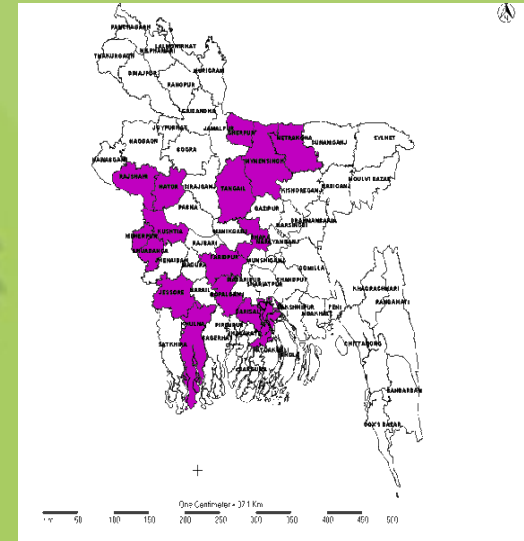


## Eco-Bishops' Consultation on Climate Change

*“The earth is the Lord’s and everything in it,  
the world, and all who lives in it.” Psalm 24: 1*



**Rt. Rev. Paul S Sarker, (Eco-Bishop)**  
Bishop of Dhaka and Moderator,  
Church of Bangladesh.





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# CLIMATE CHANGE IMPACT

## Beautiful Bangladesh



### **Introduction**

Bangladesh, officially the People's Republic of Bangladesh, is a country in South Asia. It is bordered by India on all sides except for a small border with Burma (Myanmar) to the far southeast and by the Bay of Bengal to the south. Together with the Indian state of West Bengal, it makes up the ethno-linguistic region of Bengal.

After heroic liberation war against Pakistan for 9 months in 1971 Bangladesh became independent.



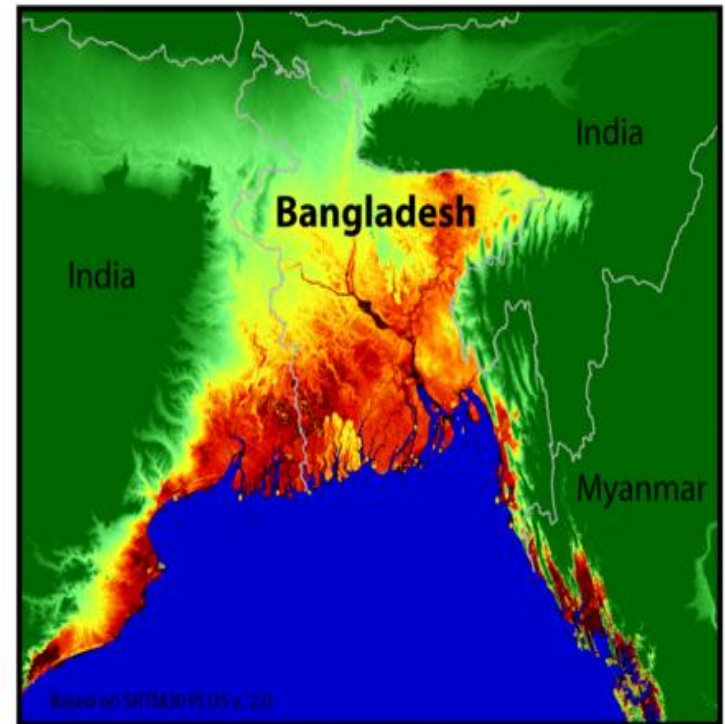
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## Climate change effects on sea level rising of Bangladesh

Bangladesh has been ranked as the 3rd most vulnerable in the world to sea level rise in terms of the number of people and in the top ten in terms of percentage of population living in the low elevation coastal zone.

