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Adapting to climate change

Issues for South Asia

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Outline

- Understanding CC and its impacts
 - Reducing CC impacts: role of adaptations
 - Why the need for adaptations?
 - What is required for an effective adaptations?
 - Some examples of adaptations in South Asia
 - Some initiatives helping adaptations
 - Way forward
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Understanding CC and its impacts

- Increased natural calamities
 - Reduced and unsustainable food production
 - Use of unbalanced chemicals in agriculture
 - Declined production and productivity, pushing small farmers to further poverty
 - Increased migration from rural to urban areas.
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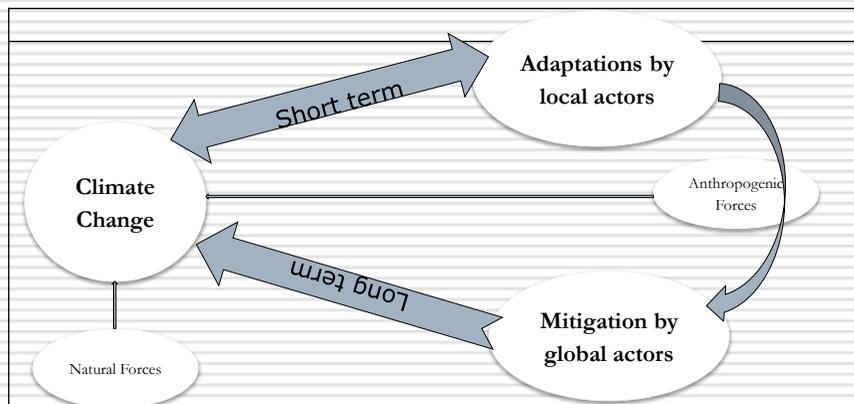
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Understanding CC and its impacts

- Declined livestock, manure and increased reliance on fertilizers
 - Declined pasture land and increased reliance on market for animal feed
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Reducing CC impacts: role of adaptations



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Why the need for adaptation?

- Adaptation is the process of adjusting and adapting to a new situation. It is thus a potential tool to address or reduce adverse impacts of CC on crop production and productivity. *This is usually achieved by bringing in behavioural changes to adjust and survive in the emerging situation.*
- Lack of adaptive capacity can lead to a virtual conflict between NATURE and HUMANITY, and thus could endanger sustainability. This calls for and requires adaptations.
- Adaptations to be effective require FULL understanding and awareness of the problem – a half known problem can only lead to a half answer – **this holds true for climate change adaptations as well.**

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Why the need for adaptations?

- ❑ Production and productivity of agricultural crops depends on specific climatic conditions
 - ❑ Climate change alters those conditions under which optimal productivity is realised
 - ❑ This calls for action to reduce impact of CC on crops
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What is required for an effective adaptation?

- ❑ As indicated earlier, adaptations to be effective require FULL understanding and awareness of the problem – a half known problem can only lead to a half answer – **this holds true for climate change adaptations as well.**
- ❑ There is no generalised practice for adaptation which could be applied universally, what is, therefore, needed is:
 - A complete mapping of CC related problems at the local levels, say district levels, and then devising area-specific adaptation tools.
- ❑ The recent initiative by the ICAR to prepare a dossier consisting of districts' agriculture and allied sectors, including fisheries, animal husbandry, and dairy farming for each of the districts in India is a welcome move. It is expected that the dossier will help administration in dealing with CC impacts.

It will use very useful for South Asia to have a similar plan and mapping of district level problems relating to CC.

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Adaptations needs coordination between farmers and other stakeholders

- It is often argued that farmers know best about type of adaptations required to cope with new situations, emerging out of CC impacts.
 - While this is true, it is also true that considering the complexity of CC impacts, farmers' ability to adapt can not be taken for granted. In fact, there could be several issues which requires effective coordination between farmers and other stakeholders such as NGOs, agronomists, etc.
 - Farmers' attempt to adapt to a situation of declining yields sometimes result in use of unbalanced inputs (fertilisers/pesticides), which result in further decline in yields.
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Some examples of adaptations in South Asia

- Switching to climate resilient agriculture
 - Finger millet, Pearl millet etc. less sensitive to ambient temperature and CO₂ content
 - But following mitigating strategies not adopted:
 - Reducing methane emissions from rice fields
 - Practicing better livestock management
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Some initiatives helping in adaptations in South Asia (Sunamgunj, Bangladesh)



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Some initiatives helping in adaptations

- ❑ NREGA, India's most important the anti-poverty scheme could become one of the country's main weapons to fight against adverse impacts of climate change.
- ❑ About 70% of works under the NREGA are "green jobs" such as water harvesting, afforestation and land development.
- ❑ 14% of the works undertaken relate to afforestation.
- ❑ 17% of total works undertaken relate to rural connectivity.
- ❑ Recently, the government has started a pilot project to quantify climate benefits from the National Rural Employment Guarantee Act (NREGA).

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Way Forward

- To move forward at the adaptation front, stakeholders in South Asia must be aware of the CC impacts at the local level. This calls for a complete mapping of potential impacts of CC.
- Policy focus on pro-poor/small and marginal farmers
- Need for investment in areas which could help coping up to the adverse impacts of CC. These could include investment in technology, seed, efficient use of natural resources.
- Need for creating resources that address adaptation strategies suitable to the country needs
- The issue of CC needs to be seen at South Asia level. This calls for facilitation of trans-boundary learning to effectively disseminate knowledge/techniques
- Boost intraregional trade
- Need for inventorising and dissemination of best adaptation practices being followed by farmers in different agro-climatic zones in South Asia.

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Thank You!

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