

a resource book on

Gender and Climate Change



A Resource Book on Gender and Climate Change

Acknowledgement

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An Introduction to the Resource Book

Nepal is experiencing impacts of climate change in various forms including rise in annual mean temperature and increase in frequency and magnitude of extreme weather events. Women, indigenous people and the poor are most vulnerable to the impacts of climate change. Yet, people and communities - are least aware of climate change and its implications. Climate risk can be minimized by raising people's awareness about climate change and its possible implications for their lives and livelihoods.

This resource book is designed and developed targeting community based organizations (CBOs), especially women's groups to build their knowledge and information on climate change and its implications. It also elaborates on dual roles of women as 'vulnerable group' to climate impacts and 'change agent' for building resilience in the face of growing climate change impacts and their disproportionate effect on women. In the book, photos, graphs and charts are used to simplify the complex science of climate change.

Target groups: The targets of the resource book are community based organizations (CBOs) working in gender and climate change. This book is expected to serve as a good resource material while providing training to CBO representatives who are then expected to have the climate change knowledge to cascade down to the grassroots women and communities the CBOs are working with.

Organization of the Book

The book is divided into four chapters and each chapter has different sections. Each section has a specific topic explained with the help of pictures for better understanding. At the end of each section you will find blank spaces that you have to fill in with 3-4 points about your understanding of each topic.

The resource book will first walk you through the science of climate. The chapter explains the terms weather, climate, climate change, greenhouse effect and global warming.

The second chapter talks about effects of climate change along with the definition of mitigation and adaptation. In this chapter you will find various examples of mitigation and adaptation actions to cope with the impacts of climate change.

The third chapter briefs its readers about global and national initiatives taken to mitigate and adapt to climate change impacts.

The final chapter elaborates how climate change and gender are interlinked. It shows that women are vulnerable to climate change and that their direct engagement is crucial for adaptation and mitigation actions.

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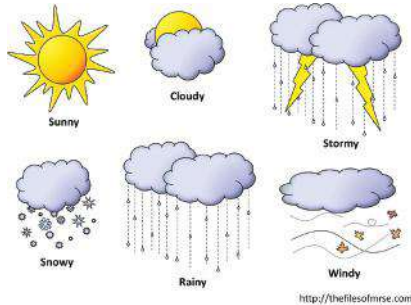
Chapter 1

Understanding Climate Science

Weather and Climate

Weather

☉ Weather is the atmospheric condition over a short period of time.



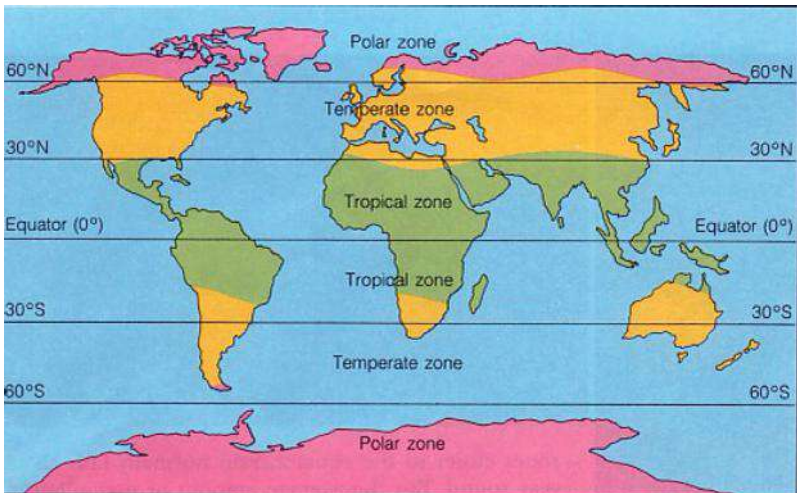
☉ Weather can change from hour-to-hour and day-to-day.

☉ **Example:** On a sunny day, if suddenly heavy rain occurs or sun shines immediately after heavy rain, this is weather.

Climate

☉ Climate is the “average weather” condition of the atmosphere over relatively long period of time (around 30 years).

