



Blue Gold Program

Report No. 2

Health and Safety Measures

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Dhaka, Bangladesh**

**Bangladesh Water Development Board (BWDB)
Department of Agricultural Extension (DAE)**

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1. INTRODUCTION

The Blue Gold Program has been designed taking into consideration the experiences of IPSWAM, CDSP, SSWRSDP, SWAIWRPMP, WMIP and other similar projects. The Blue Gold Program area covers 3 districts of Patuakhali, Khulna and Satkhira in the coastal zone of Bangladesh. The program area includes 160,000 ha of polder area and approximately 150,000 households. The aim of the Blue Gold Program is to “Reduce poverty by creating a healthy living environment and a sustainable socio economic development for all the beneficiaries.”

Blue Gold will comply with environmental safety and protection guidelines set forth by the Government of Bangladesh, and comply with the rules and regulations of Bangladesh Department of Environment (DoE) under the Ministry of Forest and Environment.

As a part of its overall planning and as a standard operating procedure, from inception the Blue Gold program has given careful attention to health and safety matters, including the following specific measures:

- Establishment of a Health and Safety Committee and implementation of its recommendations.
- Initiation of Special Measures during States of Emergency.
- Emergency Contingency Planning

This technical report contains the details of these measures.

2. ESTABLISHMENT OF HEALTH AND SAFETY COMMITTEE

To fulfil its duty of care to all those involved in its implementation, Blue Gold established a Health and Safety Committee on 6th October 2013 to develop, implement, and maintain a workplace Injury and Illness Prevention policy for all Blue Gold Program offices in Dhaka, Khulna, Patuakhali and Satkhira with the following characteristics:

2.1 Responsibility

The Blue Gold Health and Safety Committee is responsible to the Team Leader and the Deputy Team Leader, to whom it presents its findings, and also presents to the regular project team meetings, if necessary. They are also responsible for recommending health & safety policies; ensuring overall institutional compliance with policies, statute and regulations; monitoring the effectiveness of the safety programs; and providing central health and safety services to all the Blue Gold project staff and members of the public.

2.2 Terms of reference

The Blue Gold Health and Safety Committee examines all planned project activities and facilities (buildings, transport, equipment etc.) and identifies possible risks to the health and safety of project staff and members of the public. The Committee then frames policies, which will propose reasonable measures to reduce these risks to an acceptable level. The Committee regularly reviews action taken by the project management to implement these measures. The Committee considers and takes into account, if appropriate, suggestions and information supplied to it by project staff members. It also updates its policies and proposals on a regular basis, in the light of changing circumstances.

2.3 Membership

Mr. Mofazzal Ahmed, Deputy Component 2 Leader
Mrs. Sajeda Haider, DRR expert
Mr. A.F.M. Arif, Financial Manager
Ms. Shahanaz Jahan Pushon, Operation Manager

2.4 Meetings

The Committee meets as required and at least semi-annually. The recommendations made and implemented by the Health and Safety Committee are given in the next chapter.

3. ACTIONS RECOMMENDED AND IMPLEMENTED

3.1 Office locations

Office Area	Address
1.Dhaka Motijhel Office	Bangladesh Water Development Board Blue Gold Program Hasan Court(8 th Floor) 23/1 Motijhel C/A,Dhaka-1000 Tel-88027111525
2.Dhaka Farmgate Office (at DAE Premises)	DAE Building,Middle Building-3 rd Floor,Khamar Bari,Farmgate,Dhaka-1212
3.Dhaka Mott Macdonald Office	Mehrab Garden House-NE(K) 13/A (Level-5) Road-83,Gulshan-2 Dhaka-1212
4.Khulna Office	362,Sher-E-Bangla Road Moyla Pota ,Khulna
5.Khulna Office (at Bangladesh Water Development Board Premises)	13,Gagan Babu Road, Koilaghat, Khulna
6.Patuakhali Office at BWDB Premises	Blue Gold Program Bangladesh Water Development Board Campus,Kalika pur,Patuakhali
7.Patuakhali Office cum Guesthouse	West View,263/1 PTI Road,Patuakhali

3.2 Office security

For all main project offices (1, 4, 6 and 7) an arrangement has been made to have a guard posted at the office building entrance during office hours, who prevents the unauthorized removal of equipment, the entry of unauthorized persons, checks on general (fire) safety and security, etc.

3.3 Office Management

3.3.1 Housekeeping

Good housekeeping will lower the chances of a fire starting, so the accumulation of combustible materials in all premises should be monitored carefully. Good housekeeping is essential to reduce the chances of escape routes and fire doors being blocked or obstructed. Therefore, small bins are kept around the office premises and suitable containers are being used before removal of litter. Apart from that also an office inspection check list has been created for ensuring better office management. The dedicated office manager will be responsible for conducting the inspection. (See Annex-1)

3.3.2 Storage

For all Blue Gold offices, the storage of material is managed adequately. The paper records are filed properly in the library's cabinet. For individual's files and document they have been given separate cabinets to ensure proper storage, it is regularly controlled and monitored by the office managers.

3.3.3 Walkways

The use of walkways for temporary storage can introduce tripping or falling hazards and block emergency exits. Therefore walkways of all Blue Gold offices are kept free.

3.3.4 Eating and relaxation facilities

For Dhaka and Khulna project office a separate space with access to water and a sink is provided for having meal and tea. For Patuakhali a similar facility is being developed.

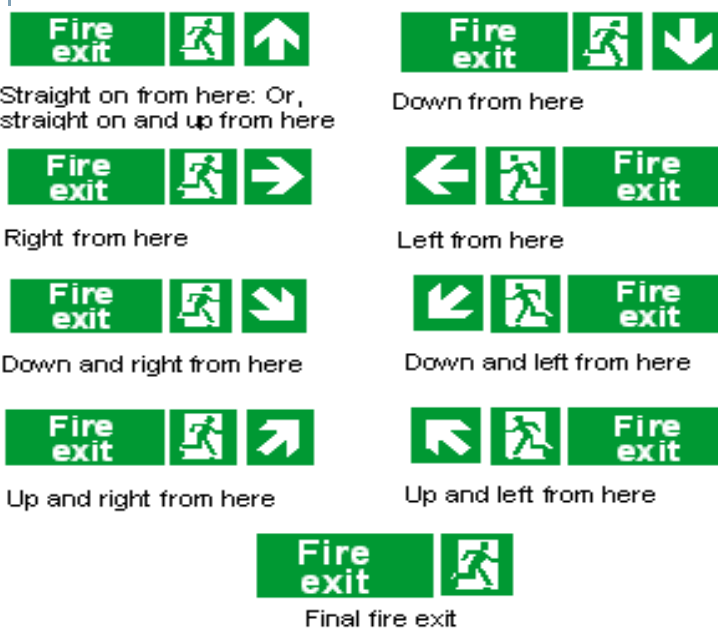
3.4 Fire Precautions

3.4.1 Alarms

Smoke alarms are installed in each office and checked semi-annually. All staff is provided with the nearest Fire Brigade telephone number for entry on mobile phones. These numbers are also posted in each office.

