

## **Climate change: A country-wide comprehensive training program carried on by BCCP to capacitate health professionals**

A widescale and comprehensive training program has been carried out by BCCP in 21 climate stressed districts to capacitate health professionals of the GoB's health care facilities at the upazila and districts. With the funding support from the World Health Organization this training program followed two aspects of the climate change issues as "Climate Change and Health" and "Climate Informed Hospital Emergency Preparedness and Response Plan". Both of these important issues of climate change have been addressed in two separate curriculums for the training program titled as "Climate Change and Health" and "Climate Informed Hospital Emergency Preparedness and Response Plan" which is followed by the global standard curriculum developed by WHO and has further been adopted by the IEDCR of the DGHS. Started from the May 27, 2024 this training has been ended up at September 12, 2024.

### **Objective of developing two curriculums**

In respect to developing two curriculums the objective was that the climate change has an impact on a wide range of health care program areas, including communicable and noncommunicable diseases, maternity and child health, nutrition and so on. Professionals in the public health and private health sectors are lack of up-to date knowledge on the harmful effect of climate change on human health and health system, as well as how to adopt the sectors to increasing climate impact on health in a systemic manner. The curriculum on "Climate Change and Health" was focused to build the capacity of the health sector professionals, includes health managers, medical doctors and nurses; by expanding technical knowledge on the impact of climate change on health and improve capacity to deal with the additional diseases burden caused by climate change in climate vulnerable areas of the country.

The curriculum on "Climate informed Hospital Emergency Preparedness and Response Plan" was developed considering the tool suggested by the WHO on pandemic management. It was



*A plenary session is going on*

structured according to nine key components each with a list of priority actions. As hospitals are experiencing an excessive demand for health services due to critical events are strongly to be prepared to implement each action of hospital emergency preparedness and response plan effectively and as soon as required. This effort aims to provide technical guidelines and procedures to health managers and workers for managing health emergencies and strongly incorporated the climate

parameters to become strong vibe as climate change is the next threat of the world as well as to Bangladesh and the community people.

Both of these training courses were for two days each where the training on "Climate Change and Health" was followed with the "Climate informed Hospital Emergency Preparedness and Response Plan". The participants of these training programs were the health managers, medical officers, medical consultants and nurses of the Upazila Health Complexes, district hospital and the supervisory doctors of the Civil Surgeon offices.

BCCP in consultation with IEDCR, DGHS and WHO prepared and finalized the training curriculum, training schedule, dates, venues, arranged necessary equipment, logistics and ensured presence of participants through call-up notice. Maintaining good liaison with Manager GEF project and IEDCR-DGHS, BCCP also arranged to send invitation through Civil Surgeons of respective districts to the participants for entire 25 batches of training program in 21 districts to provide training to 500 GoB Health Managers/Professionals of 11 climate stressed areas in Bangladesh.

### Conduction of training

As per the contract of the assignment BCCP was entrusted to conduct 25 batches of two-day long



*Participants developing HCF wise action plan*

non-residential training on each of the two separate trainings for health professionals in climate stressed areas of Bangladesh. Accordingly, BCCP conducted all of 25 batches and provided training to 499 Health Managers/Professionals including UHFPO, Residential Medical Officer, Medical Officer, Nursing Supervisor and the Senior Staff Nurses. Among the participants 295 were male and 204 were female. In terms of participants ratio by male and female, 59.12% were male and 40.88% were female. The number of district and climate stressed areas covered 21 and 11 respectively. The number of

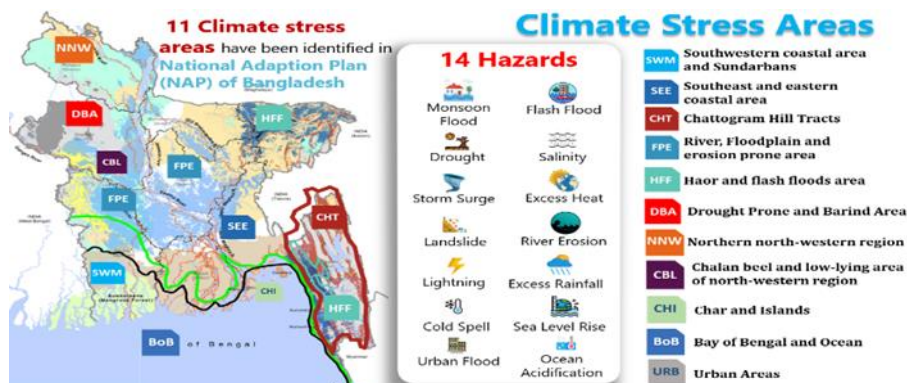
Upazila covered 155, Number of Health Care Facility Covered 155 and Health Care Facilities by category were District Sadar Hospital and Upazila Health Complexes. Participants by category of health professionals were as below:

- UHFPO	:	136
- Doctors	:	202
- Nurses	:	157
- Others	:	4

Among these participants Facility Manager (UHFPO) were 27.25%, Doctors (including Residential Medical Officers-RMO, Medical Officers, Medical Officers-Disease Control, Specialist Medical Consultants) were 40.48%, Nurses were 31.46%, and others (including Health Inspectors, Medical Technicians, Health Education Officers) were 0.80%. To ease the execution of the training program within the stipulated time frame BCCP also arranged simultaneous batches of training in four districts. All these training programs were held at the district level and the Civil Surgeons of respective districts inaugurated the opening and closing sessions of all these training programs. A common urge was resonated amongst the entire training programs by the Civil Surgeon's that underscored the need for training on "Climate Change and Health" and "Climate informed Hospital Emergency Preparedness and Response Plan" to know about the impact and effect of climate change and manage the health outcome efficiently due to the impact of Climate Change.

### The training on Climate Change and Health

In the training on “Climate Change and Health” participants were engaged to work out climate sensitive diseases of climate stressed areas they are working on. The exercise over these findings were regularly conducted and the information has been collected from eleven climate stressed areas in Bangladesh.



A categorization and mapping by Bangladesh geographical situation

The Climate Stressed areas of Bangladesh have been earmarked in different zones based on the nature of the effect of climate change which are; Char and islands area (CHI), Haor and flash floods area

(HFF), River, floodplain and erosion-prone area (FPE), Drought-prone and Barind area (DBA), Northern and north-western region (NNW), Chalan beel and the low-lying area of the north-western region (CBL). These 11 climate stressed areas comprised of 21 districts have been taken on in BCCP's training rollout plan. These 21 districts are Natore, Naogaon, Dinajpur, Nilphamari, Kurigram, Gaibandha, Natrokona, Jamalpur, Shariatpur, Patuakhali, Pirojpur, Feni, Noakhali, Laxmipur, Khagrachari, Rangamati, Satkhira, Bagerhat, Sirajganj, Sunamganj and Bandarban.

The training program was held in 21 districts that covered the climate stressed areas across Bangladesh were as below:

Climate stress area	Districts covered
Northern and North-western region (NNW)	Dinajpur
South-east and Eastern coastal area (SEE)	Noakhali, Feni, Lakshmpur
Haor and Flash floods area (HFF)	Netrokona, Sunamganj
River, Floodplain and Erosion-prone area (FPE)	Kurigram, Nilphamari
Drought-prone and Barind area (DBA)	Naogaon
Chalan beel and the Low-lying area of the North-western region (CBL)	Natore, Sirajganj
Char and Islands area (CHI)	Jamalpur, Gaibandha Patuakhali
South-western coastal area and the Sundarbans (SWM)	Pirojpur, Shariatpur
Bay of Bengal (BOB)	Satkhira, Bagerhat
Chattogram Hill Tracts (CHT)	Bandarban, Khagrachari Rangamati

### Findings over the collected information

From the training session in different climate stressed areas of Bangladesh, the BCCP team found some contributing factors associated with diseases. The below table shows that the most common diseases are derived from waterborne and vector-borne diseases. Some airborne diseases also emerge due to climate change. Adding to that malnutrition, mental health problems and cardiovascular diseases are also found in different areas.

