Towards More Socially Inclusive Resilience

Dr. Mazharul Aziz, Project Director, Component-C, BWCSRP
Department of Agricultural Extension, Ministry of Agriculture, Bangladesh
azizdae@gmail.com
## Disaster Vulnerability of Bangladesh

### Hazard

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Flood %</th>
<th>Flash Floods %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vulnerable Land Area</td>
<td>61.09</td>
<td>23.09</td>
</tr>
<tr>
<td>Vulnerable Population</td>
<td>71.74</td>
<td>26.75</td>
</tr>
</tbody>
</table>

---

### Population below the poverty line

Sources: World Bank; Bangladesh Bureau of Statistics; World Food Programme
Challenges to Mainstream Social Inclusion in DRM

- **Economic Status**: The poorest are often those rely on agriculture, fisheries and livestock.

- **Gender**: Land ownership is relatively equal compared to other South Asian countries. Much to be done to improve women’s economic and social rights and eradicate gender-based violence.

- **Multi-factors**:
  - Lack of capacity to translate early warning and forecasts and dissemination
  - Dissemination Mechanism to reach most vulnerable community
  - Often marginalized individuals have multiple exclusion factors (e.g., illiterate, poor, indigenous, landless, elderly, women etc)
Existing Efforts to Enhance Social Inclusion

- Policy documents recognizing social inclusion in DRM:
  - Disaster Management Act (2012)
  - Disaster Management Plan 2016-2020
  - Standing Orders on Disasters

- Dhaka Declaration 2015+ on Disability and Disaster Risk Management (2018)

- Social Safety Net Programme: Designed to cope with multiple shocks including natural disasters

- National Resilience Programme: Joint program among Min. of Planning, Min. of Disaster Management, Min. of Local Government, and Min. of Women and Children

- 7th Five Year Plan: Policies and strategies for Crop Sub-Sector: Technology based weather prediction and forecasting
Opportunity for More Socially Inclusive DRM in Disaster prone areas

**Opportunity:** WB-financed project “Bangladesh Weather and Climate Services Regional Project (BWCSRP) in all over Bangladesh specially in disaster prone areas”

“To strengthen Government of Bangladesh’s capacity to deliver reliable weather, water and climate information services and improve access to such services by priority sectors and communities.”

**Target Activity:**

- **Component-C, Sub-component C3:** Agricultural Disaster Risk Management through Agro meteorological Information Dissemination
  - Agro-meteorological information dissemination mechanism for farming communities
Bangladesh Weather and Climate Services Regional Project
(Funded by The World Bank)

COMPONENT-A
Strengthening Meteorological Information Services and Early Warning Systems
Bangladesh Meteorological Department (BMD)

COMPONENT-B
Strengthening Hydrological Information Services and Early Warning Systems
Bangladesh Water Development Board (BWDB)

COMPONENT-C
Agro-Meteorological Information Systems Development
Department of Agricultural Extension (DAE)
Communication and Absorption of Advisories and Services, Last-mile Connectivity (Planned)
**Action Plan for Mainstreaming Inclusive Resilience**

- **Inclusive Needs & Capacity Assessment of Farmers**
  - Agro-meteorological Information Dissemination Mechanism
  - Design of Agro-met Systems/Products
  - Farmers’ Training and Feedback Outreach

**Social Inclusion Ideas**

- Analyze information access challenge of marginalized groups
- Capture area-, language-, market & gender-specific needs

- Inclusive information dissemination system (e.g. accessible for hearing/visible impaired, those w/o mobiles etc)

- Design system/apps with local languages, use of pictorial/sign symbols
- Considering sustainable use by farmers (maintenance, updates.)

- Farmers Feedback to DAE Agromet Technical Committee
Click the following link:

AMISDP

২৪ থেকে ২৭ তারিখে বৃষ্টিপাতের সম্ভাবনা রয়েছে। সেচ, সার ও কীটলাশক প্রয়োগ ও আলু সংগ্রহ আপাতত বন্ধ রাখুন। - ডিএই

বিদ্যমান আবহাওয়ায় গমে ব্লাস্ট দেখা দিতে পারে। প্রতি পাঁচ শতাংশ জমির নাটিভো ০৬ গ্রাম /১০ লি. বা এমিস্টার টপ ১০ মিলি /১০ লি. হারে প্রয়োগ করুন। - ডিএই
AMISDP

Chance of rain from 31 March to 02 April. Stop application of irrigation, pesticide and fertilizer. Harvest wheat before 31 March. Sow Jute seeds after 02 April - DAE Agromet Project

Issued on: March 27, 2019. 17:55 pm
Alert Message as on 30th April 2019

Special Agromet Advisories for the districts of Sylhet, Sunamganj, Meherpur, Noakhali

There is chance of comparatively very good amount of rainfall (6.0-10.0 cm) along with strong wind during 3-6 May 2019. In view of that, following urgent Agromet advisories are issued to save the standing crops:

1. Where boro paddy found 80% maturity, harvest immediately otherwise due to cyclone shattering loss will take place.
2. Immediately harvest matured groundnut, rabi maize, horticultural crops, vegetables
3. Clean the irrigation channel so that there should not be any standing water in the paddy field
4. Arrange for elevated bunding around and inside the paddy field so that water current may not affect the standing crops.
5. Avoid sowing of new plants/ crops
6. Provide mechanical support to the standing crops
7. Uplift the plants which were lodged due to heavy rainfall and high wind immediately.
8. Avoid application of fertilizer, pesticides, irrigation.

