

Solid Waste Account of Urban Municipalities of Nepal 2022

Climate Change Related Indicators of Nepal 2022



Government of Nepal

Office of the Prime Minister and Council of Ministers

National Statistics Office

Kathmandu, Nepal

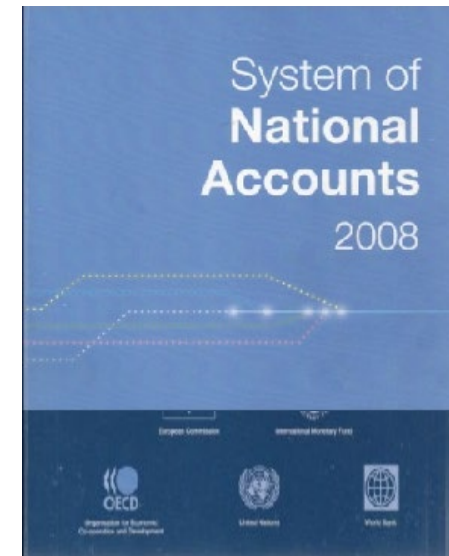
Introduction

- New Statistics Act amended
- Under Prime Ministers Office
- Upgraded to NSO with chief Statistician(Secretary level)
- Four Division
- Environment Statistics Section is on National Account Division

Solid Waste Account for Urban Municipalities of Nepal 2022



- SEEA is an internationally agreed statistical framework to measure the environment and its interactions with economy
- The **SEEA Central Framework** was adopted as an international statistical standard by the UN Statistical Commission in 2012
- The SNA and SEEA: Systems of coherent information