### The findings over the climate sensitive diseases by climate stress areas

Climate stress areas	Climate sensitive diseases			
	Vector-borne	Water-borne	Air-borne	Others
<b>FPE- river, floodplain, and erosion-prone areas</b>	Dengue fever, Malaria, Kala-azar, Leishmaniasis, Filaria, Chikungunya.	Cholera, Enteric fever, Diarrhoea, Giardiasis, Dysentery, Typhoid, Amoebiasis, Hepatitis A, acute watery, acute gastroenteritis.	Meningo Coccoal Meningitis, Influenza, Pneumonia, common cold, chicken pox, Tuberculosis, Bronchiolitis.	Snake bite, heat stroke, Scabies, drowning, insect bite, cardiovascular diseases, depression, Skin diseases, anxiety, allergy, Tinea, food poisoning, Eclampsia, pre-eclampsia, UTI, Gynecological problem (PID, Cervicitis), Diabetics
<b>NNW- Northern Northwestern region</b>	Dengue fever, Malaria, KalaAzar, Leishmaniasis, Chikungunya.	Cholera, Diarrhoea, Hepatitis A, Dysentery, Typhoid, Enteric fever, Giardiasis,	Influenza, Pneumonia, common cold, Tuberculosis, Whooping cough	
<b>DBA- drought-prone and Barind areas</b>	Dengue fever, Malaria, Leishmaniasis, Kala-azar,	Cholera, Diarrhoea, Hepatitis A, Dysentery, Typhoid, Enteric fever, Giardiasis,	Influenza, Pneumonia, common cold, Tuberculosis,	
<b>HFF- Haor and flash flood areas</b>	Dengue fever, Malaria, Kala-azar, Chikungunya,	Cholera, Diarrhoea, Hepatitis A, Dysentery, Typhoid, Enteric fever, Giardiasis,	Influenza, Pneumonia, common cold, Tuberculosis, Whooping cough, RTI, ARI,	
<b>CHI- Chars and islands</b>	Dengue fever, , Malaria, Leishmaniasis, Kala-azar, Chikungunya,	Cholera, Diarrhoea, Hepatitis A, Dysentery, Typhoid, Enteric fever, Giardiasis,	Influenza, Pneumonia, common cold, Tuberculosis, Whooping cough, RTI, ARI,	
<b>CBL- Chalan beel and low-lying areas of Northwestern region</b>	Dengue fever, Malaria, Leishmaniasis, Filaria, Chikungunya,	Cholera, Enteric fever, Diarrhoea, Giardiasis, Dysentery, Typhoid, Hepatitis A,	Meningitis, Influenza, Pneumonia, common cold, Tuberculosis, Mumps, tonsillitis	

Climate stress areas	Climate sensitive diseases			
	Vector-borne	Water-borne	Air-borne	Others
<b>SEE- Southeast and Eastern coastal region</b>	Dengue fever, Chikungunya,	Cholera, Diarrhoea, Dysentery, Typhoid, Hepatitis A, AGE,	Respiratory, Asthma, bronchiectasis, RTI, Pneumonia, ARI,	
<b>SWM- Southwestern coastal areas and Sundarbans</b>	Dengue fever, Chikungunya,	Cholera, Diarrhoea, Dysentery, Typhoid, Enteric fever, Hepatitis	Respiratory, Asthma, Pneumonia, bronchiectasis,	
<b>CHT- Chattogram Hill tracts</b>	Dengue fever,	Typhoid, Malaria, Diarrhoea, AWD,	Pneumonia, ARI, RTI,	

In Bangladesh, millions of people are afflicted either directly or indirectly by vector-borne illnesses like dengue, malaria, and diarrhea. In rural Bangladesh, there is a considerable correlation between meteorological conditions and the likelihood of diarrhea in children (Luby SP, et al, 2018; IEDCR, 2022). Drowning deaths rise with extreme weather events such as floods, cyclones, storm surges, and so forth. Drowning and snakebite deaths are two major causes of mortality during extreme weather events. Acute respiratory illness, or pneumonia, was characterized by fever, runny nose, cough, shortness of breath, and increased respirations (indicated by drawing ribs on observation) or by a registered physician's diagnosis. Acute respiratory illness, or pneumonia, was characterized by fever, runny nose, cough, shortness of breath, and increased respirations (indicated by drawing ribs on observation) or by a registered physician's diagnosis.

### **Training on Climate informed Hospital Emergency Preparedness and Response Plan**

The training on “Climate informed Hospital Emergency Preparedness and Response Plan” in Climate Stressed Areas was based on the training manual that was developed for the health managers, professional and allied staff of the primary, secondary and tertiary level hospitals. The topic of the manual covers nine components those are considered to essentially focus on during an emergency for hospital preparedness and response plan includes Command and Control, Communication, Safety and Security, Triage, Surge Capacity, Continuity of Essential Services, Human Resources, Logistics and Supply Management and Post Disaster Recovery. Some of these components were followed by a few practice sessions to conduct during the training while the manual had all of these sessions that have been associated with exercise tools.

The Climate informed Hospital Emergency Preparedness and Response Plan was prepared considering the tool suggested by the WHO on pandemic management. It was structured according to, as mentioned above, nine key components each with a list of priority actions. As hospitals are experiencing an excessive demand for health services due to critical events are