### Sea Level Risks - Bangladesh



0 1 2 3 5 8 12 20 35 60 80

Height Above Sea Level (m)





## Climate Change in Bangladesh

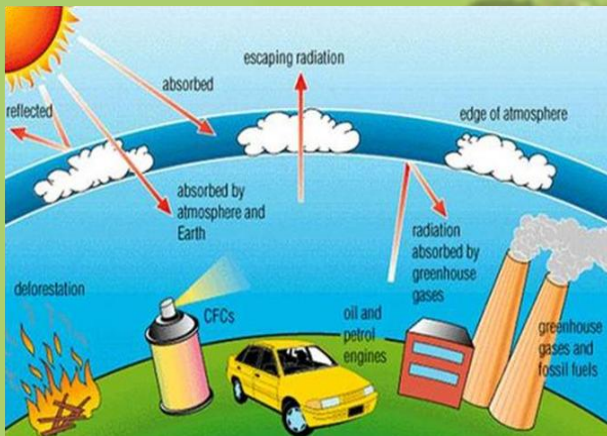
It includes for example :

- ☐ Unpredictable rainfall patterns leading to lack of access to safe drinking water
- ☐ Rising temperature and sea level encroaching mainland and increasing salinity, drought and failure of crops treating food security.
- ☐ Changing character of seasons harming agriculture farming system that causing food insecurity
- ☐ Increased likely hood of hazards. Such as floods,
- ☐ Land slides and more severe cyclone like Nargis, Sidr & Aila etc. and many other health problem.





## Emission of carbon dioxide causing Global Warming and Changing Climates



Energy use is another way greenhouse gas emissions can be reduced. Natural gas produces 24% of the country's fuel need and imported coal and mineral oil 19% (Moral, 2002). The later is produces large quantities of greenhouse gases to produce electricity, while although very much less, gas still produces some carbon dioxide when burnt.





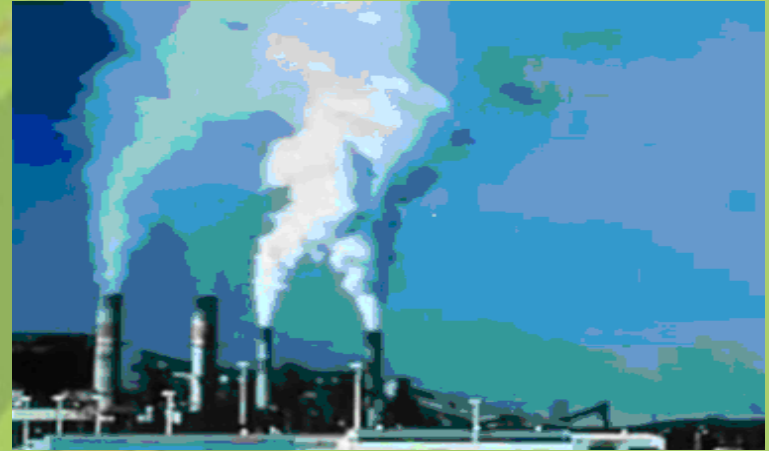
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# CLIMATE CHANGE IMPACT