☉ It is affected by two prime factors- temperature and precipitation



- ☉ Change is not frequent and takes several years.
- ☉ **Example:** We can expect rain in June and July or cold from November till February. This is climate.

The “weather”, as we experience it, is the fluctuating state of the atmosphere around us characterized by the temperature, wind, precipitation, clouds and other weather elements. Weather has only limited predictability. Beyond a week or two individual weather systems are unpredictable.

“Climate” refers to the “average weather” in terms of the mean and its variability over a certain time-span and a certain area. Climate varies from place to place, depending on latitude, distance to the sea, vegetation, presence or absence of mountains or other geographical factors. Climate varies also in time; from season to season, year to year, decade to decade or on much longer time-scales, such as the Ice Ages.

(IPCC, 2001)



Note down your understanding of weather and climate

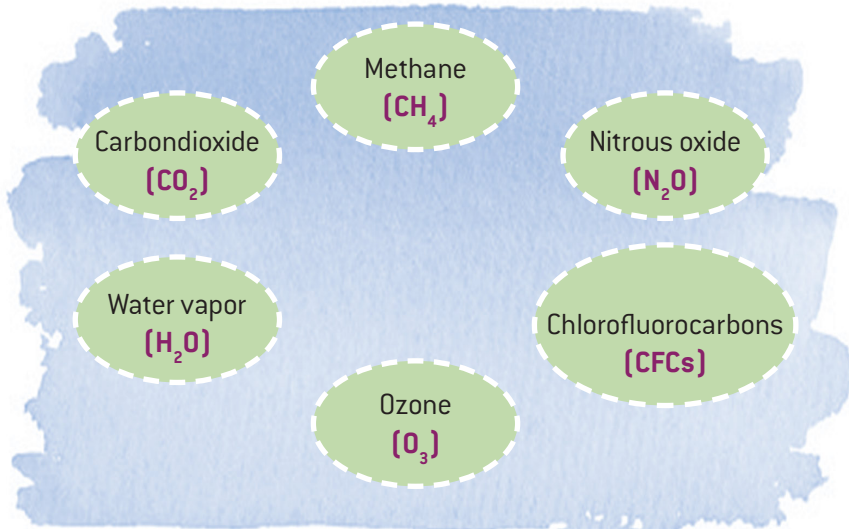
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Greenhouse Effect and Global Warming

Greenhouse Gases (GHGs)

Gases in the earth's atmosphere emitted by natural and anthropogenic sources that trap some of the solar rays in the earth's atmosphere thereby warming the earth.