Special Agromet Advisories for the districts of Sylhet, Sunamganj, Meherpur, Noakhali

There is chance of comparatively very good amount of rainfall (6.0-10.0 cm) along with strong wind during 3-6 May 2019. In view of that, following urgent Agromet advisories are issued to save the standing crops:

1. Where boro paddy found 80% maturity, harvest immediately otherwise due to cyclone shattering loss will take place.
2. Immediately harvest matured groundnut, rabi maize, horticultural crops, vegetables
3. Clean the irrigation channel so that there should not be any standing water in the paddy field
4. Arrange for elevated bunding around and inside the paddy field so that water current may not affect the standing crops.
5. Avoid sowing of new plants/ crops
6. Provide mechanical support to the standing crops
7. Uplift the plants which were lodged due to heavy rainfall and high wind immediately.
8. Avoid application of fertilizer, pesticides, irrigation.

Special Agromet Advisories for the districts of Sylhet, Sunamganj, Meherpur, Noakhali

There is chance of comparatively very good amount of rainfall (6.0-10.0 cm) along with strong wind during 3-6 May 2019. In view of that, following urgent Agromet advisories are issued to save the standing crops:

1. Where boro paddy found 80% maturity, harvest immediately otherwise due to cyclone shattering loss will take place.
2. Immediately harvest matured groundnut, rabi maize, horticultural crops, vegetables
3. Clean the irrigation channel so that there should not be any standing water in the paddy field
4. Arrange for elevated bunding around and inside the paddy field so that water current may not affect the standing crops.
5. Avoid sowing of new plants/ crops
6. Provide mechanical support to the standing crops
7. Uplift the plants which were lodged due to heavy rainfall and high wind immediately.
8. Avoid application of fertilizer, pesticides, irrigation.

Special Agromet Advisories for the districts of Sylhet, Sunamganj, Meherpur, Noakhali

There is chance of comparatively very good amount of rainfall (6.0-10.0 cm) along with strong wind during 3-6 May 2019. In view of that, following urgent Agromet advisories are issued to save the standing crops:

1. Where boro paddy found 80% maturity, harvest immediately otherwise due to cyclone shattering loss will take place.
2. Immediately harvest matured groundnut, rabi maize, horticultural crops, vegetables
3. Clean the irrigation channel so that there should not be any standing water in the paddy field
4. Arrange for elevated bunding around and inside the paddy field so that water current may not affect the standing crops.
5. Avoid sowing of new plants/ crops
6. Provide mechanical support to the standing crops
7. Uplift the plants which were lodged due to heavy rainfall and high wind immediately.
8. Avoid application of fertilizer, pesticides, irrigation.

Special Agromet Advisories for the districts of Sylhet, Sunamganj, Meherpur, Noakhali

There is chance of comparatively very good amount of rainfall (6.0-10.0 cm) along with strong wind during 3-6 May 2019. In view of that, following urgent Agromet advisories are issued to save the standing crops:

1. Where boro paddy found 80% maturity, harvest immediately otherwise due to cyclone shattering loss will take place.
2. Immediately harvest matured groundnut, rabi maize, horticultural crops, vegetables
3. Clean the irrigation channel so that there should not be any standing water in the paddy field
4. Arrange for elevated bunding around and inside the paddy field so that water current may not affect the standing crops.
5. Avoid sowing of new plants/ crops
6. Provide mechanical support to the standing crops
7. Uplift the plants which were lodged due to heavy rainfall and high wind immediately.
8. Avoid application of fertilizer, pesticides, irrigation.

Special Agromet Advisories for the districts of Sylhet, Sunamganj, Meherpur, Noakhali

There is chance of comparatively very good amount of rainfall (6.0-10.0 cm) along with strong wind during 3-6 May 2019. In view of that, following urgent Agromet advisories are issued to save the standing crops:

1. Where boro paddy found 80% maturity, harvest immediately otherwise due to cyclone shattering loss will take place.
2. Immediately harvest matured groundnut, rabi maize, horticultural crops, vegetables
3. Clean the irrigation channel so that there should not be any standing water in the paddy field
4. Arrange for elevated bunding around and inside the paddy field so that water current may not affect the standing crops.
5. Avoid sowing of new plants/ crops
6. Provide mechanical support to the standing crops
7. Uplift the plants which were lodged due to heavy rainfall and high wind immediately.
8. Avoid application of fertilizer, pesticides, irrigation.

Special Agromet Advisories for the districts of Sylhet, Sunamganj, Meherpur, Noakhali

There is chance of comparatively very good amount of rainfall (6.0-10.0 cm) along with strong wind during 3-6 May 2019. In view of that, following urgent Agromet advisories are issued to save the standing crops:

1. Where boro paddy found 80% maturity, harvest immediately otherwise due to cyclone shattering loss will take place.
2. Immediately harvest matured groundnut, rabi maize, horticultural crops, vegetables
3. Clean the irrigation channel so that there should not be any standing water in the paddy field
4. Arrange for elevated bunding around and inside the paddy field so that water current may not affect the standing crops.
5. Avoid sowing of new plants/ crops
6. Provide mechanical support to the standing crops
7. Uplift the plants which were lodged due to heavy rainfall and high wind immediately.
8. Avoid application of fertilizer, pesticides, irrigation.
Disaster Preparedness activities for FANI
Early harvesting of Winter Rice Crop if it is 80% matured
Some unavoidable situation and loss of crop
CHALLENGES AND LESSONS LEARNED

- Lack of sufficient network to draw weather data
- Absence of sufficient location specific research data
- Issues in dissemination
- Technical problems of forecast

- Key problems in agricultural climate services
  - Climate services need to be actionable and demand-driven
  - Agriculturally relevant forecast skill needs to be improved
  - Improved forecasts require appropriate decision support tools
  - Farmers and relevant stakeholders need to be empowered to understand and make use of climate information
  - Cross-sectoral awareness of climate services is currently limited
  - Lack of coordination among climate service providers
Thanks for your patience hearing