3.4.2 Use of important signs

Different signs are posted in all the Blue Gold offices for example:



3.4.3 Fire exit signs

These signs with texts are used (Exit/Fire Exit) is to assist occupants to identify those routes that are generally used to enter or leave the building (Exit), from those that are provided specifically for evacuation purposes (Fire Exit)

3.4.4 Mandatory signs

The following signs are mandatory fire action signs and must be in blue. This format is best practice:



3.4.5 Fire fighting equipment signs

All fire fighting equipment is indicated by a sign or a red area large enough to allow equipment to be identified easily.

Fire Signs That Do Comply



3.4.6 Escape

In the Dhaka Motijheel office, gates have been made in the window grills on the 7th and 8th floor and are kept unlocked during office hours. An extendable ladder has been installed on Floor 7 and a chain ladder on Floor 8, adjacent to the gates. These can be used to reach the roof of the adjacent building, which can be reached by Fire Brigade ladders from both sides. Emergency Exit signs have been placed appropriately.

However the chain ladder is not sufficient in case of an emergency evacuation. Therefore, several options are under investigation, including the construction of a fire escape stair with adequate capacity to evacuate all project staff within a short period of time. As a temporary measure, a fire safety guard is posted at the entrance of the Motijheel office, since mid-November 2013.

In Khulna the office building is two storied with some open space on the first floor (roof). A gate has been made on the first floor which connects to the open space. Also an additional ladder has been installed on first floor which can be used for climbing down. On ground floor Gates are kept open during office hours.

In Patuakhali the office building is one storied and it already has two gates, therefore both the gates can be used for emergency exit.

Annual fire drills are arranged in all offices under the guidance of the Civil Defence Officer of the Fire Brigade.

3.4.7 Extinguishers, hoses and sand buckets

Fire extinguishers are installed in each office, checked and refilled regularly, and staffs have been trained in their use.

In the Dhaka Motijheel office a special roof water tank has been installed with a flexible hose on the 8th Floor, suitable for extinguishing small fires. Sand Buckets have been procured and installed on the building stairs of Floor 7 and 8.

3.4.8 LPG (Liquefied Petroleum Gas) storage

Only In Khulna office, LPG in cylinders is present in the kitchen; particular care is taken to minimize the possibility of its involvement in a fire.

In Khulna office LPG cylinders and cartridges are kept in a safe and secure place where they:

- cannot be interfered with;
- are kept upright (with valve protection fitted);
- are away from sources of ignition and/or readily ignitable materials;
- are away from any corrosive, toxic or oxidant materials; and;
- are away from stairways, exit doors and places where they may obstruct the means of escape.

3.5 Electrical safety

All electrical equipment is installed and maintained in a safe manner by a competent person. All electrical installations are being inspected quarterly by a competent electrical technician for all our offices.

3.6 Managing building work and alterations

Accidents are more frequent when buildings are undergoing refurbishment or alteration. Blue Gold's Component 2 is related to constructing/repairing embankments, water control structures, re-excavation of drainage and irrigation canals. Activities such as welding, flame cutting, painting will take place frequently and these can pose serious hazards, therefore the office manager does a strict supervision while the work goes on to avoid unwanted circumstances. Before giving work to any third party the office management strictly follows the below guidelines:

- Do a risk assessment and find out what additional dangers are likely to be introduced. Take precautions in advance.
- Check, whether the implementing company has the required experience.
- Whether they maintain & follow safety standards.
- Inform staff about the activities in advance when refurbishment work is going to take place at an office building.
- Continuous monitor of the refurbishment work.
- Ensure that there is a formal check confirming that a safe system of work is being followed;

3.7 Health

3.7.1 Cleanliness

Safe, clean drinking water must be made available in the office at all times. Separate washroom facilities for male and female staff must be provided in all offices. Soap, clean towels, toilet paper and water pots are always available in bathrooms. Clear reminders are posted to users to keep the washroom facilities clean. Also a maintenance sheet is posted in front of the toilets to know when it was last maintained. Also wet floor signs are being used after cleaning work.

The office cleaner's hours in the Dhaka Motijheel office have been extended up to 14:00 pm every day to improve bathroom cleanliness. Close swing bins have been provided for used tissue and other similar items. Use of soluble toilet tissues is also under active consideration.

3.7.2 Smoking

A non-smoking policy is followed in all offices and 'No Smoking' signs posted as required.

3.7.3 Temperature

The temperature in workplace should provide reasonable comfort; without the need for special clothing. Where such temperature is impractical because of hot or cold processes, all reasonable steps have been taken (using of air conditioner /Heater). In addition to keep the temperature perfect in the office place thermometers must be installed in all Blue Gold offices.

3.7.4 First aid kit

A First Aid kit has been installed in each project office and vehicle; these are restocked after use and checked annually. (See Annex 4 for a list of First Aid Box Requirements)

3.7.5 Medical services

All international staff is provided with a briefing sheet, which includes information and Contact details on recommended health clinics and medical services.

3.8 Vehicles

Safety rules covering the operation of vehicles have been carefully drawn up and followed. A copy of the project rules covering the operation of vehicles is laminated and kept in each Project vehicle (**see Annex 2**). It is ensured that each driver understands the recommendations and follows them.

Measures have been taken to ensure that all vehicles have been fitted with seat-belts, which should be used by all drivers and passengers.

Fire extinguishers and first aid boxes have been installed in all vehicles, including the rented ones. Insurance coverage of drivers and passengers has been arranged.

Each project vehicle is clearly assigned to be the responsibility of a specific senior team member. He/she is responsible for arranging regular servicing/maintenance of a high standard and ensuring that operation/maintenance is strictly in accordance with Blue Gold Health and Safety Policies.

The person responsible for the vehicle ensures that a log book along with a complete record of all running costs is maintained.