Greenhouse Gases



Natural Sources of Greenhouse Gases



Wildfire



Volcanic eruption



Wetland

Human-induced sources of Greenhouse Gases



Intensive agriculture



Vehicular emissions

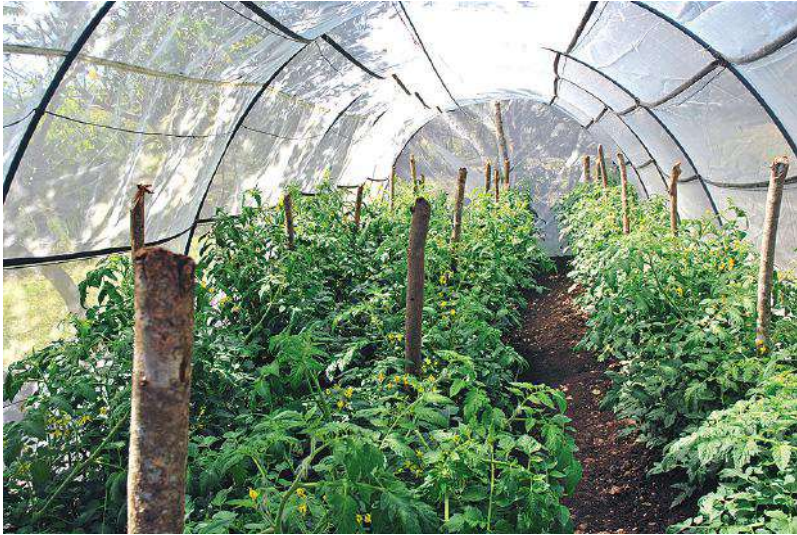


Landfills



Industrial emissions

Artificial Greenhouse

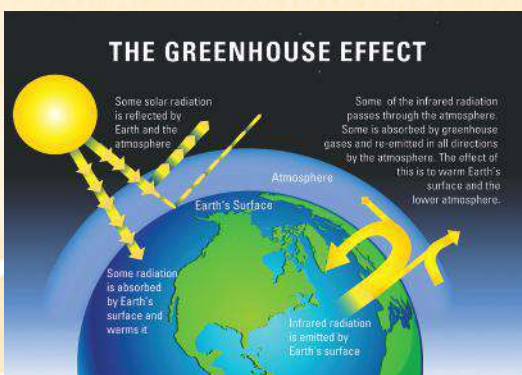


- ☉ A house made of glass (or plastic)
- ☉ Sunlight passes through the glass or plastic and hits solid surface of the house. The surface absorbs some of the light letting the rest reflect back.
- ☉ The reflected light cannot pass through the glass or plastic and gets trapped inside the house.
- ☉ The heat trapped inside the house increases the temperature and makes it warmer than outside.

Greenhouse Effect

- ☉ Greenhouse effect of the earth has the same phenomena as that of artificial greenhouse.
- ☉ When sunlight hits the earth surface, some of the solar radiation is absorbed by the surface and the rest reflects back into the space.

- ☉ The greenhouse gases in the atmosphere trap some of these rays before they escape.
- ☉ This makes the earth's surface warmer and fit for survival.
- ☉ This natural process by which heat energy is trapped in the earth's atmosphere by greenhouse gases is known as **Greenhouse Effect**.



We must understand that Greenhouse Effect is a natural process. In its absence the earth's temperature will be -18 degree Celsius.

Note down your understanding of Greenhouse Effect



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Global Warming



Global warming is a gradual increase in the average atmospheric temperature of the earth attributed to anthropogenic greenhouse gases that causes corresponding change in climate.

Earth's average surface temperature is 14°C (NASA GISS, n.d.)



Global mean surface temperature has already increased by approximately 1°C above the pre-industrial levels (IPCC, 2018)

Climate Change

- ☉ Climate change **refers to change in climate** over a period of time, whether due to natural process¹ or human actions² leading to increase in the earth's temperature.
- ☉ Two prime parameters of climate change are:



Temperature



Precipitation

1. volcanic eruption, wildfire, wetlands

2. fossil fuel burning, industrial emissions, automobiles, agriculture

United Nations Framework Convention on Climate Change (UNFCCC), in its Article 1, defines climate change as: 'a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods'.

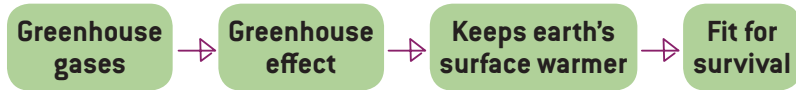
Note down your understanding of Global warming and climate change



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Links between Greenhouse Effect, Global Warming and Climate Change

Natural Process



Anthropogenic Intervention

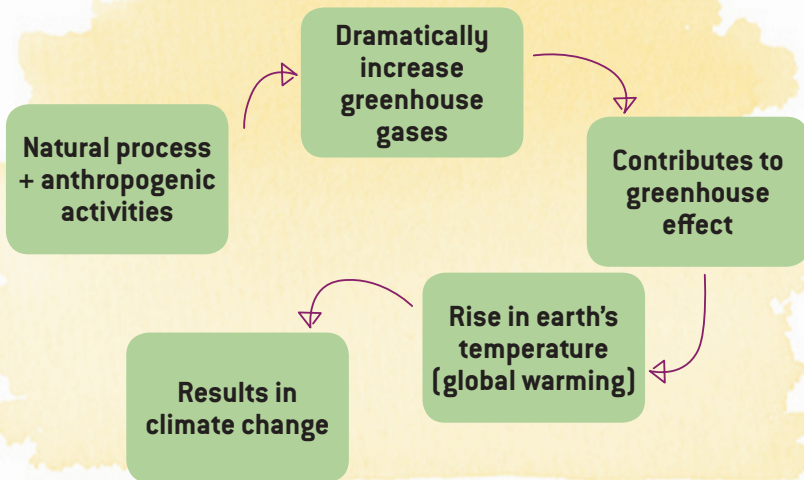


Figure: The linkage between greenhouse effect, global warming and climate change



Note down your understanding of the linkage among greenhouse effect, global warming and climate change