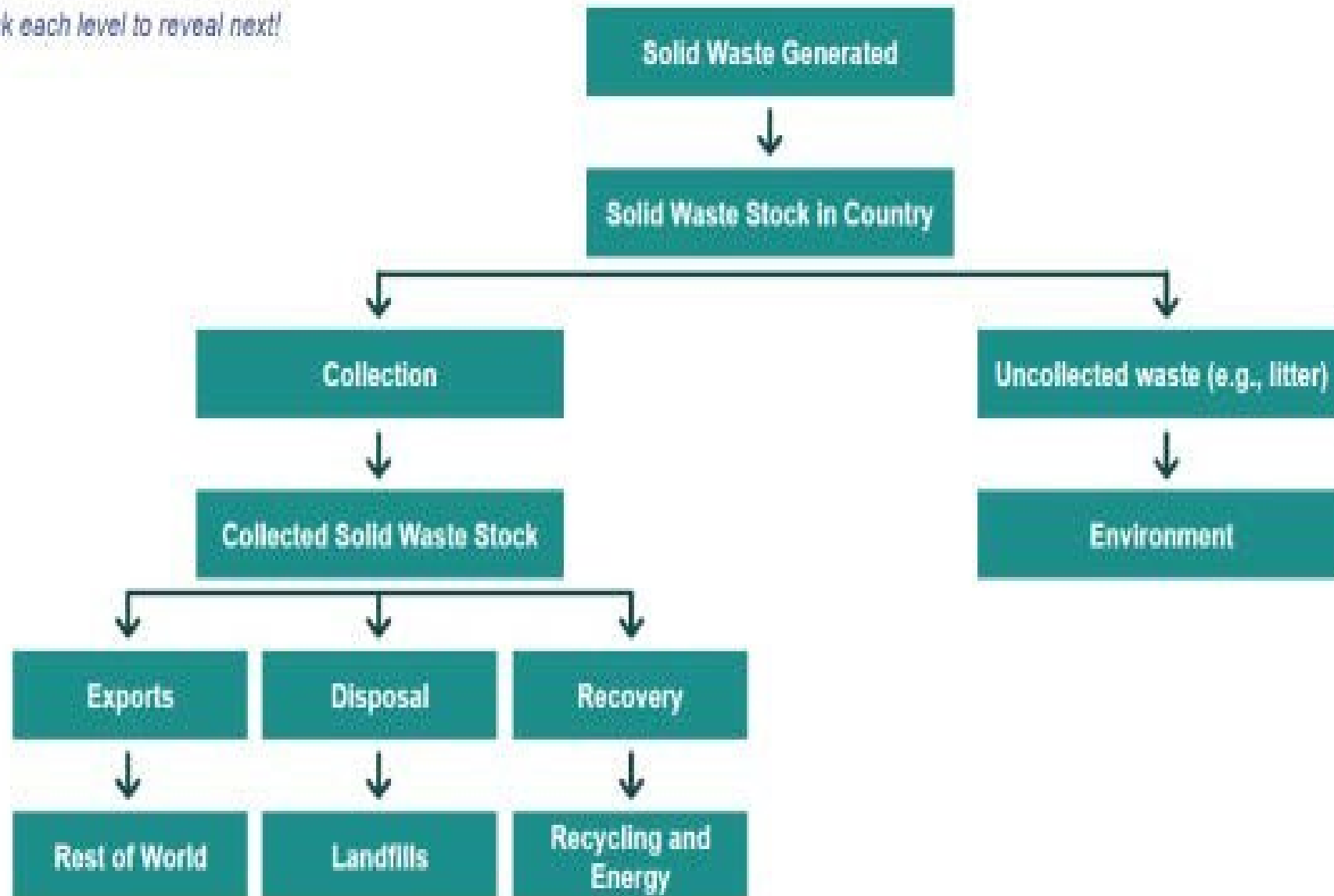


Why solid waste accounts ?

- In organizing information on the generation of solid waste and the environment management
- Measures of the amount of waste in aggregate or of quantities of specific waste materials which is important indicators of environmental pressure
- The construction of solid waste accounts allows these indicators to be placed with economic data in both physical and monetary terms
- Implementation of SEEA in Nepal, a great milestone for NSO

Simplified Schematic of Solid Waste Flows

Click each level to reveal next!