The person responsible for the vehicle is in day to day charge of the operation of the vehicle, which is used strictly for journeys required for Blue Gold activities. The vehicle does not leave its normal area of operation without the specific permission of the Team Leader.

No person other than the driver designated to the vehicle may drive it except in the case of a genuine medical emergency.

A check has been made to ensure that all staff travelling to the office by means other than project vehicles has access to safe means of transport.

At least four backup helmets for motorcycles will be kept in each of the project cars in the field.

3.9 Boats

Travelling from Dhaka **by launch is avoided** and Rocket Steamers are used instead. If essential, the best available launches may be used only during December-March. During a major cyclone warning or depression **no river transport may be used** and project vehicles used instead, if travel is essential.

Life rings and life jackets have been supplied to each zonal office and are taken on board of all country boats or speed boats used in the field. Staff using boats are strongly requested not to throw any rubbish out of boats (or vehicles) into rivers.

Using the Mawa crossing by speedboat is allowed when the weather is calm, usually in the period between December and April. When using the Mawa crossing, prior advice from the Operations Manager should be requested at all times, as special transport arrangements have to be made.

3.10 Motor bikes

Project staff is not allowed to drive a motorcycle without driving license. Blue Gold will assist in obtaining driving licenses for field staff members that are entitled to a motorbike. Before providing motor bikes to the field workers, a driving training will be organised by Blue Gold's Training Expert to all the desired bike riders for safety purpose. A driving test will be conducted, organised by the Training Expert before distributing the motorbikes to those that successfully passed the test.

3.11 Lessons learned from minor accidents

Field staff, travelling in the evening, are supplied with torch-lights and take the utmost care.

No person without suitable experience should open and check electro-mechanical equipment.

In each polder there is a fully stocked First Aid Box, and arrangements for doctors and logistics in case of emergency are in place.

A congenial socio-political linkage should be ensured in each polder to minimize risks to staff.

Long distance night driving should be avoided at all times. When it is clear that the destination can't be reached during the day, the trip should be rescheduled or an overnight stop should be made. Drivers should always have at least eight hours sleep per day. If instructed otherwise by any project staff, drivers should inform the Team Leader/Deputy Team Leader immediately.

If project staff has to come to the Dhaka office at unusual times (i.e. early morning or late evening) project transport will be provided, to increase safety.

All drivers (motorbikes, cars, minibuses) must hold a valid driving license. In case of any accident, the company can only claim insurance for people, who hold a valid driving license; therefore this policy should be followed strictly.

4. SPECIAL MEASURES DURING STATES OF EMERGENCY

From the beginning of 2013, the political situation in Bangladesh became uncertain and there were a number of violent clashes all over Bangladesh. Therefore it was decided to take **PRECAUTIONARY MEASURES**. These included advising all staff to take care, as follows:

- Make sure you have a supply of non- perishable provisions including; food, bottled water; batteries for radios and other essential battery powered equipment, candles, torches, first aid kit and your regular medication.
- Avoid public places such as super markets, shopping malls, cinemas etc, and areas known to be vulnerable to demonstrations.
- Avoid political or religious demonstrations.
- Limit local travel and stay in touch with the project management team. At any sign of trouble, return to your home as soon as possible and inform your contact person at once.(See table below)
- Listen to your local and radio/ television broadcasts.
- Do not pay much attention to rumours. In case of doubt consult your contact person: keep your mobile switched on.
- During Strike/Hartal days, each staff member should watch the news or discuss with the H&S committee members before coming to the office. If it is not safe to come to the work place during that time, staff can work from home by informing any member from the H&S committee as well as the Office Manager.
- A group mail option has been created for all staff of Blue Gold; Office managers will circulate the message via email or SMS.
- Project vehicles (cars/motor-cycles) are only to be used with specific permission of TL or DTL, and should be parked in a secure place.
- Project vehicles, notably micro buses, have an original “laissez passer” duly signed by Embassy of the Kingdom of the Netherlands”, to avoid requisition of the vehicle.

Emergency Contact Person	Contact Person Name	Mobile Number
International Staff	Mr. Dirk Smits, Team Leader	+8801963 770104
Local Consultant, Dhaka	Mr. Alamgir Chowdhury, Development Planner / Deputy Team Leader	+8801711 833212
Local consultant, Dhaka	Mr. Mofazzal Ahmed, QC Engineer / Deputy Component Leader	+8801711 660633

The following proforma was completed by all staff and all close family members and used to compile a data (see annex 4)

Name	Designation	Duty Station	Residence Address	Mobile Number	Emergency contact person Name & Number	Blood Group

5. EMERGENCY CONTINGENCY PLANNING

5.1 Introduction

Like any other organization Blue Gold is susceptible to disasters of all types, which can interrupt our work. Contingency planning is the identification, prior to a disaster, of all critical procedures and resources necessary to follow in case of a major event such as cyclone or earthquake. These disasters may be grouped into three categories:

Natural Disasters – Cyclone, Flood, Storms, Earthquake etc.

Man-made Disasters – Fire, Bomb, Building collapse, Accidents

Political Disasters – Strikes, Riots, Civil Disturbances, etc.

5.2 Cyclone

5.2.1 Disaster scenarios

The following is the classification of the cyclone according to the intensity and velocity of wind -

- | | |
|-----------------------------|--|
| (a) Depression: | Wind speed 31 miles/hr or 50 km/hr. |
| (b) Deep depression: | Wind speed 32-38 miles/hr or 51-61 km/hr. |
| (c) Cyclone: | Wind speed 39-54 miles/hr or 62-88 km/hr. |
| (d) Severe Cyclone: | Wind speed 55-73 miles/hr or 89-117 km/hr. |
| (e) Cyclone with hurricane: | Wind speed 74 miles/hr or 118 km/hr or more. |