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Chapter 2

Effects and Impacts of Climate Change

Effects of Climate Change

Melting glaciers (Glacial Lake Outburst Floods, GLOFs)



- ★ Glaciers are shrinking and glacial lakes are evolving and growing in number and size.
- ★ Within a span of 30 years from 1987- 2017, 511 new glacial lakes have emerged in Nepal (Khadka et.al, 2018).
- ★ GLOFs have both economic impact (life and property, infrastructure, and agricultural land) and social impact (heritage sites, environment quality, insecurity, depression) on downstream communities.
- ★ Nepal has experienced at least 24 GLOF events (ICIMOD, 2011).

Increased risk of floods and landslides

- ★ As a result of climate change, the torrential rainfall during monsoon poses a risk of increased flooding, inundation, landslide and erosion.



- ★ Flood and landslides affect property, agriculture, infrastructure (settlements, roads, bridges, and communication and transmission networks), business and commerce, and cause loss of human life.
- ★ Out of Nepal's 75 districts 49 are prone to floods and/ or landslides (MoPE, 2017).

Increased risk of forest fires

- ★ Forest sector is most exposed to fire hazards causing wildlife death, habitat destruction or alteration.



- ★ Forest fires can adversely impact on forest resources, the availability of fuelwood and the communities dependent on them.
- ★ Out of Nepal's 75 districts, 23 are prone to wildfires (MoPE, 2017); extreme droughts also trigger forest fires.

Severe droughts

- ★ Droughts have severe impacts on agriculture, water resources, other natural resources and livelihood.



- ★ In the case of droughts and reduced water availability people, especially women need to spend more time to collect water, so they are directly affected by drought.

Sea level rise and coastal flooding

- ★ Sea level rise causes heavy rain, severe storms and coastal flooding.
- ★ This threatens life, farmland, housing, recreational areas of coastal communities.
- ★ Coastal flooding and inundation lead to forced migration.



Based on the above examples list the most prominent climate change effects in Nepal



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Sector-wise Impacts of Climate Change in Nepal

Sectors

Impacts



Agriculture

- ★ Agriculture sector is affected by climate induced floods, droughts, erratic rainfall, and pest and disease outbreak, which lead to crop failure, production losses and food insecurity.
- ★ As about 70% of women are employed in agriculture in Nepal climate change impacts increases their drudgery.



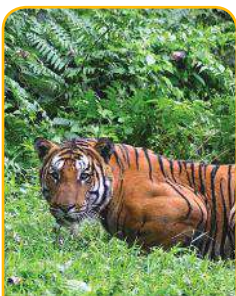
Water Resources

- ★ Climate change affects overall water availability including its timing, quantity and quality as a result of variability in temperature, precipitation and extreme weather events (flood and droughts).
- ★ Decreasing water availability for water dependent livelihood (agriculture) and drinking increases vulnerability of marginalized groups and women are already spending a lot of time on fetching water.



Urban Settlements and Infrastructure

- ★ Changing climatic patterns are posing threats to urban livelihoods in the form of more frequent droughts, drying springs and a decrease in the ground water table during the dry seasons.
- ★ Poor urban planning and inadequate provision of infrastructure (e.g., drainage system) have made floods a major problem in urban areas during the monsoon and heavy rainfall events.



Forest and Biodiversity

- ★ The flowering and fruiting time of many species and the length of the growing season have changed.
- ★ Many species that are already vulnerable are likely to become extinct and species with limited climatic ranges and restricted habitat requirements are typically the most vulnerable.