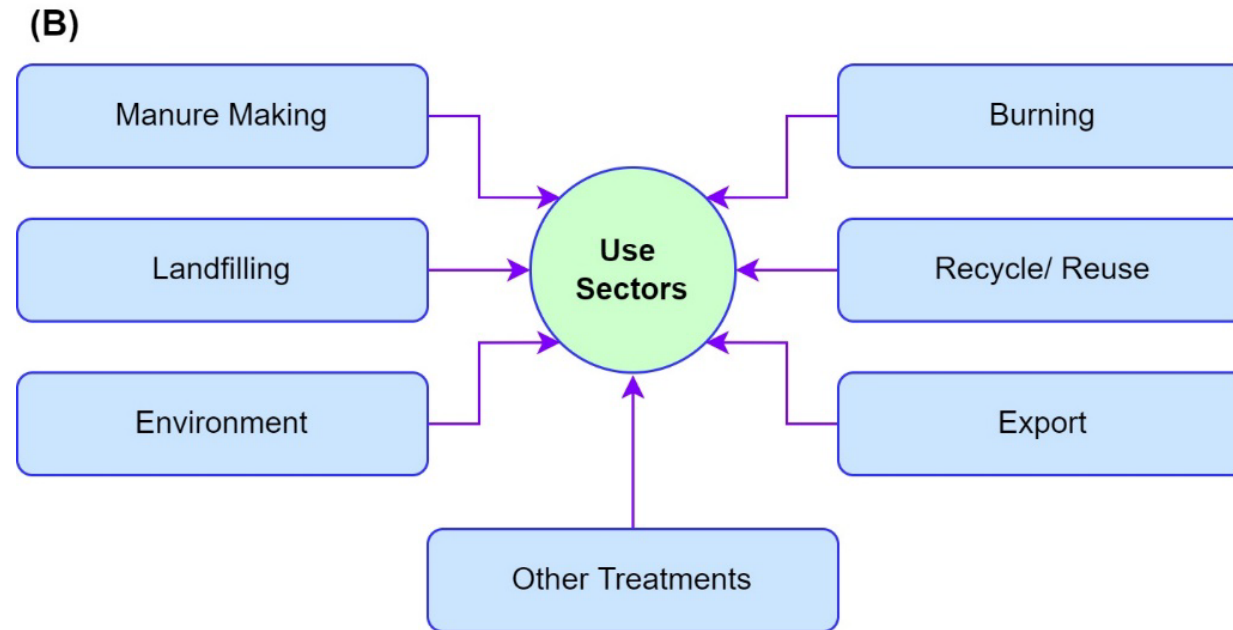
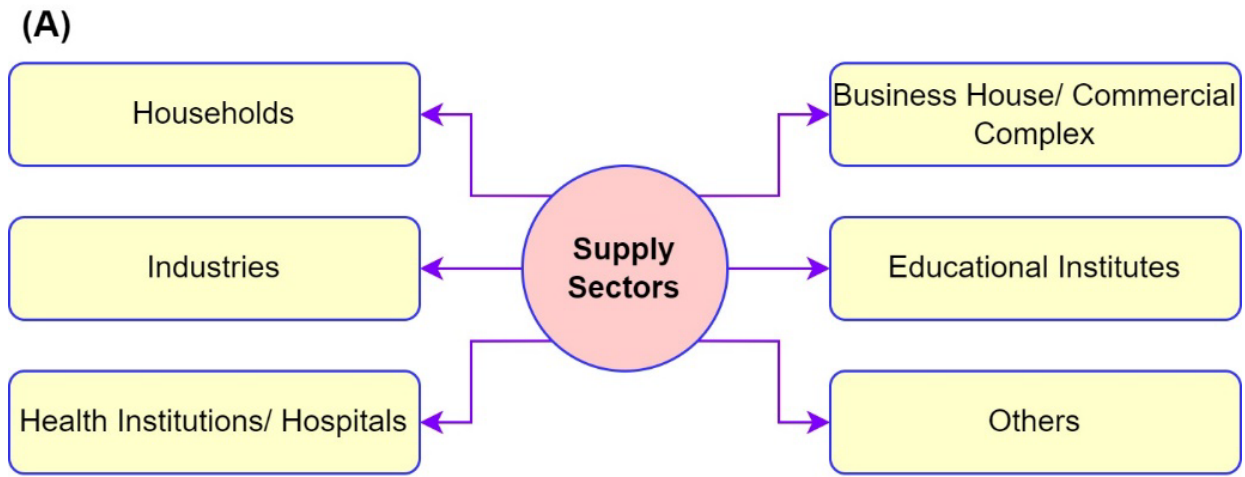


