to the floods, an Integrated Food Security Phase Classification (IPC) analysis of 28 vulnerable districts in Balochistan, KP, and Sindh estimated 5.96 million people to be in IPC Phase 3 (crisis) and 4 (emergency) between July and November 2022. A figure that was expected to increase to 7.2 million people from December 2022 to March 2023. According to the latest WFP and FAO projections, initial estimates indicate that floods will increase the number of people requiring emergency food assistance (IPC3/4) to 11 million.

The incidence of severe acute malnutrition is also growing. The prevalence of Global Acute Malnutrition was significantly high in Balochistan, KP, Punjab, and Sindh prior to the floods: 96 percent of children under 2 were not consuming a minimum acceptable diet, and at least 40 percent of children under 5 were chronically malnourished (stunted). It is inevitable that these numbers will increase given the impact of the floods. This, along with the huge number of fallen and dead livestock, means Pakistan is facing a monumental hunger crisis. The floods were caused by weeks of extreme monsoon rainfall after months of extreme heat waves and at a time when Pakistan was trying to cope with a major economic crisis, with high inflation and food and fuel prices rocketing. Preliminary estimates by the World Bank suggest the national poverty rate could increase because of recent floods by 4.5 to 7 percentage points, pushing between 9.9 and 15.4 million people into poverty and intensifying the severity of poverty for already poor households. Therefore, the flood has created food insecurity along with many other problems. After millions of acres of crops flooded and hundreds of thousands of cattle were killed, the low food supplies are likely to induce malnutrition-related tragedies.

Flood-Related Displacements

Displacement may be defined as the forced relocation of people to new places of residence due to several conditions, both natural as well as man-made.

Displacement in the present context means the displacement that occurred due to floods in the country. People had to be moved to safe locations before their areas were inundated, which was part of the precautionary measures. However, all displacement was not of this category alone. People moved on their own when their homes were flooded, and they had to wade through running and standing waters.

There is no confirmed figure regarding the number of people displaced. Different sources quote different figures. According to one source, some 33 million people got displaced in the summer floods of 2022 in Pakistan. According to the same source, one-third of the country was under water. The Southern Provinces of Pakistan—Sindh and Balochistan—do not receive much rain commonly, but this time the rains were heavy and severe, which devastated the provinces of Sindh and Balochistan.

Displaced People in Khyber Pakhtunkhwa

In Charsada and Nowshera District of KPK, there were floods or flood-like situations in several districts. According to one source, some 30,000 people in the two districts were displaced by the floods. A large number of cattle and livestock were also shifted to safe areas, as a large population of these districts depended on livestock for their livelihood. Swabi, Dir Upper and Lower, and Swat were the other calamity-hit districts in the northern parts of the province. Tank and D.I. Khan were the most hit districts in the south of the province. The total number of displaced people was cited as 600,000 people. According to the same source, the authorities evacuated 364,000 people from the flood-hit areas and rescued 96,228 people.

The three districts of Upper and Lower Kohistan and Kolai-Palas were other affected areas. According to sources, some 630 houses were completely destroyed, and 250 were partially damaged, and the residents had to relocate to other safe areas.

Displaced People in Punjab

Punjab province is home to five large and several small rivers. The southern parts of the province were badly affected by the floods. According to sources, some 490,256 households were damaged, resulting in the displacement of around 2-3 million people. There were floods in Dera Ghazi Khan, Rajanpur, and Jhang districts. In the rest of Punjab, the situation was under control, and the amount of rain was less than what was recorded in Sindh and Balochistan.

Displaced People in Sindh

Flooding in Sindh was due to the overflowing of rivers/canals as well as heavy rains. The rains in Sindh province were 500% higher than the annual average. According to one source, the floods in Sindh Province alone left 1.25 million people homeless, and they are living in camps or beneath the open sky. A large number of displaced people relocated to higher areas along the major canals of the province. Thousands of mud-houses were completely wiped out in many parts of the province. According to the Provincial Disaster Management Authority (PDMA), 4.9 million people were affected by the floods. These people had to be shifted to camps and makeshift shelters. A total of 23 districts were badly hit by the floods in the province of Sindh. According to sources, some 50,000 displaced people shifted to Karachi from different parts of Sindh.

Displaced People in Balochistan

Balochistan usually does not receive rain in the summer, but this year there were heavy and torrential rains, which washed away embankments and small dams, destroying thousands of dwellings and leaving the inhabitants homeless. According to sources, some 20,000 people were displaced due to floods.

Problems Faced by Displaced People

The displaced people faced several problems, especially with the cold weather adding to their miseries. In rural areas, people have taken refuge with their relatives or are living in makeshift shelters that cannot protect them from the severity of the weather. These people have lost their cattle and crops due to floods and torrential rains. Their agricultural land has either been washed away by the floods, or the water is still standing in these areas, meaning there would be no rabi crops in the affected areas. The poor sanitary conditions have led to several health problems, including gastro diseases and typhoid fever. Safe drinking water is not available in these areas.