Health

- ★ Heat waves lead to sudden increase in morbidity and mortality rates, in particular among older people, children and those who are suffering from pre-existing health conditions.
- ★ Scarcity of water for drinking and lack of proper sanitation and hygiene subsequently leads to water and food-borne diseases.

(Source: National Adaptation Plan Formulation Process in Nepal, 2017)

List similar impacts observed by you in your locality



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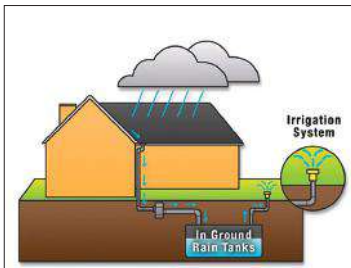
Adaptation and Mitigation

Adaptation

Any adjustment or action taken to sustain the changing climate condition and its effects is adaptation to climate change.

ADAPTATION ACTIONS

1. Water Management (e.g. rain water harvesting, drip irrigation)



Rain water harvesting



Drip irrigation

2. Disaster Risk Reduction (e.g. flood control techniques, early warning system)



Flood control techniques



Early warning system

3. Sustainable Land Use and Management (e.g. watershed management, sustainable soil management)



Sustainable soil management



Watershed management

4. Climate Smart Agriculture (e.g. drought resistant crop, crop insurance)



Drought resistant crop



Crop insurance

Mitigation

Mitigation means any action taken to reduce the sources or enhance the sinks of greenhouse gases.

MITIGATION ACTIONS

1. Conservation of forest; (e.g. Afforestation)
2. Waste Management; (e.g. Reuse and recycle)
3. Promotion of Renewable Energy; (e.g. Solar power, wind power)
4. Promotion of Non-motorized and Mass Transportation (e.g. Cycling, walking, public vehicles)
5. Energy Efficiency (e.g. LED bulbs)



Reuse and recycle



Afforestation



Solar power



Cycling



LED bulb



List some other adaptation and mitigation actions suitable for your locality

Adaptation

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Mitigation

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Chapter 3

Global and National Initiatives

Global Climate Initiatives

United Nations Framework Convention on Climate Change (UNFCCC)



- ◎ It is an international environment treaty adopted at the Earth Summit in 1992.
- ◎ It aims to stabilize the greenhouse gas concentration in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.
- ◎ There are now 197 parties including Nepal to the Convention.

Kyoto Protocol (KP)



- ◎ Kyoto Protocol (KP) is the international agreement reached in 1997 which has broadly put the countries in developed and developing country categories.
- ◎ It has legally binding obligations for developed countries to reduce their GHG emissions.

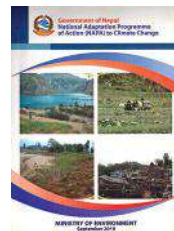
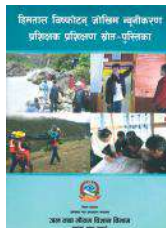
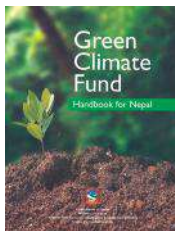
Paris Agreement (PA)



PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21-CMP11

- It is an international agreement concluded in 2015 in Paris, France.
- It aims to keep the global temperature rise of this century well below 2 degree Celsius above pre-industrial level and make efforts to limit the temperature rise to 1.5 degree Celsius
- Developed countries should provide financial support to developing countries for adaptation efforts.

National Climate Initiatives



Policy Documents	Focus
National Adaptation Programme of Action (NAPA), 2010	<ul style="list-style-type: none"> ★ NAPA is prepared by LDC (Least Developed Countries) parties to submit to UNFCCC defining priority activities, which need to be addressed urgently. ★ Nepal has prepared and submitted its NAPA to UNFCCC in 2010. ★ Six sectors vulnerable to climate change are agriculture and food security, water resources and energy, climate-induced disasters, forest and biodiversity, public health and urban settlements, and infrastructure and gender as cross cutting sector. ★ It has identified nine priority adaptation projects across the vulnerable sectors.
National Climate Change Policy (NCCP), 2011	<ul style="list-style-type: none"> ★ It focuses on adaptation to adverse impacts of climate change and adopting low-carbon socio economic development model. ★ Priorities of this policy are: climate adaptation and disaster risk reduction, low carbon development and climate resilience, access to financial resources and utilization, capacity building, people's participation and empowerment, study and research, technology development, transfer and utilization, and climate friendly natural resource management.