## Why Climate Change ?



**Population explosion and over uses of carbon contained power and energy.**



**Emission of carbon di oxide and other harmful gases from the mills and factories.**

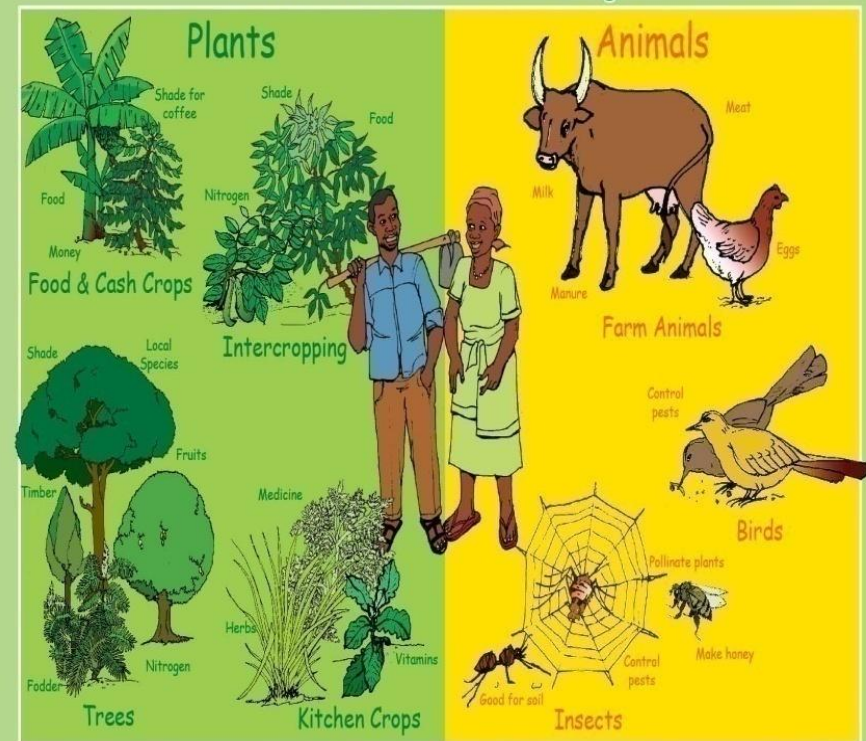


**Misuse and over extraction of ground water**

## Bio-diversity and Climate Change

Bangladesh has a diverse range of forest ecosystems, including savannah, bamboo, freshwater swamp forests and mangroves. The Sundarbans of Bangladesh, a world heritage sight, is the single largest mangrove area in the world, comprising an area of 577,00 ha, and housing one of the richest natural gene pools. A total of 425 species have been identified there, the most notable of which is the Bengal tiger, which is endemic to the area. Climate change will have a detrimental impact on all of the forest ecosystems in Bangladesh, and the Sundarbans are likely to be the worst affected

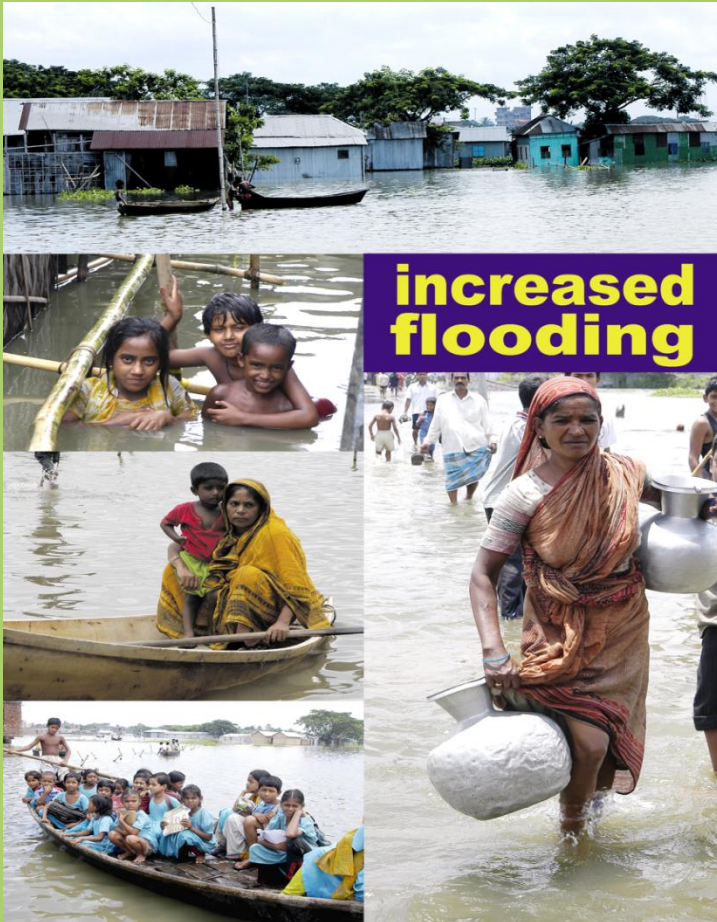
### What is biodiversity?







## Climate change effects on rainfall causing frequent flood



▶ According to the IPCC Distribution Centre rainfall in South Asia is predicted to increase by 5-7 per cent in the 2020s, 10-13 per cent in the 2050s and 15-26 per cent in the 2080s (Tanner *et al*, 2007).

▶ variety of different studies all point to average rainfall increasing in Bangladesh during the summer monsoon by around 1-4% by the 2020s, and 2-7% by the 2050s (Tanner *et al*, 2007)





## Climate change effects on agriculture



Reductions in yield could potentially be as high as a 17-28% decline for rice and 31-68% decline in wheat production (Karim *et al*, 1999).



So 8% smaller rice harvests and a 32% smaller wheat harvests by 2050 now look likely (IPCC in Reid *et al*, 2007).