	District	People Displaced
1.	Tank	200,000
2.	Charsadda	183,000
3.	Dera Ismail Khan	180,000
4.	Nowshera	72,678
5.	Peshawar	30,000
6.	Swat	3,220
7.	Malakand	2,000
8.	Upper Dir	1,440
9.	Lower Kohistan	1,300
10.	Lakki Marwat	550
11.	Lower Chitral	100
12.	Mohmand	30
13.	Swabi	0
14.	Tor Ghar	0
15.	Kohat	0
16.	Batagram	0
17.	South Waziristan	0
18.	Buner	0
19.	Hangu	0

	District	People Evacuated
1.	Charsadda	183,000
2.	Nowshera	67,917
3.	Bannu	48,425
4.	Dera Ismail Khan	40,000
5.	Hangu	40,000
6.	Swat	14,000
7.	Tank	5,000
8.	Malakand	3,000
9.	Peshawar	2,352
10.	Lower Kohistan	1,318
11.	Lower Chitral	500
12.	Khyber	500
13.	Lakki Marwat	491
14.	Mohmand	30
15.	Upper Dir	5
16.	Swabi	0
17.	Tor Ghar	0
18.	Kohat	0
19.	Batagram	0

	District	People Rescued
1.	Charsadda	21,300
2.	Nowshera	20,925
3.	Dera Ismail Khan	13,500
4.	Peshawar	8,625
5.	Swat	2,481
6.	Tank	1,300
7.	Lakki Marwat	873
8.	Mardan	450
9.	Lower Chitral	200
10.	Lower Kohistan	51
11.	Malakand	45
12.	North Waziristan	23
13.	Bannu	2
14.	Swabi	0
15.	Tor Ghar	0
16.	Kohat	0
17.	Batagram	0
18.	South Waziristan	0
19.	Buner	0

International Organizations

World Food Program (WFP)

WFP began its scale-up of relief assistance on 25 September to reach 1.9 million people with 15,524 metric tons of food in the provinces of Balochistan, Khyber Pakhtunkhwa (KP), Punjab, and Sindh. Prior to the floods, 96 percent of children under 2 were not consuming a minimum acceptable diet, and at least 40 percent of children under 5 were stunted in Balochistan, KP, Punjab, and Sindh. WFP provided 5,982 children aged 6-23 months and 5,286 pregnant and lactating women in Balochistan and Sindh with 10.6 metric tons of specialized nutritious foods during September 2022. WFP used 20 boats from Operation Rescue 1122 to provide food assistance to a total of 104,000 people in hard-to-reach areas of Sindh.

As of September, in KP, WFP had provided 75,927 people (11,681 households) with 616 metric tons of food in Lower Chitral and Upper Dir districts. In Sindh, WFP had provided 117,936 people (18,144 households) with 909 metric tons of food in Jacobabad, Khairpur, Larkana, Naoshero Feroz, Qambar Shahdadkot, and Sanghar districts since 5 September.

These efforts by WFP were complementary to the cash stipends provided by the Government through BISP, as well as other support from the Government (including food and non-food items [NFIs] to 2.3 million beneficiaries) and humanitarian actors (providing food and NFIs to over 900,000 people). WFP also opened provincial relief offices in Balochistan, KP, and Sindh to coordinate with other UN agencies and humanitarian actors to ensure an integrated response for the affected populations.

During these efforts, road access remained a challenge. There were increasing threats to food dispatch and potential risks associated with food distribution, considering WFP's scale-up plan to reach 1.9 million people. As a mitigation measure, WFP informed authorities whenever commodities were dispatched to cooperating partners. No night movement of staff was authorized, and all staff movement to the field was done with police escorts. Alternative roads were also identified by provincial administrations to ease congestion.

Beyond immediate needs, WFP announced plans to transition to recovery and resilience activities through early 2023 to help communities rehabilitate climate-smart infrastructure and restore livelihoods.

United Nations International Children's Emergency Fund (UNICEF)

Post-flood, UNICEF expanded delivery of life-saving assistance and services

and reached 51 of the 82 hardest-hit districts with integrated services. Child protection services were introduced in 15 districts, water tankering of 970,000 liters of safe water per day was provided to 194,000 people, 71 mobile health camps were established that catered to 64,000 people, and 70 temporary learning centers were set up where 6,000 children received education.

Nutrition Cluster

The Global Nutrition Cluster exists to collectively strengthen the technical and coordination capacities for nutrition in countries, based on the needs of affected populations. This initiative aims to enable countries to forecast nutrition trends and prepare for, respond to, and recover from shocks during humanitarian emergencies, contributing to global efforts to prevent and treat malnutrition in all its forms.

In Pakistan, the cluster, called the National Nutrition Cluster, is led by the UN and aims to strengthen partnerships, as well as the predictability and accountability of international humanitarian action, by improving prioritization and clearly defining the roles and responsibilities of humanitarian organizations. With the support of the National Nutrition Cluster, the Provincial Nutrition Cluster is responsible for leading the Nutrition Cluster at the provincial level in Khyber Pakhtunkhwa (KP). The need for a nutrition cluster in KP and the Newly Merged Districts (NMDs) remains vital as an effective mechanism to address the ongoing humanitarian needs in the nutrition sector in the province. During the current floods, the Cluster played an active role as a liaison between federal, provincial, and international organizations. Additionally, in coordination with other agencies, it provided Ready-to-Use Therapeutic Food (RUTF) cartons to the affected regions of KP.