<p>Local Adaptation Plans of Action (LAPA) Framework, 2013</p>	<ul style="list-style-type: none"> ★ LAPA aims to integrate climate adaptation activities into local and national development planning processes and create a situation for climate resilient development. ★ There are seven steps: 1. Sensitization on climate change, 2. Vulnerability and adaptation assessment, 3. Prioritization of adaptation options, 4. LAPA formulation, 5. LAPA integration into planning process, 6. LAPA implementation 7. LAPA progress assessment.
<p>Nationally Determined Contributions (NDC), 2016</p>	<ul style="list-style-type: none"> ★ NDC is Nepal's commitment to the UNFCCC to meet the goal of limiting the global temperature rise to 1.5 degree Celsius. ★ NDC focuses on: renewable energy; increasing forest cover and forest productivity; energy efficient and electrical public transport; formulation of National Adaptation Plans and implementation of Environment Friendly Local Governance Framework.



List some of the global and national initiatives related to climate change

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Institutions Related to Climate Change

Climate Change Council (CCC)

It is an apex government body chaired by the Prime Minister to provide policy guidance to the Government of Nepal on climate change matters.

Multistakeholder Climate Change Initiative Coordination Committee (MCCICC)

It is a multistakeholder coordination committee chaired by the secretary of the Ministry of Forest and Environment to coordinate climate change activities and implement collaborative programmes. It has representation from the relevant ministries and institutions, NGOs, INGOs, academia, private sector, and development partners.

Ministry of Forest and Environment (MoFE)

It is the focal Ministry for climate change under the Government of Nepal and also a focal point for UNFCCC.



Climate Change Management Division (CCMD)

It is an administrative unit under the Ministry of Forest and Environment with the responsibility of executing climate change programme and projects and also coordinating with stakeholders.

Ministry of Finance (MoF)

The Ministry plays an important role in allocating, disbursing and tracking progress related to **climate finance**. It has also established a climate finance unit in the ministry.



International Economic Cooperation Coordination Division (IECCD)

IECCD is housed within the Ministry of Finance which leads and oversees the international aid and climate finance related process in Nepal. This division is the focal point for Green Climate Fund (GCF) and Global Environment Facility (GEF).



Climate Finance Unit (CFU)

This unit sits under the IECCD in the Ministry of Finance. It coordinates international climate finance received by Nepal, including from Green Climate Fund.



List key institutions related to climate change in Nepal

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Chapter 4

Gender and Climate Change

Climate change impacts are not gender neutral. Women are disproportionately affected and climate change further aggravates their existing problems.

Factors Contributing to Women's Vulnerability to Climate Change



1. Women's high dependency on natural resources for regular household chores such as cooking, fetching water, washing clothes, fodder and fuel collection becomes a challenge due to climate change.



2. Socio-cultural, economic and political barriers created by social roles, patriarchal social construct, discriminations and illiteracy do not allow women to participate actively in decision making in the homes as well as in community.



3. Socio-economic discrimination based on gender limits women's capacity to exercise their rights and abilities to utilize the resources on their own.



4. Women have less rights and opportunities than men in terms of land and property rights, access to resources, salaries or wages and decision making processes.



5. Male outmigration for employment opportunities in rural Nepal is common, which leaves behind women as default stewards of natural resources. Women are engaged more in agriculture than men.

(Source: Gender and climate change-why women's perspectives matter, WEDO 2009)



Note down your understanding of the linkage between women's vulnerability and climate change

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Women as Agents of Change



A. Women can contribute to climate actions as they manage the resources they depend on to ensure their families' food and energy security.



B. Women's coping ability against climate stressors increases if they are empowered and their coping ability typify the adaptation capacity of the community as they are the first to respond to any climate shocks.