## Climate Change effects on temperature in Bangladesh

By 2020 temperature will be  $1.2^{\circ}\text{C}$  warmer by 2050s will be  $2.4^{\circ}\text{C}$  warmer (Tanner *et al*, 2007)

By 2020 the country will lose land during this period about 2.7 million hectares of land in Bangladesh are vulnerable to annual drought







## Climate Change effects on normal weather



Climate change means that storm surge heights will increase from 15% to 25% in the 2020s and 32% in the 2050s (Tanner *et al*, 2007). A cyclonic storm similar like the one in 1991 would have a surge around a metre higher (Mohal & Hossain, 2007) and would penetrate up to 10 km further inland than at present to almost 50 km in places in a worst case global warming scenario (Tanner *et al*, 2007).



## Climate Change effects on normal weather

Cyclones are expected to become 10 to 20% more powerful if sea-surface temperatures rise by of 2 to 4°C in South Asia, therefore the number of devastating cyclones will increase (Knutson and Tuleya, 2004 in Cruz *et al*, 2007). Cyclones are expected to have 3% to 12% faster wind speeds by the 2020s, rising to 4% to 20% faster by the 2050s (Tanner *et al*, 2007).







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## Climate change effects on health



Climate Change exposes  
Bangladesh to more tropical diseases.

The Health impacts from climate change  
would be far reaching in the country  
with more people suffering from water  
borne diseases. It might be in jeopardy  
in near future.

One of them is Arsenic problem.



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## Increasing Flood

Conservative studies show that Bangladesh is to lose between 17,000 and 22,000 SQR kms of land, nearly one third of the country in the southern part due to sea level rise of 1-1.5 meter by 2050



**increased  
flooding**







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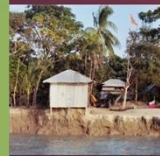
# CLIMATE CHANGE IMPACT

Response of Church of Bangladesh Social Development Programme (CBSDP)

## Vegetable Gardening in the canal and marshy area in Bangladesh



### CLIMATE CHANGE IS ALREADY AFFECTING BANGLADESH



Sea level is rising



Cyclones are getting  
more powerful



Floods are becoming  
more frequent



Winter droughts are  
increasing



Himalayan glaciers  
are melting

### CBSDP IS HELPING PEOPLE ADAPT TO AN INCREASING HOSTILE ENVIRONMENT



Raising awareness



Planting trees to prevent  
drought & flood erosion



Raising tubewells for  
use in floods



Changing agricultural  
techniques such as using  
floating gardens



Building cyclone  
shelters



The Church of Bangladesh Social Development Programme

Floating vegetable Garden on the watery area with the locally available water hyacinth for climate change.

Hanging vegetables garden to save land





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# CLIMATE CHANGE IMPACT

## Prepared Floating Beds







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# CLIMATE CHANGE IMPACT

## **Growing Vegetable On Floating Beds**







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# CLIMATE CHANGE IMPACT

## **Growing Vegetable On Floating Beds**







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# CLIMATE CHANGE IMPACT

## World Environment Day Celebration

The Church of Bangladesh and its developmental organization CBSDP celebrated World Environment Day. Different initiatives were taken by the Church and CBSDP. Seminars, Rally, Tree plantations took place in different parts of Bangladesh. Through the CBSDP's projects trees were distributed to students to encourage them to care for the creation.

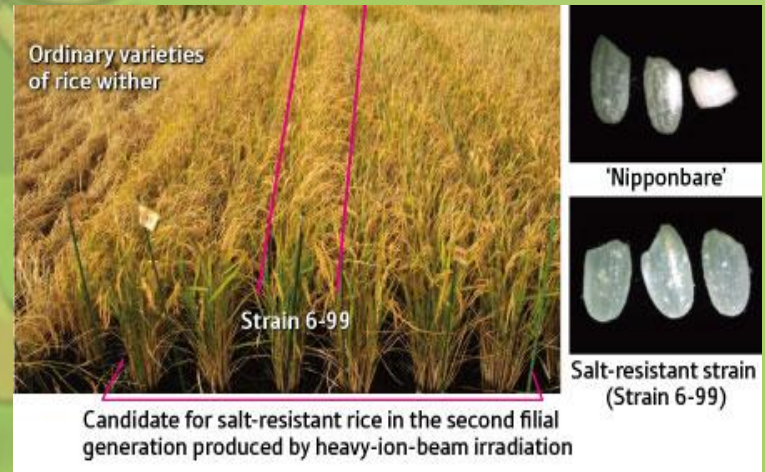




## Response of CBSDP

CBSDP has been emphasizing to plant more coconut trees to protect the wind, storm, cyclone etc.