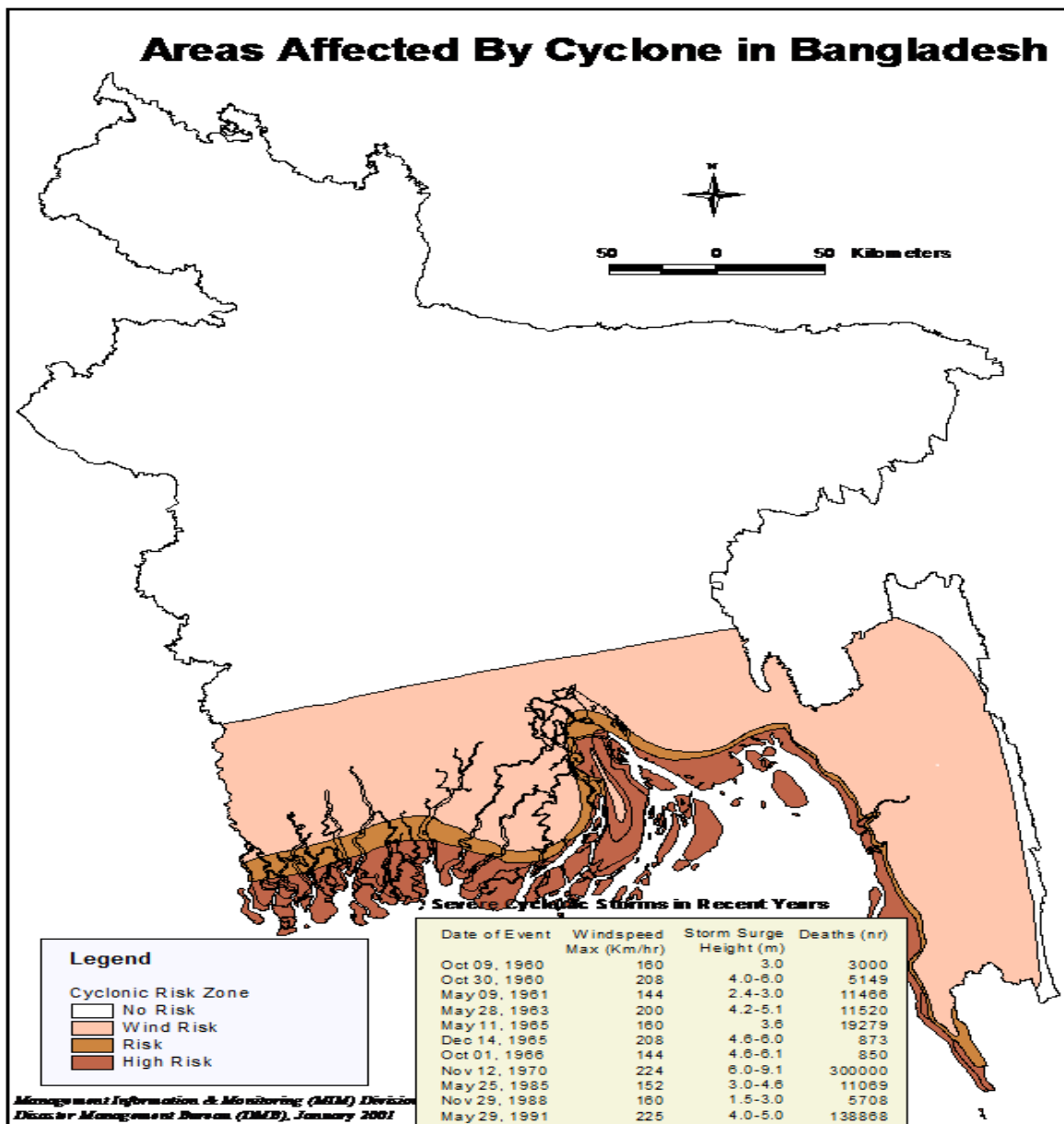


Table 1: Early warning signal system for maritime and river ports

Maritime signals		Riverine signals	
No	Wind Speed (KPH)		Wind Speed (KPH)
1	Cautionary Signal No. I	51-61	Not applicable
2	Distant Warning Signal No. II	62-88	Not applicable
3	Local Cautionary Signal No. III	40-50	Local Cautionary Signal No. III
4	Warning Signal No. IV	51-61	Warning Signal No. IV
5	Danger Signal No. VI	62-88	Danger Signal No. VI
6	Great Danger Signal No. VIII	89-117	Great Danger Signal No. VIII
7	Great Danger Signal No. IX	118-170	Great Danger Signal No. IX
8	Great Danger Signal No. X	>170	Great Danger Signal No. X

Source: Centre for Excellence in Disaster Management and Humanitarian Assistance, Country Disaster Response Handbook 2012

5.2.2 Cyclone contingency planning

Table 2: Warning signal explanation and responses

No	Signals	Explanation	Response
1	Cautionary Signal No. I	There is a region of squally weather in the distance sea where storms may form.	<ul style="list-style-type: none"> Do not go to any water that takes more than a day to return Monitor and check status of valuable and floating possessions Keep livestock at a place nearby household Keep essential materials within reach Listen/watch weather forecast
2	Distant warning Signal No. II	A storm has formed in the distant sea.	
3	Local Cautionary Signal No. III	The port is threatened by squally weather.	
4	Warning Signal No. IV	The port is threatened by a storm but it does not appear that the danger is as yet sufficiently great to justify extreme precautionary measures.	<ul style="list-style-type: none"> Dig down valuables in the ground Dig down dry food and water in the ground Take women children and the elderly to cyclone shelter as soon as possible Place all livestock at high and secure ground but don't tie them Decide where you will go after receiving evacuation notice Listen/watch weather forecast
5	Danger Signal No. VI	The port will experience severe weather from a storm of slight or moderate intensity that is expected to cross the coast to the North of the port in case of Chittagong and Cox's Bazar and to the West of the port in case of Mongla.	
6	Great Danger Signal No. VIII	The port will experience severe weather from a storm of great intensity that is expected to cross the coast to the South of the port in case of Chittagong and Cox's Bazar and to the East of the port in case of Mongla.	
7	Great Danger Signal No. IX	The port will experience severe weather from a storm of great intensity that is expected to cross the coast to the North of the port in case of Chittagong and Cox's Bazar and to the West of the port in case of Mongla.	<ul style="list-style-type: none"> Save self and others Evacuate as soon as possible Use force if necessary Follow instructions of assigned personnel
8	Great Danger Signal No. X	The port will experience severe weather from a storm of great intensity that is expected to cross over or near to the port.	