C. Their extensive knowledge and expertise can be used in climate change mitigation, disaster risk reduction and adaptation policy strategies and actions, which make them effective actors and agents of change.

Give your point of view on 'Women as Agents of Change'



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Illustrations of Climate Change Impacts and Implications for Women

Climate Change Impacts	Possible Implications for Women
 <p data-bbox="306 670 444 699">Crop failure</p>	 <p data-bbox="644 670 906 735">Increased agriculture workload</p>
 <p data-bbox="292 1032 457 1062">Loss of forest</p>	 <p data-bbox="624 1032 926 1097">Travel far and long to find firewood</p>
 <p data-bbox="236 1430 518 1459">Drying of water sources</p>	 <p data-bbox="632 1430 918 1459">More time to fetch water</p>



Disaster



Greater risk of disaster incidences to women



Growing incidence of vector-borne disease



Increased burden of caring for ill family members

List other possible impacts of climate change on women



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Gender and Climate Change Policy Context

International

Beijing Declaration and Platform for Action

- First international declaration that recognizes the links between gender equality and environment.

United Nations Framework Convention on Climate Change (UNFCCC)

- First addressed 'Gender Equality' at COP7 in 2001 to increase women's participation in the negotiations.
- First ever Gender Action Plan (GAP) adopted at COP23 in 2017.

National

National Climate Change Policy

- Recognizes women as 'vulnerable group'
- Prioritizes participation of women in implementation of climate programme

National Adaptation Programme of Action (NAPA) and NAP (National Adaptation Plans)

- 'Gender' as crosscutting theme
- NAPA has taken account of gender-related issues in developing priority projects on adaptation
- NAPs has developed a Vulnerability and Risk Assessment Framework with separate set of gender and diversity indicators.

Gender Action Plan (GAP)

- Involve women actively in environmental decision making at all levels.
- Integrate gender concerns and perspective in policies and programmes for sustainable development.
- Strengthen or establish mechanism at national, regional and international level to assess the impact of development and environmental policies on women.

Green Climate Fund (GCF) Gender Policy

- Pioneer international financial instrument to mainstream gender in funding proposals.
- GCF Gender Policy and Action Plan adopted in March 2015.
- The gender policy has committed to contribute to gender equality and low emission and climate resilient development pathways.

National Budget

- Gender responsive budget coding since fiscal year 2007-2008.
- Aimed at integrating gender perspective into policy making and allocation of government budget.

Gender Strategy and Action Plan

- In draft stage
- Gender mainstreaming in climate change policy and programme to develop gender-responsive climate change programmes.



List international and national policies on climate change

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Gender Mainstreaming

- ☉ Gender mainstreaming is the process of integrating gender perspective into design, preparation, implementation, monitoring and evaluation of any action plans, policies, programmes, projects and legislation in all the areas to address gender inequalities.
- ☉ Integration of voices of both men and women reflecting particularly the latter's specific needs, interest and concerns in climate relevant laws, policies, programmes and projects with budget factored in for addressing them is the key to gender mainstreaming in climate change.
- ☉ It is a strategy towards promoting equality between women and men to combat discrimination

The Concept of Gender Mainstreaming

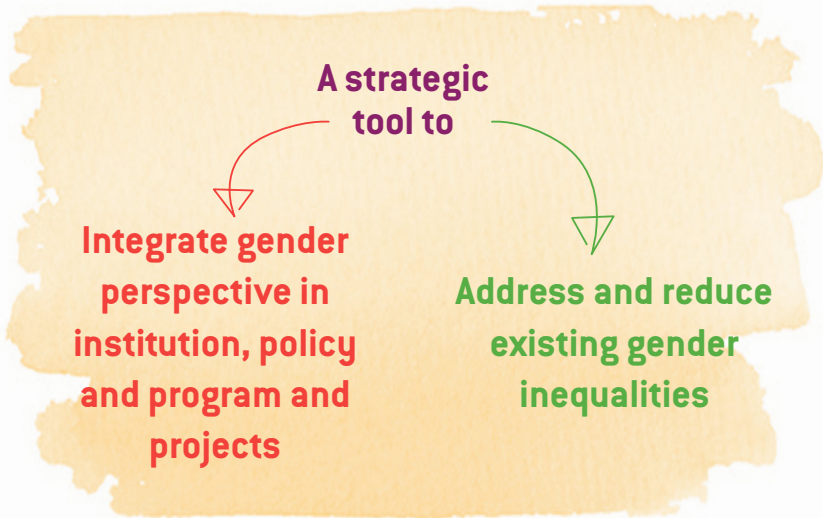


Figure: The concept of gender mainstreaming

Note down your understanding of gender mainstreaming



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Why to Mainstream Gender in Climate Change?



