Global Set of Climate Change Statistics and Indicators

National Consultation on the Draft Set

Nepal’s Experience

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Climate Change Issues in Nepal

• The Himalayas play a crucial role in supplying water to the continent, they are sometimes called the “water towers” of Asia.

• Melting ice from the mountains provides life-giving water to close to two billion people.

• However, recently mountain region are at the forefront of climate change impacts with looming water crisis and huge losses due to disaster events.
Climate Change Issues in Nepal cont..

- Nepal contributes only around 0.027 percent to total global emissions, although it is one of the countries most vulnerable to the impacts of climate change.

- Nepal submits its second nationally determined contribution (NDC) document to UN outlining its targets for the next decade to reduce emissions and support vulnerable communities to adapt to the impacts of climate change.

- The government strongly believes that these targets can be achieved as they have been set after consultation with various ministries, stakeholders, and experts.
Climate Impacts in Nepal

1.5 to 2% GDP Loss

Temperature raise 1.5 - 2.7 degree by 2100

Black carbon in the high mountains

Glacier melting and GLOF issues

Slow on set impacts (desertification, Drought)

Rapid on set impacts (Flood, landslide, fire)

Impact on water, energy, food, biodiversity, urban and rural settlements, tourism

13% GDP Loss by 2100

Unique topography with different elevation based eco-regions, nature-based livelihoods

Poverty and marginalization a major problem

Low adaptive and resilience capacity

Poor, Indigenous marginalized, women, girls, children, disabled, elderly groups are mostly impacted by climate change
National consultation on the draft climate change indicators

Formation of technical committee leading by CBS including from Ministry of Forest and Environment & other stakeholders

- Meetings conducted and discussed about how we can contribute

Consultation workshop with stakeholders

- The discussions were made to develop indicators which can respond to main climate change policy questions in an internationally comparable way

- As provisioned in UNSD framework agreed to keep these as five areas to be consistent with the UNSD framework.

- Basically, indicators in Agriculture, Forestry and Other Land Use (AFOLU), Energy, and Waste sectors were discussed in priority on the basis of relevancy of Nepal

- Consensus was made to omit some indicators from global set, which are not relevant in the context of Nepal for example, issues related with ocean and other statistics which were beyond the scope of national assessment
Current status

• Separate Environment Statistics Section in CBS
• Regular publication of Environment Statistics (Censuses, Surveys, admin data)
• National Climate Change Impact Survey Report, Waste management Baseline Survey Report
• Second Nationally Determined Contribution (NDC) Report (Ministry)
• National Communication Report (Ministry)
• Community questionnaire is added in Population census where one of the thematic area is environment/disaster
Co-operation loop for environment & climate change statistics

CBS
- Censuses, surveys
- Admin data
- Disaster statistics
- Agriculture statistics
- Waste statistics
- Environment statistics
- Climate change statistics
- Energy statistics
- Industry statistics
- Environmental Accounts

Other Stakeholders
- Land use
- Forestry
- Transport
- Temperature, Rainfall
- Environmental statistics database
- Emission calculation
- GHG inventory
- Air quality
- Temperature, Rainfall
- Energy statistics
- Industry statistics
- Agriculture statistics
- Waste statistics
- Disaster statistics
- Environment statistics
- Climate change statistics
- Environmental Accounts
Both of these publications inform corresponding indicators in the Global Set
### Filled in information in Part 2 of the Global Consultation

<table>
<thead>
<tr>
<th>Area</th>
<th>Code</th>
<th>Tier</th>
<th>Themes</th>
<th>National Data</th>
<th>Relevance</th>
<th>Methodological Soundness</th>
<th>Data Availability</th>
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</thead>
<tbody>
<tr>
<td>111</td>
<td>Average increase of insurance premiums incurred due to climate change</td>
<td>5140 3</td>
<td>Insurance</td>
<td>National</td>
<td>Yes/No</td>
<td>Reference/Link</td>
<td>Report on Climate Change Impact Survey 2016</td>
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<td>Proportion of population with access to climate information</td>
<td>5200 3</td>
<td>Education</td>
<td>Planning Commission</td>
<td>Yes</td>
<td>Climate Change Impact Survey 2016</td>
<td>Report on Climate Change Impact Survey 2016</td>
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<tr>
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<td>Number of households with timely access to climate information</td>
<td>5201 3</td>
<td>Education</td>
<td>Planning Commission</td>
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<td>Report on Climate Change Impact Survey 2016</td>
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<td>113</td>
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<td>Education</td>
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<td>Climate Change Impact Survey 2016</td>
<td>Report on Climate Change Impact Survey 2016</td>
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<td></td>
<td>Number of companies publishing sustainability reports (SDG)</td>
<td>5220 2</td>
<td>Corporate</td>
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<td></td>
<td>5221 2</td>
<td>Corporate reports</td>
<td></td>
<td></td>
<td></td>
<td>Report on Climate Change Impact Survey 2016</td>
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</table>
Results on Perception of Climate Change