Federal Organizations

Ministry of Planning, Development, and Special Initiatives

The Ministry of Planning, Development & Reform (MPDR)/Planning Commission (PC) provides policy guidance, planning, and coordination, serving as the "institutional home" for nutrition planning and programming at the national level, including AJK, GB, and NMDs, to carry out development and recurring activities. The Nutrition section, a regular section within MPDR, acts as a resource, provides guidance, and offers a reference point for cross-cutting multi-sectoral food and nutrition interventions. The SUN secretariat housed in the Nutrition Section serves as a bridge between

provincial, national, and international stakeholders, providing a platform for multi-sectoral and multi-stakeholder coordination and harmonizing efforts for progress at the Pakistan level.

The Ministry has recently issued the Pakistan Multi-Sectoral Nutrition Strategy, in collaboration with national and international stakeholders, to effectively address nutrition-related deficiencies in Pakistan.

The Post-Disaster Needs Assessment (PDNA) – Main Report of the 2022 Pakistan Floods was also prepared under the leadership of the Ministry of Planning, Development, and Special Initiatives through its Flood Coordination Cell, supported by the Asian Development Bank, the European Union, the United Nations agencies with technical facilitation by the United Nations Development Program, and the World Bank. The assessment estimates total damages to exceed USD 14.9 billion, with total economic losses reaching about USD 15.2 billion. The estimated needs for rehabilitation and reconstruction in a resilient way are at least USD 16.3 billion, excluding much-needed new investments to support Pakistan's adaptation to climate change and overall resilience to future climate shocks. WFP and other food and nutrition-related organizations were represented by the agriculture and food security sector, which was led by the Food and Agriculture Organization of the UN.

Ministry of National Health Services, Regulation & Coordination (MNHSR&C)

The Ministry of National Health Services, Regulation & Coordination (MNHSR&C) is the lead ministry for nutrition-specific intervention delivery. Its major roles and responsibilities include health emergency management, policy planning and guidance, compliance and reporting to international health agreements, research, special studies, and technical training. It also handles health information collection, consolidation, analysis, and its relay for decision-making at the appropriate levels (including management information systems, disease surveillance, epidemiological surveillance, and registries). Other functions include regulatory roles, coordination with the provinces, tracking progress against priorities, and donor coordination on technical aspects. MNHSR&C leads and coordinates nutrition-specific interventions at the federal level.

During the floods, the Ministry played an active role by promoting awareness regarding the nutritional needs of the flood-affected population, especially regarding the promotion of breastfeeding during flood-related emergencies.

HEALTH PROGRAMS

No.1-2 (Emergency-IYCF)/2022-Dir(P/N)-NHSRC
GOVERNMENT OF PAKISTAN
Ministry of National Health Services, Regulations and Coordination
Telephone: +92 51 9213142; Fax: +92 51 9255096
****

Islamabad the 10th August, 2022

Subject: **Protection and promotion of breastfeeding in Flood Emergencies.**

Respected Dear Sir

Appropriate feeding practices are essential for growth, development and survival of infants and young children. Given the criticality of the issue and the considerable experiences gained since that time especially in relation to large scale emergencies, different guidelines have been developed for IYCF by Nutrition Wing MoNHSR&C with the support of UNICEF and WHO, including IYCF in Emergency guidelines.

2. Pakistan is hit by the floods now a days leading to huge catastrophes at many places in the country especially Balochistan, northern Sindh and South Punjab and KP. Not only hundreds of precious lives have been lost but hundreds of thousands of people have been displaced requiring support in the form of shelter, protection and food. Simultaneously there are dangers of spread of communicable diseases due to improper hygiene and sanitation and insufficient health services at different areas. So there is a need to adopt preventive health and nutrition measures. It is important to note that malnourished population especially women and children are already in an immune compromised state and if denied from malnutrition treatment or nutritious diet, they may develop severe life threating condition.

3. I would like to commend your leadership to tackle the flood emergency in the country. The response to the devastating floods continues to be challenging with increasing number of people being displaced, deaths and scarcity of resources. Concerted efforts to roll out social protection measures through cash and non-cash assistance to mitigate the negative socio-economic impact of displacement are also welcomed.

4. The Nutrition Wing of Ministry of National Health Services, Regulation & Coordination (MoNHSRC) would like to take this opportunity to further support your efforts in tackling the food and nutrition issues. Distribution of food rations provides a golden opportunity for disseminating messages on adequate nutrition practices, mainly targeting the most vulnerable (women and children). It is important to mention here that Breast Milk Substitutes are very dangerous for health and survival of Newborn and infants. WHO and UNICEF as well as guidelines developed by MoNHSR&C strongly recommend only and only breast feeding for children under 6 months of age, with continued breast feeding from 6 to 23 months along with age appropriate complementary feeding. Emergencies are a time of stress for the families especially parents and they are more likely to adopt unhealthy and dangerous practices of BMS use for infants and young children. It is therefore extremely important to protect these families from illegal promotion of BMS by the industry through free of cost donations but also safeguard the health and survival of the children by promoting and protecting breast feeding only.