Figure: Why gender mainstreaming is important in climate change



Your understanding on why gender mainstreaming in climate change is important

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Entry Points for Gender Mainstreaming

Livelihood	Address social and economic barriers including access to income, education, health, land rights, and other resources.
Economic Opportunity	Enable women to access low-carbon technologies and benefit from reduction of emissions including income opportunities.
Agency	Empower and encourage women to make decisions and gain control over resources to further their needs and interests.
Voice	Enable women stakeholders and women's organizations to participate in decision-making and policy discussions on all levels.

(Source: Training Manual to Support Country-Driven Gender and Climate Change Policies, Strategies and Program Development, ADB 2015)

What are other possible entry points for gender mainstreaming?



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References

- ADB. (2015). Training Manual to Support Country-Driven Gender and Climate Change. Policies, Strategies and Program Development. Asian Development Bank
- CCNN. (2011). Climate Change Training Manual: An Easy Guide for Teachers. Climate Change Network Nepal
- ICIMOD.(2011). *Glacial lakes and glacial Lake Outburstfloods in Nepal*. Kathmandu: International Centre for Integrated Mountain Development
- IPCC.(2001).*Climate Change 2001: The Scientific Basis. Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change* [Houghton, J.T.,Y. Ding, D.J. Griggs, M. Noguer, P.J. van der Linden, X. Dai, K.Maskell, and C.A. Johnson (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 881pp
- IPCC. (2013). Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 1535 pp.
- IPCC. (2014).*Climate Change 2014: Impacts, Adaptation, and Vulnerability. Summaries, Frequently Asked Questions, and Cross-Chapter Boxes. A Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Field, C.B., V.R. Barros,D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy,S. MacCracken,P.R. Mastrandrea, and L.L. White (eds.)]. World Meteorological Organization, Geneva, Switzerland, 190 pp.(in Arabic, Chinese, English, French, Russian, and Spanish)

- IPCC. (2018). Summary for Policymakers. In: Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [V. Masson-Delmotte, P. Zhai, H. O. Pörtner, D. Roberts, J. Skea, P. R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J. B. R. Matthews, Y. Chen, X. Zhou, M. I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, T. Waterfield (eds.)]. World Meteorological Organization, Geneva, Switzerland, 32 pp.
- Khadka, N, Zhang, G and Thakuri, S. (2018). Glacial Lakes in the Nepal Himalaya: Inventory and Decadal Dynamics (1977–2017). *Remote Sens.* 2018, 10, 1913; doi: 10.3390/rs10121913. www.mdpi.com/journal/remotesensing
- MoPE. (2017). Synthesis of Stocktaking Report for National Adaptation Plan (NAP) Formulation Process in Nepal. Ministry of Population and Environment, Kathmandu
- NASA GISS. (n.d.). GISS Surface Temperature Analysis. National Aeronautics and Space Administration: Goddard Institute for Space Studies. Accessed on November 05 2018
- PRC. (2018). Gender and Climate Change: An Overview of National and International Context. Briefing Paper. Prakriti Resources Centre, Kathmandu
- UNDP.(2011). Overview of linkages between gender and climate change. Policy Brief. UNDP Asia-Pacific Human Development Report 2011. United Nations Development Programme
- UNFCCC. (1992).United Nations Framework Convention on Climate Change https://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf
- WEDO. (2009).Gender and Climate change-Why women's perspective matter. Women's Environment and Development Organization- <https://www.wedo.org/wp-content/uploads/gender-and-climate-change.ppt>

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