Source: Centre for Excellence in Disaster Management and Humanitarian Assistance, Country Disaster Response Handbook 2012

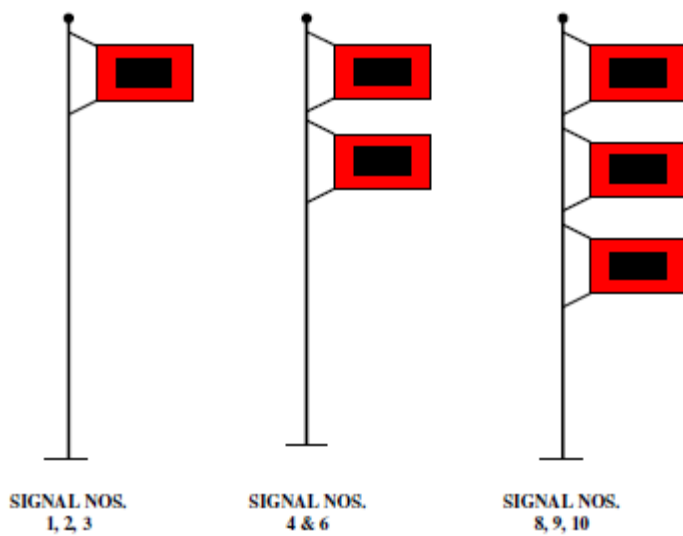


Figure 1: Procedure for hoisting cyclone warning flags

5.3 Flood

5.3.1 Disaster scenario

Flood is an annual phenomenon, with the most severe occurring during the months of July and August.

Regular river floods affect 20% of the country, increasing up to 68% in extreme years. Approximately 37%, 43%, 52% and 68% of the country is inundated with floods of return periods of 10, 20, 50 and 100 years respectively (MPO, 1986). Four types of flooding occur in Bangladesh.

- Flash floods caused by overflowing of hilly rivers in eastern and northern Bangladesh (in April-May and September-November).
- Rain floods caused by drainage congestion and heavy rains.
- Monsoon floods caused by major rivers usually in the monsoon (during June-September).
- Coastal floods caused by storm surges.

5.3.2 Flood contingency planning

Flood Warning:

Flood Forecasting & Warning Centre (FFWC) of BWDB disseminates flood warnings during most of the monsoon season. The warning is related to the measured and forecasted water levels and the danger levels: a) normal flood: water level is more than 100 cm below danger level; b) moderate flood: water level is between 100 cm below danger level and 100 cm above danger level; and c) severe flood: water level is 100 cm above danger level. Warnings are disseminated through a daily flood bulletin (<http://www.ffwc.gov.bd/index.php#>), e-mail, FFWC home page, newspapers, radio and television.

At the community level, Union Disaster Management Committee (UDMC) members and volunteers are responsible for flood warning dissemination. At the community level, rising and falling of water level has been converted into symbols '+' or '-' according to predefined ranges as shown in the following tables.

Water Level Change (cm)	Number of flags
0 to 10	No Change
11 to 32	+
33 to 54	++
55 to 76	+++
77+	++++

Water Level Change (cm)	Number of flags
-10 to 0	No Change
-32 to -11	-
-54 to -33	--
-76 to -55	---
-77	----

Source: CEGIS

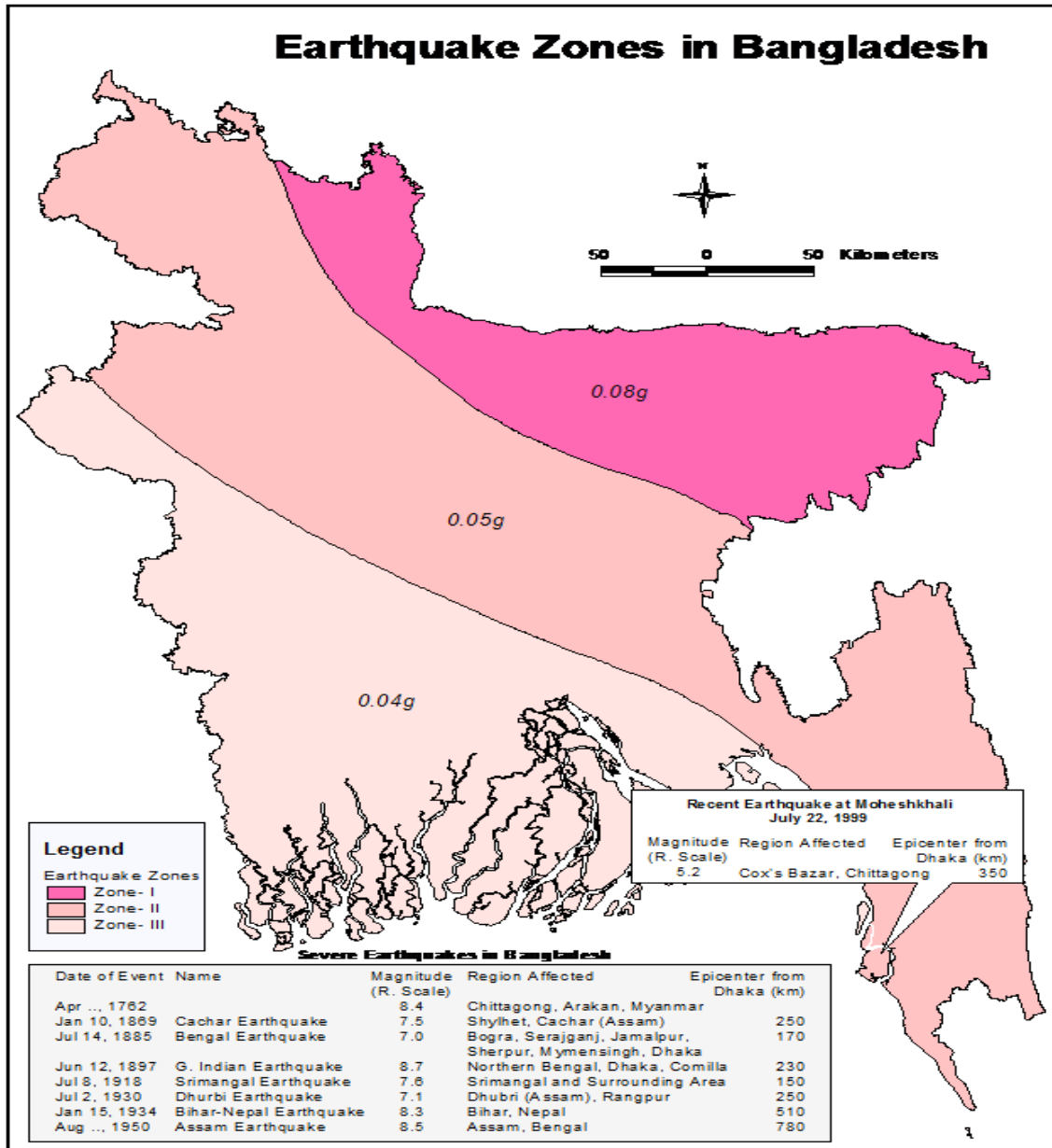
UDMC members and volunteers hoist flag based on the following table.