Best regards

(Dr. Baseer Khan Achakzai)
Director Health Programs & Nutrition

The Honorable Chairman
National Disaster Management Authority (NDMA)
Prime Minister Secretariat, Islamabad
CC

- Chairpersons Provincial Disaster Management Authorities, All Provinces
- SPS to the Secretary, Ministry of NHSR&C, Islamabad
- SPS to the Director General Health, Ministry of NHSR&C, Islamabad
- Director General Health Services, Director Nutrition Programs, all provinces and regions
- National Coordinator Nutrition & NFA, MoNHSR&C, Islamabad

Nutrition Wing, Third Floor, Kohsar Building, Pak Secretariat, Constitution Avenue, Islamabad
nfapakistan@gmail.com

Benazir Income Support Program (BISP)

BISP operates under the Ministry of Poverty Alleviation. The BISP Nashonuma Program provides active help and support to deserving families.

The primary objectives of the program are to prevent stunting in children under two years of age, improve weight gain in pregnant women during pregnancy, reduce anemia and micronutrient deficiencies, and prevent low birth weight. The World Food Program is the lead implementing partner for Benazir Nashonuma.

A total of 50 Benazir Nashonuma Centres have been established across 14 districts at the district and tehsil levels to provide health services and conditional cash transfers for children under two years old: Rs 1,500 for a boy child and mother, and Rs 2,000 for a girl child, mainly to prevent stunted growth in children. For this purpose, an additional amount of one billion rupees was allocated for flood-affected mothers and children, apart from the existing beneficiaries. In addition to this program, BISP has been tasked with disbursing Rs 25,000 per family to flood victims by the Prime Minister, given the severity of the flood situation in the country.

National Disaster Management Authority (NDMA)

NDMA designated special relief units to handle relief cargo at ports and airports, as well as its onward transportation, as significant amounts of bilateral in-kind relief items continued to arrive. Since early September, NDMA and WFP facilitated relief cargo at ports and airports and supported onward transportation to more than 25 different locations across Pakistan, via 2,030 contracted trucks.

Pakistan Meteorological Department

The Pakistan Meteorological Department provides flood forecasting and early warning services, along with the generation of weather data and its dissemination to relevant agencies. During the 2022 floods, the department stated that the floods were caused by the La Nina effect. This weather phenomenon refers to cooler-than-normal ocean surface temperatures in the eastern and central Pacific Ocean, which in turn causes heavy monsoon rains in Pakistan. The department also predicted that the La Nina effect is likely to increase in the future.

Provincial (KP) Departments

Khyber Pakhtunkhwa Stunting Prevention and Rehabilitation Integrated Nutrition Gain (KP SPRING)
KP SPRING is a project of the Planning & Development Department of KP. KP SPRING has operationalized 20 sites in three districts: DIK, Tank, and

Nowshera, as they were severely affected by the floods. The main aim of the SPRING sites was to reduce stunting through preventive, nutrition-specific interventions focusing on adolescent girls, lactating women, and children.

Provincial Disaster Management Authority (PDMA)

As shown in the letter below, PDMA constituted Thematic Working Groups in response to the emergency declared by the government of KP, to ensure a better and more cohesive response.

PDMA/PaRRSA
Provincial Disaster Management Authority/
Provincial Reconstruction Rehabilitation & Settlement Authority
PDMA Building Plot 46-B, Sector B-2, Phase –V, Hayatabad, Peshawar
Phone: (091) 9216212, Fax: (091) 9216212
www.pdma.gov.pk

REVISED NOTIFICATION

PDMA/KP/FLOOD-22(1/7)/20222. In view of the ongoing flood emergency situation, the Competent Authority is pleased to constitute the following thematic working groups in pursuance of the emergency declared by the Government of Khyber Pakhtunkhwa for a better and cohesive response:

S. No	Working groups	UN Co-chair	Departmental Chair	Member from PDMA
1	Health	WHO & UNFPA	Health	Director DRM, PDMA
2	Nutrition	UNICEF	Nutrition Directorate /Health	PM, GCC, PDMA
3	WASH	UNICEF	LGRDD/PHED	PM, GCC, PDMA
4	Food Security & Agriculture	WFP & FAO	PDMA & Food/ Agriculture Department	Director DRM, PDMA
5	Protection (Women & Child Protection & GBV)	UNHCR, UNWOMEN, UNICEF & UNFPA	Social Welfare Department	PM, GCC, PDMA
6	Education	UNICEF	Education Department	Deputy Director, T&A, PDMA
7	Early Recovery, Rehabilitation, Reconstruction.	UNDP	PDMA, C&W, Irrigation, PHE	Deputy Director Infra
8	Shelter / NFIs	IOM/IFRC	PDMA	Dey. Director Relief

Generic TORs of the working groups are as under, however, each working group may develop its own TORs:

- Ensure timely and robust coordination among Government Departments and UN agencies including humanitarian organizations operating in KP;
- Departmental / thematic gap analysis
- Develop joint response plans/frameworks, and conduct periodic reviews;
- Identify programmatic synergies and thematic issues which overlap or affect more than one sector to be addressed by a multi-dimensional approach;
- Ensure sharing of best practice and lessons learned among different sectors for a better and cohesive response to the ensuing flood emergency situation;

-sd-

Directorate General Health Services

The Directorate General Health Services addressed a letter to the Director General of PDMA regarding the protection and promotion of breastfeeding in flood-affected areas. The same is reproduced below for reference:

DIRECTORATE GENERAL HEALTH SERVICES
KHYBER PAKHTUNKHWA PESHAWAR

mmunications should be addressed to the Director General Health Services Peshawar and not to any official by name.