Households’ knowledge on climate change

- Mountain: 63.59%
- Hill: 60.47%
- Terai: 51.35%
- Male: 54.07%
- Female: 49.98%
- Total: 50.67%

Main source of information about climate change

- Family member: 1%
- Neighbour/friends: 18%
- Local agencies/official: 1%
- Awareness program: 5%
- Newspaper: 3%
- Television: 28%
- Radio: 43%

Statistics in the Global set: Proportion of population with access to climate information

Statistics in the Global set: Number of households with timely access to climate information

Statistics in the Global set: Number of people reached through climate change public awareness campaigns
## Filled in information in Part 2 of the Global Consultation

<table>
<thead>
<tr>
<th>Area</th>
<th>Topic</th>
<th>Indicator</th>
<th>Statistics</th>
<th>Code</th>
<th>Tier</th>
<th>Preliminary</th>
<th>Themes</th>
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<td>Occurrence of hazardous events and disasters (FDES 4.1)</td>
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<td>1</td>
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<td>GDP</td>
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<td>1082</td>
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</tbody>
</table>

- pH/acidity/alkalinity (FDES 1.3.2.f.1)
Climate Induced Disasters and Impacts...

Informs indicator 31 in Global Set: Frequency of hazardous events and disasters

Households affected by disasters in last 25 years

<table>
<thead>
<tr>
<th>Hazards</th>
<th>Yes</th>
<th>No</th>
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</thead>
<tbody>
<tr>
<td>Diseases / insect</td>
<td>20</td>
<td>80</td>
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<tr>
<td>Cold wave</td>
<td>16</td>
<td>84</td>
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<tr>
<td>Heat wave</td>
<td>7</td>
<td>93</td>
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<tr>
<td>Avalanche</td>
<td>0</td>
<td>100</td>
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<tr>
<td>Snow storm</td>
<td>6</td>
<td>94</td>
</tr>
<tr>
<td>Land slide</td>
<td>35</td>
<td>65</td>
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<tr>
<td>Soil erosion</td>
<td>28</td>
<td>72</td>
</tr>
<tr>
<td>Sporadic rain</td>
<td>7</td>
<td>93</td>
</tr>
<tr>
<td>Heavy rain</td>
<td>27</td>
<td>73</td>
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<tr>
<td>Hailstorm</td>
<td>26</td>
<td>74</td>
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<tr>
<td>Thunderstrom</td>
<td>13</td>
<td>87</td>
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<td>Dry wind wave</td>
<td>38</td>
<td>62</td>
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<tr>
<td>Inundation</td>
<td>29</td>
<td>71</td>
</tr>
<tr>
<td>Flood</td>
<td>32</td>
<td>68</td>
</tr>
<tr>
<td>Fire (settlement)</td>
<td>32</td>
<td>68</td>
</tr>
<tr>
<td>Fire (forest)</td>
<td>7</td>
<td>93</td>
</tr>
<tr>
<td>Drought</td>
<td>22</td>
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### Climate Change Impacts on Crops, and Livestock

<table>
<thead>
<tr>
<th>IMPACTS</th>
<th>Area</th>
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<th>Methodological Soundness</th>
<th>Data Availability</th>
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<tbody>
<tr>
<td>Agricultural production impacted by climate change</td>
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<td>Reference/Link</td>
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</tbody>
</table>

#### Climate change impact on crops and livestock in last 25 years

**Observation**
- **Yes**: 60, 66
- **No**: 46, 34
- **Not applicable**: 14, 0

- Blue: Emergence of diseases in crops
- Red: Emergence of new insects/pests in crops
- Green: Emergence of new diseases in livestocks
### Climate Change Impacts on Human Health