Table: Community Flood Message

Water level change	Flag	Description
Today flood status	Top flag: No flag, Green, Yellow, Red	No flag – Water level at gauge is at below the Normal Flood level Green – Water level at gauge is within the Normal Flood range Yellow – Water level at gauge is within the Moderate Flood range Red – Water level at gauge is above the Moderate Flood range
Water level after 48 hr	Except the topmost flag	No Flag – WL change < 1 bghat (22 cm) White Flag – decrease of WL Blue Flag – increase of WL

Source: CEGIS

5.4 Earthquake



Management Information & Monitoring (MIM) Division, Disaster Management Bureau (DMB), January 2001

5.4.1 Disaster scenario

An earthquake is a sudden motion or trembling of the ground produced by abrupt displacement of rock masses within the upper 15-50 km of the earth's crust. There is enough scientific evidence that the densely habituated and populated areas of Bangladesh especially Dhaka is highly vulnerable to earthquake disasters. Inadequate knowledge about anticipated seismic risks, spurt of non-engineered earthquake unsafe construction, use of poor quality building materials, weak techno- legal regime and enforcement of building codes and lack of public awareness and community preparedness make Bangladesh highly vulnerable to earthquake hazard. An earthquake Risk and Vulnerability study of Dhaka city suggests that in the event of an earthquake leading to intensity VIII damage, about 13.4 % houses may be severely damaged (SAARC Disaster

Management Centre, 2011). Another survey conducted by the Comprehensive Disaster Management Programme (CDMP) identified 78,000 out of 3,26,000 buildings in Dhaka as being vulnerable.

Based on the IPSWAM earthquake contingency plan, the Blue Gold team has taken its own limited initiative to prepare for earthquake contingency plan, especially in relation to the Blue Gold central team, and families of zonal team members, resident in Dhaka.

5.4.2 Earthquake contingency planning

This contingency plan is based on a worst case earthquake scenario. It is assumed that the airport will still be functioning but there will be limited to no access to it due to destroyed roads. This contingency plan is focused on Blue Gold staff and their dependants in Bangladesh, for planning and response purposes. WMO members in polders are expected to be very significantly less affected due to the rural conditions and nature of housing etc.

5.4.2.1 Preventive measures

The following activities should be implemented on a routine basis:

Activities	Note
Test fire extinguishers, hoses	Already arranged
Check first aid boxes	Already arranged
Prepare accurate list of names, addresses, phone numbers, blood group of family members	<i>Action to be taken</i>
Secure tall furniture to the wall. Keep heavy items on the bottom of shelves. This applies to both home and work	<i>Action to be taken</i>
Make sure staff and dependants know what to do and what not to do during and just after an earthquake (see box)	<i>Action to be taken</i>
Store clean water and emergency food supplies	<i>Action to be taken</i>

- Remain calm
- When you are in a building, duck and cover under furniture. The interior walls of rooms or halls are good places to crouch against.
- If you happen to be outdoors or in a vehicle, move to an open area, if possible stay away from buildings, power lines, block walls and overpasses.
- Do not use elevators
- Do not rush towards public exits.

Measures to be taken after disaster

Immediately after the disaster, the following actions will be undertaken –

Activities	By whom
Make sure you are safe	Everybody
Put out fires	„
Check whether there are any injuries and provide first aid	„
Register all people present	„
Assessment of situation	„

This information will be made known to all staff.

5.4.2.2 Communication

The following activities should be implemented to increase the chances of proper communication after the disaster:

Activities	Note
Select strategic locations for communication nodes, according to the communication plan enclosed.	<i>Action to be taken</i>
Procure and test mobile radios and train nodal monitors and vehicle drivers in their use.	<i>Action to be taken</i>
Prepare a list of Blue Gold staff and dependants on a zonal basis from which these persons can be easily located.	<i>Action to be taken</i>
Make available the communication plan for all nodes.	<i>Action to be taken</i>
Inform/train nodal monitors on what they have to do in case of an emergency.	<i>Action to be taken</i>
Investigate how central nodes can get information about the situation from other networks.	<i>Action to be taken</i>

After the disaster, the following actions should be undertaken

Activities	By whom
Ensure that nodal monitors' radios are working.	Monitors
Nodal monitors contact central nodes according to the structure plan provided and report on local situations, including the specific locations and names of people located.	Monitors Coordinators
Central coordinators and nodal monitors plan how search for and transport of people will be coordinated. Final decisions will be taken by central coordinators.	Coordinators Monitors

5.4.2.3 Transport

The following activities will be implemented.

Activities	By whom
Arrange bicycles for central coordinators and zonal monitors and ensure they are always available.	<i>Action to be taken</i>
Make list with responsible people (+ backup) for different vehicles and roles in arranging transport.	<i>Action to be taken</i>
Buy fuel to be stored as required.	<i>Action to be taken</i>

After the disaster, the following actions will be undertaken

Activities	By whom
Vehicles contact central nodes by radio	Drivers
Transport of injured people to hospitals (see health section)	Drivers
Fuel stocks to be picked up by vehicles	Drivers
Assessment of road network (by bicycle if necessary)	Monitors

5.4.2.4 Taking care of injured people

The following activities will be implemented.

Activities	By whom
Heavy duty first aid boxes and stretchers provided at nodes	<i>Action to be taken</i>
List of doctors/hospitals available by zone/node (locations / house address / phone numbers)	<i>Action to be taken</i>
Acquisition of lifting equipment will be considered	<i>Action to be taken</i>

After the disaster, the following actions will be undertaken

Activities	By whom
Assessment of injuries and first aid	Everybody
Assessment of road network	Monitors
Contact hospitals / doctors available	Monitors
Transport of injured people to hospitals / doctors	Monitors Drivers
Informing family and central coordination on status and place of injured people	Monitors

5.4.2.5 Food, water and fuel

The following activities will be

Activities	By whom
Identify locations where water, food and fuel can be stored	<i>Action to be taken</i>
Prepare a list and buy stocks of water, food and non-food items to be kept at central points/nodes.	<i>Action to be taken</i>
Store items at selected locations.	<i>Action to be taken</i>
Prepare and distribute a message to staff and families on basic preparedness advice on food and water	<i>Action to be taken</i>
Check stocks regularly	<i>Action to be taken</i>

After the disaster, the following actions will be undertaken

Activities	By whom
Monitor the requirements of water and food supply by staff and their families and distribute available stocks by prioritizing the most vulnerable groups (sick / injured people, children, elderly, etc.)	Coordinators Monitors

5.4.2.6 Relocation of people: Evacuation from Dhaka to village

After a severe earthquake living conditions in Dhaka will probably be very bad for a long time. This might cause serious health hazards for the citizens of Dhaka for months. The situation in the villages will probably be better. Therefore evacuating Blue Gold team members and their families to a place outside of Dhaka is planned.