E-Mail Address: dghealthkpk2014@gmail.com Office Ph# 091-9210269 Fax# 091-9210269 Exchange# 091-9210239

No. 495 / DGHS/Nut/Flood . Dated: 05 / 09 / 2022

To

Director General PDMA, Khyber Pakhtunkhwa.

Subject: **PROTECTION AND PROMOTION OF BREASTFEEDING IN FLOOD EMERGENCIES.**

In response to the Flood emergency situation in various districts of Khyber Pakhtunkhwa, the Directorate General Health Services, Khyber Pakhtunkhwa is assessing all options to ensure the Nutritional wellbeing of most vulnerable mothers and children, particularly those less than 05 years of age. The risk of malnutrition is particularly more alarming due to the resulting Food Insecurity situation due to widespread destruction of roads infrastructure and standing crops.

Reference to Nutrition Wing, Ministry of National Health Services, Regulations & Coordination, Islamabad letter on the subject noted above, it is to communicate to all concerns that department of health is committed to protect, support and promote breastfeeding for children between 0 to 24 months of age and regulating the marketing and promotion of designated products including breast milk substitutes and feeding bottles etc. under the **"Khyber Pakhtunkhwa Protection & Promotion of Breastfeeding & Child Nutrition Act, 2015" & Rules, 2017.**

During the current Pandemic, the Global call emphasizes on; **"Do not call for, support,** accept or **distribute donations of BMS (including infant formula), other milk products, complementary foods, and feeding equipment (such as bottles and teats). Do not include purchased or donated supplies in general distribution".**

It is important to mention here that Breast Milk substitutes are very dangerous for health and survival of Newborn and infants. WHO and UNICEF as well as National IYCF in Emergencies Guidelines- 2017, (Use and Distribution of BMSs in Emergencies Contexts- Page 8) clearly states that "The use and distribution of BMS in emergencies should be tightly controlled to protect infants and caregivers from inappropriate marketing of BMS and to control unsolicited donations and distribution of unsuitable products, according to national and international guidance"

It is therefore requested to direct/instruct everyone engaged as part of the response to the flash floods to promote and protect breastfeeding and curb the inappropriate use of the BMS/powdered milk, which is unsafe, expensive and detrimental to the health of children.

ADDL. DIRECTOR GENERAL HEALTH
Services, Khyber Pakhtunkhwa, Peshawar.

Copy Forwarded to the:

Al-Khidmat Foundation

Al-Khidmat Foundation Pakistan, a nonprofit organization, arranged 41 kitchens, 85,200 cooked meals, and 171,041 food packs. In the sector of safe drinking water, the Foundation provided 21 units of Mobile Water Filtration Plants, 10 units of water filtration plants, 95 water tankers, and 132 water storage tanks. The beneficiaries of clean drinking water were approximately 266,341 people per day.

Scaling Up Nutrition (SUN) – KP

It is a subordinate wing of the Planning & Development Department, KP. Its main aims include the provision of technical guidance to relevant sectors (including health, agriculture, food, education, local government, public health engineering, social welfare, and industries) on evidence-based interventions pertaining to nutrition-sensitive and specific strategies. It also assists these sectors in the development of sector-specific nutrition-sensitive development plans and donor proposals as needed. Additionally, it liaises with donors/UN agencies and other organizations to align nutrition-related interventions with a multi-sector integrated nutrition strategy.

During the floods, SUN-KP constituted a Provincial Nutrition Working Group to maintain active liaison with relevant provincial agencies like the Directorate of Nutrition of the Directorate General Health Services, the Directorate of Food, and other agencies such as PDMA, UNICEF, WFP, WHO, UNHCR, and relevant NGOs. Data and information flow was managed in coordination with SUN-KP, PDMA, and the Pakistan National Nutrition Sector, UNICEF. The Working Group mentioned above prepared an elaborate Nutrition Sector Response & Preparedness Plan and a Rapid Need Assessment. Some of the actions executed under the plan are as follows:

- **Outpatient Therapeutic Feeding Program (OTP)**

The Outpatient Therapeutic Feeding Program (OTP) brings services for the management of Severe Acute Malnutrition (SAM) closer to the community by making services available at decentralized treatment points within primary health care settings, through the use of ready-to-use therapeutic foods, community outreach, and mobilization.

During the floods, OTP sites remained functional in flood-affected districts like Chitral Upper & Lower, Dir Lower, Swat, and Malakand. Moreover, 322 all-nutrition sites, where therapeutic food was provided to the community, were also established in the flood-affected Union Councils.