#### Climate change and human health

<table>
<thead>
<tr>
<th>Area</th>
<th>Indicator</th>
<th>Code</th>
<th>Year</th>
<th>Themes</th>
<th>National Data Sources</th>
<th>Relevance</th>
<th>Methodological Soundness</th>
<th>Data Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td>Climate refugees, migrant and displaced persons by climate change</td>
<td>2150</td>
<td>3</td>
<td>Disasters</td>
<td>Disaster</td>
<td>Yes/No</td>
<td>Reference/Link</td>
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<tr>
<td></td>
<td>Number of people whose destroyed dwellings were attributed to climate change</td>
<td>2151</td>
<td>2</td>
<td>Disasters</td>
<td>Ministry</td>
<td>Yes/No</td>
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</table>

#### Incidence of climate-related diseases

<table>
<thead>
<tr>
<th>Area</th>
<th>Indicator</th>
<th>Code</th>
<th>Year</th>
<th>Themes</th>
<th>National Data Sources</th>
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</thead>
</table>

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**Climate change impacts on human health in last 25 years**

- **Increase the incidence of vector borne diseases**: 81%
- **Increase the incidence of water borne diseases**: 79%

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**Observation**

- Yes: 19%
- No: 21%
Observed changes on water resources in last 25 years

- Changes on surface water
- Changes on water sources
Climate Change and Natural Resources: Water and Biodiversity...

<table>
<thead>
<tr>
<th>Distribution and status of species</th>
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<tbody>
<tr>
<td>51 Proportion of population maintained within a species</td>
<td>2420 3 Species Ministry o</td>
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<tr>
<td>Species population (FDES 1.2.2.c.4)</td>
<td>2421 2 Species Ministry o</td>
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<tr>
<td>52 Red list index (SDG 15.5.1)</td>
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<tr>
<td>Number of red list species (FDES 1.2.2.c.1)</td>
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<td>53 Species habitat index</td>
<td>2440 2 Species Ministry o</td>
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<tr>
<td>Area of ecosystems (FDES 1.2.2.a.1)</td>
<td>2441 2 Species Ministry o</td>
</tr>
<tr>
<td>Known flora and fauna species (FDES 1.2.2.c.1)</td>
<td>2442 2 Species Ministry o</td>
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</table>

Changes in the status of animal and plant species in last 25 years

- **Insects**: 57 Changed, 21 Not changed, 21 Don't know
- **Birds**: 78 Changed, 12 Not changed, 9 Don't know
- **Wild animal**: 61 Changed, 12 Not changed, 13 Don't know
- **Aquatic plant**: 15 Changed, 20 Not changed, 50 Don't know
- **Aquatic animal**: 33 Changed, 17 Not changed, 38 Don't know
- **Grass / Fodder**: 45 Changed, 26 Not changed, 24 Don't know
- **Herbal/ NTFPs**: 24 Changed, 24 Not changed, 45 Don't know
- **Shrub / bush**: 43 Changed, 30 Not changed, 24 Don't know
- **Tree**: 70 Changed, 17 Not changed, 10 Don't know

Legend:
- Blue: Changed
- Red: Not changed
- Green: Don't know
- Purple: Not applicable
Adaptation measures (farm based) adopted in last 25 years

- Work on water and land conservation
- Start seed bank
- Use of cold storage
- Use of tunnel for vegetable farming
- Started mixed cropping
- Start agro-forestry
- Both livestock and crop farming
- Crop cultivation only
- Raise livestock only
- Agriculture insurance
- Livestock insurance
- Switch to another livestock
- Cultivate new crop
- Increase compost fertilizer
- Increase in-organic fertilizer
- Change crop cultivation time
- Improved seed
- Investment on pond
- Supplemntal irrigation management
- Raise improved breed of livestock
- Change cultivation technique
- Agriculture skills training
Issues and challenges

- Data gaps
- Administrative data is not reporting on time
- Capacity development
- Coordination/collaboration
- Prevailing statistical laws and regulations have not been updated/amended
- Data sharing policy
- Weak statistical infrastructure
- Covid-19 Pandemic (First wave, second wave, .........)
Next steps

• Share the prefilled Consultation parts and discuss with the national focal point reporting to UNFCCC

• Share the prefilled Consultation and set up a meeting with technical committee to discuss Part I and assess most relevant indicators and data availability in the draft Global Set contained in Part II (Excel).

• Complete Part I and a draft of Part II (share draft with UNSD) and organize a second wider meeting (last week of July) with more stakeholders before finalization and submission to UNSD.
Thank you !!!
Your comments and queries are highly appreciated !!!