Supply and use tables for waste track residuals and products separately

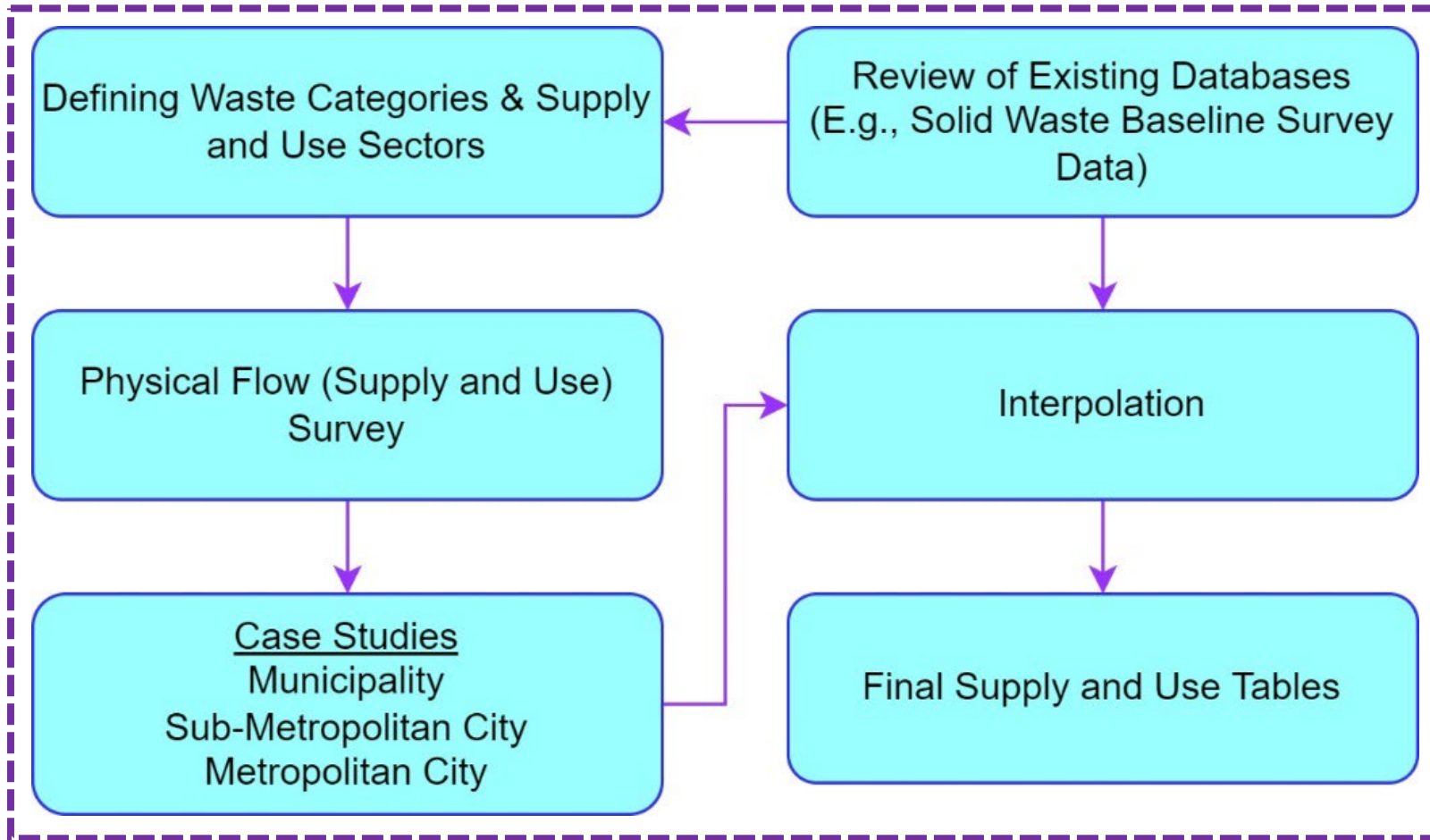
Physical supply table for solid waste									
Generation of solid waste							Rest of the world	Flows from the environment	Total supply
Waste collection, treatment and disposal industry					Other industries	Households	Imports of solid waste	Recovered residuals	
Landfill	Incineration	Recycling and reuse	Other treatment						
Total		Of which: Incineration to generate energy							
Generation of solid waste residuals									
Chemical and healthcare waste									
Other wastes									
Generation of solid waste products									
Chemical and healthcare waste									
Other wastes									

Click to add text

Physical use table for solid waste										
Intermediate consumption; Collection of residuals							Final consumption	Rest of the world	Flows to the environment	Total use
Waste collection, treatment and disposal industry					Other industries	Households	Exports of solid waste			
Landfill	Incineration	Recycling and reuse	Other treatment							
Total		Of which: Incineration to generate energy								
Collection and disposal of solid waste residuals										
Chemical and healthcare waste										
Other wastes										
Use of solid waste products										
Chemical and healthcare waste										
Other wastes										