- **Assistance for BISP Nashonuma Beneficiaries** Assistance was provided to the beneficiaries of the BISP Nashonuma program (14 UCs) in flood-affected districts.
- **Community-based Acute Malnutrition Model (CMAM) Project** Funded by the Kingdom of Saudi Arabia and the World Food Program, the Community-based Acute Malnutrition Model (CMAM) Project introduced 10 Targeted Supplementary Feeding Program Sites in Shangla and Kohistan in coordination with PDMA, SUN-KP, and representatives of DGHS.
- **Distribution of Ready-to-Use Therapeutic Food (RUTF)** Available supplies of Ready-to-Use Therapeutic Food (RUTF) were distributed to flood-affected districts by the KP government with the help of relevant international organizations like WFP, UNICEF, and the NGO Integrated Health Partners (IHP).
- **Blankets and Supplementary Feeding Programme** The WFP executed a Blanket and Supplementary Feeding Programme for flood-affected districts. Around 53,000 flood-affected people benefited from it over 2 months. General Food Distribution (GFD) activities were also carried out by WFP in affected areas in collaboration with SUN-KP and other relevant stakeholders.
- **Additional Support for Nutrition Services** Additional support for nutrition services was provided in DIK & Tank by UNICEF for children with Severe Acute Malnutrition (SAM).
- **Details of the above efforts are tabulated below for reference:**

S. No.	Name of District	No of OTP	UNICEF OTP Sites	RUTF Carton Dispatch
1	Shangla	11	0	70 IHP
2	Dir (Lower)	19	07	300 UNICEF
3	Dir (Upper)	19	0	80 IHP
4	Swat	26	08	350 UNICEF
5	Tank	13	0	150 IHP
6	D I Khan	19	0	150 IHP
7	Swabi	29	0	70 IHP
8	Chitral (Lower)	16	12	300 UNICEF
9	Chitral (Upper)	-	-	-
10	Kohistan (Upper)	8	0	30 IHP
11	Kohistan (Lower)	-	-	30 IHP

12	Charsadda	25	02	200 UNICEF
13	Peshawar	31	34	400 UNICEF
14	Nowshera	22	0	120 IHP
15	Malakand	16	04	300 UNICEF
Total	-	**254**	**67 OTP**	**2550**

Analysis

Area Under Consideration

Role of PDMA in providing relief to flood victims by ensuring adequate nutrition and food supply to avoid food insecurity and malnutrition.

Desired State

1. **Identification of Threats from Incoming Floods by Analyzing Data**

- Conducting risk assessments and designing detailed risk reduction solutions for various hazards.
- Development and use of new technologies that support disaster risk management (DRM), such as the collection of high-resolution imagery, use of drone imagery to support better planning and environmental management, and open-source community-based creation of hazard and exposure maps.

2. **Building Resilient Infrastructure in Hazard-Prone Areas to Reduce Potential Damage**

- Improvements in urban infrastructure (particularly stormwater drainage).
- Investments in solid waste management to reduce flood and public health risks.
- Use of nature-based solutions, such as ecosystem restoration and management to mitigate disaster risk.
- Investments in community infrastructure and services, such as water supply and sanitation facilities, roads, and health and education facilities.

3. **Increasing the Capacity of Disaster Risk Management Authorities for Response to Disasters with Early Warnings**

- Building capacity and strengthening institutions to properly operate and maintain early warning systems.
- Upgrading infrastructure to modernize and operate information systems needed to collect data and develop forecasts, particularly for hydro-meteorological hazards (floods and droughts).
- Improving service delivery to offer timely and reliable early warnings to users and communities.

4. **Resilient Reconstruction by Supporting Post-Disaster Assessments and Financing Reconstruction Programs**

- Supporting disaster management authorities at the local level in understanding post-disaster damages and losses using innovative rapid-assessment tools, as well as traditional post-disaster needs assessments.
- Financing recovery programs, including the reconstruction of housing, infrastructure, and the public sector, and building more resilience through safer school projects.

5. **Strengthening Systems & Strategies for Preventing Malnutrition and Food Insecurity**

- Making plans for emergencies by putting the right policies, programs, and strategies in place ahead of time and securing the human resources needed to scale up emergency responses when needed.

6. **Tracking Nutrition Information**

- Monitoring and collecting national data on malnutrition to help make critical decisions before, during, and after a crisis.

7. **Identifying and Managing Risks to Nutrition and Food Security**

- Anticipating threats to good nutrition and developing risk-informed systems and programs that are flexible and poised to adapt when an emergency strikes.

8. **Directing a Coordinated Response for Prevention of Malnutrition and Food Insecurity**

- Leading disaster risk management authorities for timely, well-coordinated, and effective responses, especially when the scale of an emergency is so large that no single agency or authority can address it alone, as witnessed by the 2022 floods.

9. **Preventing Malnutrition Before It Starts**

- All the steps mentioned above will directly or indirectly prevent malnutrition before it starts. This will contribute to the overall improvement of the nutrition status in Pakistan.

Current State

- No uniform disaster management policy in the country, from the national level to the district and community levels.
- Natural disasters are handled at the national level by NDMA and at the provincial level by PDMA. However, disaster management institutions are not yet established at the local level.
- No strategy regarding public awareness has been devised by PDMA.
- The Disaster Management Ordinance of 2006 deals with disasters at the federal level. No such document exists at the provincial level.
- In the current floods, rescue operations were extremely difficult due to the lack of professional expertise, specialized machinery, equipment, and limited internal capacity, as well as the non-availability of foreign specialists within a short time frame.