The evacuation will be coordinated from the central coordinators. The evacuation might start a few days after the earthquake.

Efforts will be made to continue Blue Gold activities in Patuakhali, Khulna and Satkhira in a decentralized way with a very limited or no Dhaka central office.

The following activities should be implemented on a routine basis:

Activities	By whom
Each family prepare an evacuation plan and inform coordinators	<i>Action to be taken</i>
Cash reserves be arranged for central coordinators and zones	<i>Action to be taken</i>

After the disaster, the following actions will be undertaken:

Activities	By whom
Assessment of usable routes out of Dhaka by road/river	Coordinators Monitors
Making evacuation plan, getting vehicles in place inside/outside Dhaka, arranging fuel.	Coordinators Monitors

5.4.2.7 Priority preparation activities

- Coordination: Identify Coordinators/Monitors and Nodes for each Zone.
- Communication: Procure Radios and Bicycles for Centre and Nodes.
- Training: Organise Training for Coordinators/Monitors and then for staff/families.
- Storage: Procure Equipment, Medical Supplies, Food, Water, Fuel and Store.
- Organise Practice Event.

Responsible: Team Leader, Deputy Team Leader, Operations Manager, Health and Safety Committee.

5.5 Disaster standing order

(Based on Bangladesh Government's Disaster Management Plan, 2010-2015)

Programs like Blue Gold will complement governmental efforts during disaster. Blue Gold will perform the following duties within the ambit of own rules and regulations and organizational structure, in association with various governmental organizations.

5.5.1 Risk reduction

Establish a disaster management committee. The main focal contact should be the team leader but in some cases during his absence Deputy Component 2 leader will make all the decisions. It is suggested that there should be two official contact people from each field office to contact the main office in case of any disaster.

Incorporate disaster risk reduction considerations into Blue Gold policies, plans and programmes.

Collaborate with national committees related to disaster risk reduction.

Allocate resources and arrange training on risk reduction for its staff and the volunteers.

5.5.2 Emergency response

Normal Times

- a Take steps for disaster preparedness at all levels and prepare plans.
- b Appoint team of volunteers and workers in disaster-prone areas and arrange training for them.
- c Arrange educational and awareness raising programmes for the people for disaster management.
- d Arrange and participate in seminars, workshops and meetings to gather skill and experience in disaster management.
- e Keep contact with concerned government, NGO, United Nation Organizations for disaster relief if necessary.
- f If possible, link responsible government departments for construction of fortified earthen mound and flood/cyclone shelter
- g Take any other steps in connection with preparedness programme of the people to meet any emergency situation.

Alert Stage

- a In case of cyclone, issue warning notice to all concerned.
- b Ensure dissemination of warning signals to the concerned community.
- c In case of cyclone, keep contact with CPP and the Control Room of Storm Warning Centre (SWC) of BMD.
- d Issue instructions to community organizers (COs) to be on standby and take any other steps, if necessary.

Warning Stage

- a Disseminate warning signals to all.
- b Keep the COs on standby in readiness with required transports.
- c Attend the meeting of union disaster management committee (UDMC).
- d If necessary, issue instructions for sending of employees, volunteers and materials to disaster affected areas from less disaster-prone areas.
- e Disseminate the danger/great danger signal with proper explanation to all concerned (in case of cyclone warnings).
- f In view of seriousness of situation send reserve employees and materials to advantageous places.
- g Take part in evacuation programme of population with close cooperation of volunteers and local authority if directed by the appropriate authority.
- h Liaison with MoFDM, DCs, UNOs and UP Chairman for possible cooperation.

Disaster Stage

- a Assist in damages, losses and needs assessment in affected areas and dispatch of relief/medical teams and arrival of concerned relief and medical units to the affected areas soon after the passage of disaster.
- b Assist the local authority to determine loss and damage and requirement and supply information to these organizations and own Headquarters.
- c Give emergency assistance to the disaster affected people, especially in the following cases.
- d Help in rescue and evacuation work

- e Assist the local administration in organizing shelter places
- f Give first aid to injured persons
- g Arrange complementary food according to the need of distressed people
- h Arrange preventive and limited curative treatment
- i Arrange for the necessary household materials and clothing to be dispatched to the seriously affected people
- j Inform appropriate authority about loss and damage and requirement of affected people.
- k Arrange for use of material, received from areas not attacked by disaster and from Headquarters in areas affected by disaster.
- l Send request for requirement of relief and rehabilitation assistance to the donor agencies after informing NGO Affairs Bureau.
- m Inform concerned government departments about the response activities in order to have better coordination and avoid duplication.

Rehabilitation Stage

- a Participate in reconstruction and rehabilitation programmes in special circumstances.
- b Take steps for correct and effective evaluation of preparedness work and for correcting errors/weakness in such work.
- c Provide assistance to the local authority in any possible way for relieving the distress of people.
- d Extend Cooperation to the UDMCs in preparation of list of disaster-affected people and the requirement and probability of rehabilitation.
- e Ensure implementation of government guidelines (i.e. shelter) for infrastructure construction in the affected and disaster-prone areas.

5.6 Useful web sites to gain additional, specific information on disaster

International Federation for Red Cross and Red Crescent Society

<http://www.ifrc.org/en/what-we-do/where-we-work/asia-pacific/bangladesh-red-crescent-society/>

Médecins Sans Frontières (MSF)/Doctors Without Borders

<http://www.msf-me.org/en/mission/in-the-field/msf-projects-world-wide/bangladesh-1.html>

Flood Forecasting and Warning Centre (FFWC)

FFWC sends daily email, Fax, couriered water level prediction bulletins to national and district agencies. More frequently during emergencies.