Solid waste supply (A) and use (B) sectors



Methodological framework adopted for preparing the national solid waste account

Annual average waste collection per municipality by waste types and categories

Waste Type	FY	Metropolitan City (mt/Year)	Sub-Metropolitan City (mt/Year)	Municipality (mt/Year)	Annual Average of Municipalities (mt/Year)	Daily Average of Municipalities (mt/Day)
Organic	2073/74	12,734.0	2,269.8	829.8	1,153.3	3.2
	2074/75	13,478.0	3,044.2	950.0	1,214.6	3.3
	2075/76	10,669.5	4,088.2	824.2	1,206.1	3.3
Inorganic	2073/74	8,787.0	1,005.7	518.3	698.0	1.9
	2074/75	9,725.0	1,338.7	504.6	666.8	1.8
	2075/76	7,100.0	1,525.9	551.9	743.5	2.0
Other	2073/74	5,145.0	228.0	194.8	379.6	1.0
	2074/75	5,446.0	213.5	155.6	283.0	0.8
	2075/76	6,200.0	229.7	177.5	283.0	0.8
Total	2073/74	26,666.0	3,503.5	1,543.0	2,231.0	6.1
	2074/75	28,649.0	4,596.3	1,610.2	2,164.4	5.9
	2075/76	23,969.5	5,843.7	1,553.6	2,232.7	6.1

Solid waste supply table for all metropolitan cities, sub-metropolitan cities, and municipalities of Nepal

Waste types	Total solid waste generated (mt/year)						Total
	Household	Business house	Educational institute	Industry	Health institute	Others	
Organic wastes	2,32,981	1,26,138	28,082	NA ^a	NA	NA	3,87,201
Plastics	42,536	31,780	22,129	NA	NA	NA	96,445
Paper and paper products	35,285	28,645	33,967	NA	NA	NA	97,898
Metals	8,701	13,401	1,549	NA	NA	NA	23,650
Glass	17,691	34,055	1,032	NA	NA	NA	52,778
Rubber and leather	7,057	1,229	1,480	NA	NA	NA	9,766
Textiles	5,220	3,012	1,962	NA	NA	NA	10,194
Others	37,219	7,622	13,043	NA	NA	NA	57,884
Unclassified ^b	– ^c	–	–	94,392	1,01,507	66,220	2,62,119
Total	3,86,690	2,45,884	1,03,244	94,392	1,01,507	66,220	9,97,936

^a Data not available

^b The unclassified waste category was added because the waste composition of total waste generated in industrial, health care and others sectors were not available