Actions Required

- There is a wide gap between policy and implementation that needs to be addressed. Natural disasters in our country are handled at the federal and provincial levels, and disaster management institutions are not yet established at the local level. This exacerbates the vulnerability of the people to a considerable extent. Consequently, the help for needy flood victims is often delayed and insufficient. Therefore, disaster risk management authorities need to be strengthened at the lowest levels, as they are the frontline organizations for disaster risk reduction and response. In this regard, a decentralized mode of operation should be adopted from the national to the regional (provincial) level, from the regional to the district level, and from the district to the local level (union council). This would help follow an integrated framework, bringing all stakeholders and victims together to develop organized emergency management planning systems and operational frameworks that effectively address the immediate needs of disaster victims.
- Additionally, during the current floods, rescue operations were extremely difficult due to a lack of professional expertise, specialized machinery, and limited internal capacity, as well as the non-availability of foreign specialists within a short time. The responsibility for building community preparedness and catalyzing coping strategies lies with the government and disaster management

institutions in the areas of disaster preparedness and sharing information to raise community awareness. This requires a well-coordinated mechanism between national and provincial agencies with active participation from community members. Therefore, PDMA should identify key players in a disaster, such as the police, fire services, and community organizations, and conduct training sessions to teach them how to collaborate effectively during a disaster. Emergency management awareness can be promoted by PDMA even when there is no disaster, as many organizations are unaware of the measures to take during such events.

- On the lines of the Disaster Management Ordinance of 2006, the provincial government may draft a document to better define the aims and objectives of PDMA.
- PDMA may be strengthened by the provincial government to enable it to:

    - Adopt high-resolution imagery for early flood warnings.
    - Provide technical training to selected members of flood-prone communities to build resilient infrastructure in hazard-prone areas.
    - Establish programs to track nutrition information and monitor and collect data on malnutrition, so that risks to nutrition and food security may be identified and managed in a timely manner.

SWOT Analysis of Nutrition-Related Institutions of KP

Strengths	Weaknesses
• There are institutions in KP dedicated to providing adequate nutrition to the general public. Examples include SUN-KP, the Food Department KP, and the Nutrition Wing of DGHS.	• There is a lack of coordination between international, federal, and provincial organizations.
• The functioning of these institutions is supplemented by international organizations that are highly active in the province in the context of nutrition. Examples include WFP, UNICEF, and FAO.	• There is a lack of coordination among provincial organizations. • There is a heavy reliance on international organizations by federal and provincial organizations. • There is a lack of skilled staff in provincial organizations. • Provincial organizations have no warehouses where RUTF and other nutritional packages can be stored. • There is no preparedness on the part of provincial organizations regarding floods. • Provincial organizations have no active liaison with Utility Stores or other relevant organizations for food provision. • Data management and maintenance are not properly handled.
Opportunities	**Threats**
• The havoc wreaked by the recent floods has sensitized both the government and the general public to the seriousness of nutrition-related problems.	• The Pakistan Meteorological Department has warned that the incidence of floods due to the La Niña effect is likely to increase in the near future. This increases the likelihood of floods in Pakistan. • Global warming, caused by the greenhouse effect, is on the rise. Moreover, major global players contributing the most to global carbon emissions are beyond the control of the government of Pakistan. This also increases the likelihood of floods in Pakistan.

	• Establishing proper infrastructure and human resources to tackle flood-related malnutrition may take a long time in Pakistan.

EETH Analysis of Nutrition-Related Institutions of KP

Enhancement of Strengths	**Elimination of Weaknesses**
• Joint assessments and regular information sharing between disaster risk management authorities to address any hazard before its occurrence.	• Rehabilitation of waterways to avoid major damage caused by floods.
• Planning and capacity-related issues can be tackled by involving authorities from the national level down to union-level communities.	• Deforestation and soil conservation should be prevented at all levels.
• Preparedness measures should be taken in advance of any expected hazard to prepare for and reduce the potential adverse impacts of the hazard.	• Capacity building of communities and relevant stakeholders to reduce the death toll in any flood.
• Village-level contingency planning for providing nutrition and food to flood victims to avoid malnutrition and food insecurity.	• Crop insurance should be implemented to secure farmers' earnings from their fields.
• Information and procedures should be developed comprehensively and shared with the public to ensure the evacuation of people and animals to safe places during floods.	• Capacity building of farmers to develop flood-resilient crops.
• Stockpiling of food, water, and feed at the national, provincial, and local levels to avoid delays in providing food supplements to flood victims.	• Coordination between various stakeholders is limited to information sharing only; it should extend from planning to implementation. • Create a liaison body responsible for coordination from the national level down to the local level quickly. • Conduct assessments of

	previous floods at the national level to prevent future emergencies. • Reduce reliance on international organizations as much as possible. Focus on local resources.
Take Advantage of Opportunities	**Hedge Against Threats**
• Implement systems to disseminate information to the general public to create awareness about malnutrition and food insecurity.	• Allocate funds for the rehabilitation and reconstruction of productive infrastructure related to agriculture, which will secure nutrients and food supplies for flood victims.
• Create a dynamic emergency system for future floods to secure food supplements for flood victims.	• Build the capacity of various stakeholders to perform their assigned responsibilities in contingency plans at the national, provincial, and union levels to counter malnutrition and food insecurity.
• The recent floods have sensitized both the government and the general public to the seriousness of nutrition-related problems. This opportunity can be used to secure better financing for provincial institutions to improve infrastructure and human resources.	• Support the horticulture and agriculture sectors to stock food/nutrients for future hazards. • Conduct research to improve storage facilities, raised seed beds, windbreaks, firebreaks, and livelihood diversification, making disaster risk management more reliable.