Bangladesh Water Development Board

8th Floor WAPDA building, Dhaka

Tel: 880-2-9553118, 9550755

Fax: 880-2-9557386

<http://www.ffwc.gov.bd/>

5.7 Contact details of hospitals and fire services

No	Hospitals	Fire Service
1	Square Hospital Ltd. 18F, BirUttamQaziNuruzzamanSarak, West Panthapath, Dhaka 1205 Phone: 02-8159457, 8142431, Mobile: 01713141447 24hr Emergency and Ambulance service: 8144466, 8144477, 8144488 ER Mobile: 01713377773-5 Web: http://www.squarehospital.com/	Motijheel (02) 9555555
2	Apollo Hospitals Dhaka Plot: 81, Block-E, Bashundhara R/A, Dhaka 1229, Bangladesh Phone: 02-8401661 Ambulance: 01714090000 Web: http://www.apollodhaka.com/main.php	Sadarghat (02) 7119759
3	United Hospital Plot: 15, Road: 71, Gulshan 2, Dhaka 1212, Bangladesh Phone: 02-8836444, 8836000 Emergency contact number: 01914001234; HOTLINE: 10666	Khulna +8801730009148
4	Dhaka Medical College Hospital (Government) Emergency Number: 02-8626812-26	Patuakhali 0441-62222, +8801777998333
5	Islamic Bank Hospital (Private) Emergency Number: 02-9336421-23	
6	Pangu Hospital (Government) Emergency Number: 02-9114075, 9112150-52	

7	BIRDEM Diabetic Hospital 9661551- 60	
8	Shahid Sharawardy Hospital (Government) Emergency Number: 02-9130800 (Ext: 154)	
9	Kurmitola General Hospital Emergency Number:02-8872113	
10	Khulna Medical College and Hospital(Government) Emergency Number: 041-761509, 761531, 760531	
11	Patuakhali Central Hospital(Government) Emergency Number:044162842,+8801730324763	

Annex 1. OFFICE INSPECTION CHECKLIST

OFFICE INSPECTION CHECKLIST FOR BLUE GOLD			
Date:	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Requires Action		
Inspectors	Location	Condition	Comments
Bulletin Board and signs			
Are they clean and readable?			
Is the material changed frequently?			
Are they posted in the right place?			
Fire			
Are all entrances and exits well marked and clear of obstruction?			
Are passageways, stairs and landings kept clear of obstacles at all times?			
Is firefighting equipment regularly checked? (Check expiry date)			
Are fire notices displayed?			
Are fire drills held regularly?			
Do fire alarms work properly?			
First Aid			
Are first aid boxes fully stocked and meeting the required standards?			
House Keeping			
Is the office area clean and tidy?			
Is the standard of cleaning satisfactory?			
Are there a sufficient number of waste containers and are they emptied regularly?			
Is the furniture safe? (Broken/sharp edges)			
Storage			
Is there sufficient storage space?			
Is the storage of materials kept at the right place?			
Are combustible materials kept to minimum?			
Are bookshelves/cupboards secured to ensure stability?			
Electricity			
Are plugs, sockets and wiring in good condition (By visual inspection)?			
Is the over loading of sockets (by the use of adaptors) avoided where possible?			
Is all portable and transportable electrical equipment inspected and tested regularly and confirmed by a sticker?			
Toilet Facilities			
Are there separate toilet facilities for each sex which are appropriately marked?			
Are toilets clean, well ventilated, in good working order and adequately lit?			
Is there always sufficient supply of water?			
Is there sufficient supply of soaps, towel, hand wash, and bins?			
Are floors free from obstructions and tripping hazards?			
Are "wet floor" sign used when required?			

Annex 2. BLUE GOLD VEHICLE SAFETY MEASURE

Recommendation of the Health and Safety Committee Meeting held on date-11/11/2013

- The project vehicles must have seat belts in all front facing seats.
- Before start, the driver should check that all the passengers have fastened their seat belts.
- No one except the specified Blue Gold drivers should drive the project vehicles unless it is required in a real medical emergency.
- Speed limit should not be more than 60 km/hour in towns or cities and 80 km/hour on highways.
- The driver should be very careful in overtaking other vehicles. Overtaking should be done only when it is absolutely necessary.
- Before starting the driver should check that the vehicles is in good running condition.
- All project personnel should ensure that fire extinguisher, first aid kit and enough drinking water are in the vehicle.
- All project personnel should use the project vehicles rather than hired vehicles whenever possible because of safety requirements.
- All vehicles must have comprehensive insurance that will cover both the vehicle and all passengers including the driver.
- Every vehicle should go for servicing every 5000 km or every 4 months whichever comes earlier. For CNG driven cars every vehicle should go for servicing every 3000 km or every 3 months. For CNG driven cars cylinder checking should be done in every 6months. (Applicable for both owned and rented cars).
- Night driving outside cities/towns should be avoided at all times.
- Journey through risky roads should be avoided as far as possible.
- Motorcycles will only be driven by the assigned users.
- Both driver and passengers of motorcycle will wear good quality helmets at all times.
- Drivers are not allowed to use their mobile phone when driving, also not when using earphones as this may distract them.
- Drivers are required to drive safely. This includes travelling with average/low speed, keeping sufficient distance to other vehicles, taking rest after every 3 hours, etc.
- During Ramadan it is not advised for drivers who are fasting, to travel long distances
- Drivers should obey traffic light signals all the time.
- A trusted company will be used when renting vehicles. Blue Gold's Operations Manager will inform the company on Blue Gold's rules and safety procedures when using vehicles.
- Blue Gold's Operations Manager will gather feedback on the driving behaviour of the drivers of rented vehicles and take appropriate action if needed.
- Accidents caused to the vehicle must be reported to the nearest police station for an official report. Claims will be handled by the insurance company. TL/DTL need to be informed immediately in case of any accident

Mr.Mofazzal Ahmed

Annex 3. First Aid Box Requirements

SL. NO	First Aid Box Requirements
1	Gauze pads (at least 4 x 4 inches)
2	Two large gauze pads (at least 8 x 10 inches)
3	Box adhesive bandages (band-aids)
4	One package gauze roller bandage at least 2 inches wide
5	Two triangular bandages
6	Wound cleaning agent such as sealed moistened towelettes
7	Scissors
8	At least one blanket
9	Tweezers
10	Adhesive tape
11	Latex gloves
12	Resuscitation equipment such as resuscitation bag, airway, or pocket mask
13	Two elastic wraps
14	Splint
15	Directions for requesting emergency assistance

Annex 4. Employee Emergency Contact No

Name	Designation	Duty Station	Residence Address	Mobile Number	Emergency contact person Name & Number	Blood Group