We aware the community for maintaining the Bio-Diversity and growing salt resistance rice in the southern belt.







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# CLIMATE CHANGE IMPACT

*Webinar on*

## CLIMATE CHANGE

Where's the justice?



Church of Bangladesh led a webinar through Anglican Alliance to raise voice on climate change affected area during September 2014 .



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# CLIMATE CHANGE IMPACT

## Climate Campaign

Dhaka, on Saturday. 20<sup>th</sup> September 2014, The Church of Bangladesh actively participated in this Rally and raised voice for the Justice towards those who are affected for Climate Change all over the world including Bangladesh. It was a rainy day but in spite of rain many have come forward to take part in the March.







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# CLIMATE CHANGE IMPACT

## Response of CBSDP

Road side tree plantation and social forestry is one of the key activities to mitigate the risk of climate change. To ensure safe drinking water we are providing water tank to harvest rainfall water where there is saline water increasing in the south coastal area.





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# CLIMATE CHANGE IMPACT

Bottle drip in drought prone area in Bangladesh



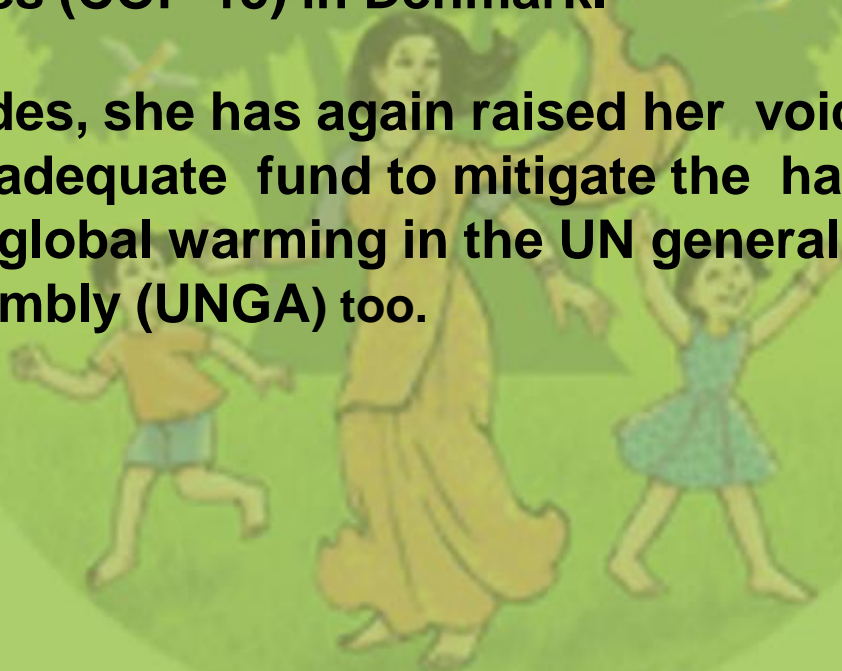




## **Response of Bangladesh Government**

**Prime Minister of Bangladesh, Sheikh Hasina has raised her voice in the last conference of parties (COP-15) in Denmark.**

**Besides, she has again raised her voice to allot adequate fund to mitigate the hazards over global warming in the UN general Assembly (UNGA) too.**





## Steps for the future

Some people and countries are taking steps now to reduce greenhouse emissions and slow climate change. They are reducing their dependence on fossil fuels, increasing the use of renewable and ecofriendly energy, expanding forests, and making personal lifestyle decisions which improve the environment. Some simple practical suggestions for people are:

- Replace your five most frequently used lights with energy saving bulbs; make a habit to put off unnecessary energy consuming equipment (lights, television, computer, radio etc.) in every house.
- Reduce the number of vehicles and use public transport as much as possible. Consider buying hybrid vehicle.
- Buy energy efficient and ecofriendly appliances and products. Use green power, including solar panels.
- Reduce and recycle trash, and buy recycled products. Make better use of papers and consider unnecessary printing and photocopying.
- Use water carefully and efficiently.
- Protect the nature of trees, jungles and insects.
- Share your good practices and outcomes of them with your friends and neighbors. Make a movement of climate change.





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# CLIMATE CHANGE IMPACT

LET US WORK TOGETHER TO PROTECT OUR  
PLANET FOR GOD'S GLORY AND FOR THE FUTURE  
GENERATIONS.

*"Thank you for your patience"*