Logical Framework Matrix

Overall Objective	**Logic**	**Indicators**	**Means of Verification**	**Assumptions**
Specific Objective	Reduction of malnourishment	Incidence of malnourishment will reduce	Surveys may be conducted by international, national and provincial organizations	[6] Will helping the flood prone community reduce malnourishment in KP?
Output	Ready availability of food to [6] ~~flood prone~~ malnourished community [6] of KP with a special focus on flood prone areas	Vulnerable community will be satisfied	Conducting interviews, checking stock registers and checking vehicle log books	[5] What if the malnourished have no resources to reach to the location of warehouse
Activity	Construction of [1]50 [3] - 70 warehouses [4] at a safe location in [6] KP with a special focus on flood prone areas , [5] along with provision of suitable mode of transportation, [2] with the help of WFP, where required.	Activity of concerned department, C & W	**Warehouses:** Field visits **Vehicles** Checking documents and physical verification	[3] Due to devaluation of rupee, fifty warehouses may not be built [4] The warehouses may get inundated
Input	➢ Finance	Ready availability of funds	Relevant documents of Finance Department and bank statements	[1] Provincial government does not have enough funds, how many warehouses? [2] Provincial government still does not

				have enough funds
Pre-condition is Political will				

Conclusion

Floods are the most frequent type of natural disaster and occur when an overflow of water submerges land that is typically dry. Pakistan, due to its geographical location, is often exposed to floods caused by monsoon rains. During the recent floods of August 2022, significant damage, both human and otherwise, occurred. Additionally, malnutrition-related problems were exacerbated by the floods. Food security and nutritional issues in the affected areas were already chronic, as these regions were impoverished and heavily reliant on livestock and agriculture. Since both sectors were severely affected by the floods, the situation worsened. Consequently, various international, national, and provincial organizations took action during and after the flood to provide relief to the affected people. While many relief goods and services were provided, some gaps remain. Concerted efforts are required to address these gaps and ensure proper nourishment and resolve health-related issues, especially for children and lactating mothers.

Recommendations

There is a significant gap between policy and implementation that needs to be bridged. In our country, natural disasters are managed at the federal and provincial levels, but disaster management institutions are not yet established at the local level. This significantly exacerbates people's vulnerability. As a result, the help provided to flood-affected individuals is often delayed and insufficient. Therefore, disaster risk management authorities must be strengthened at the grassroots level, as these are the frontline organizations for disaster risk reduction and response.

In light of this, a decentralized operational model should be adopted, extending from the national level to the regional (provincial) level, then from the regional to the district, and finally from the district to the local level (union council). This will help implement an integrated framework that brings all stakeholders and victims together to develop an organized emergency management system and operational framework to reach disaster victims and meet their immediate needs effectively.

Moreover, in the recent floods, rescue operations were extremely challenging due to a lack of professional expertise, specialized machinery, limited internal capacity, and the non-availability of foreign specialists within a short time. In building community preparedness and catalyzing coping strategies, the responsibility lies with the government and disaster management institutions to enhance disaster preparedness and share information to raise community awareness. This requires a well-coordinated mechanism between national and provincial agencies, with active participation from community members. Therefore, training sessions for key players like police, fire services, and community organizations should be conducted to improve collaborative disaster response. Creating awareness about emergency management should be an ongoing process carried out by relevant organizations, even in the absence of an active disaster, as many organizations are unaware of the proper measures to take during a disaster.

It is globally well-established that achieving nutrition security requires a complex, multi-sectoral response, involving well-coordinated efforts across various sectors through multi-sectoral planning, sectoral implementation, and monitoring. This translates into improving the quality and coverage of 'nutrition-specific' interventions, maximizing synergies for 'nutrition-sensitive' approaches, and creating a conducive enabling environment to shape political, institutional, and policy processes for nutrition. Therefore, there is an urgent need to prioritize addressing malnutrition and ensuring an effective and timely response to the Pakistan Vision 2025, the Global World Health Assembly Targets, the Framework of the Second International Conference on Nutrition (ICN-2), Sustainable Development Goals (SDGs), and the Global Scaling up Nutrition (SUN) Movement.

In this regard, disaster management authorities should be strengthened by the provincial government to establish programs for tracking nutrition information and monitoring and collecting data on malnutrition, ensuring that risks to nutrition and food security are identified and managed promptly. Active liaison should be established between the Ministry of National Health Services, Regulations and Coordination, and the Provincial Disaster Management Authority. Additionally, SUN-KP should be declared the central organization for tackling all nutrition-related issues in the province. SUN-KP may work in close liaison with relevant international and national organizations, particularly the Nutrition Wing of DGHS and the Food Department of KP.

A comprehensive Nutrition Sector policy should be drafted by SUN-KP, outlining the responsibilities of all relevant organizations to ensure swift and effective flood responses across various sectors in case of any future emergencies. Lastly, institutions like the Utility Stores Corporation of Pakistan should work closely with SUN-KP to devise mechanisms for

ensuring food provision during flood events.

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