^c Not applicable

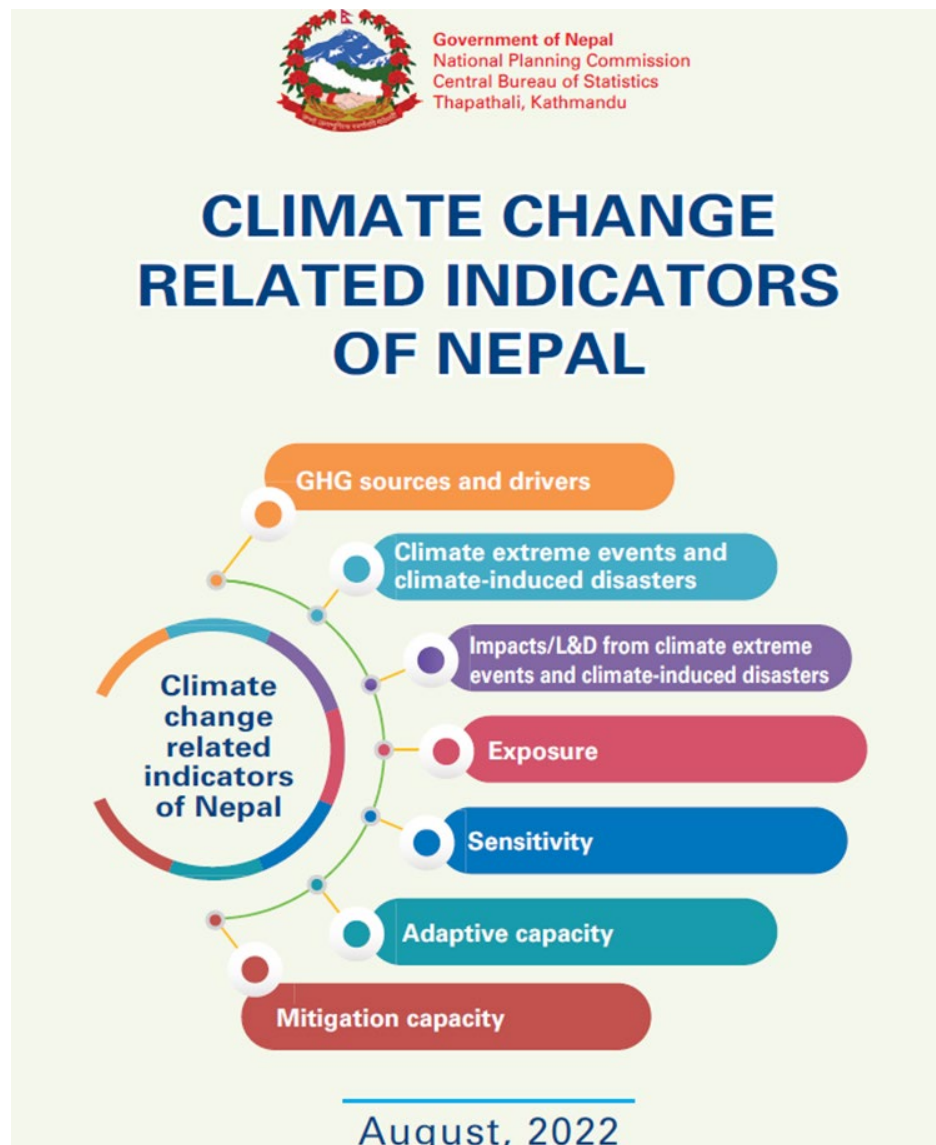
Solid waste use table for all metropolitan cities, sub-metropolitan cities, and municipalities of Nepal

Waste types	Quantity of solid waste in use sectors (mt/year)					
	Landfill	Environment	Recycle	Burn	Unclassified ^a	Total
Organic wastes	2,05,217	1,70,369	0	11,616	–	3,87,201
Plastics	51,116	39,224	3,211	2,893	–	96,445
Paper and paper products	51,886	38,759	4,316	2,937	–	97,898
Metals	12,534	9,243	1,163	709	–	23,650
Glass	27,973	23,222	0	1,583	–	52,778
Rubber and leather	5,176	4,297	0	293	–	9,766
Textiles	5,403	4,485	0	306	–	10,194
Others	30,679	25,469	0	1,737	–	57,884
Unclassified ^a	– ^b	–	–	–	2,62,119	2,62,119
Total	3,89,983	3,15,069	8,690	22,075	2,62,119	9,97,936

^a The unclassified waste and use categories were added to account for the waste quantity that was unsegregated by waste type and use sectors

^b Not applicable

Climate Change Related Indicators of Nepal



Introduction

- Nepal experienced direct impacts of climate change and is one of the most vulnerable countries in the world
- Nepal government devised a number of policy instruments on climate change
- Effective implementation of such instruments is a challenge due to various limitations including lack of availability of integrated and reliable data

Introduction

- Climate change is one of the pressing issue of our time
- Our economic activities are a critical driver of climate change
- Climate change indicators are needed to understanding the relationship between economy and climate change
- Help to adopt and mitigate climate change impacts
- Help to promote accountability by forming the basis for policy targets & by informing how well policies are performing

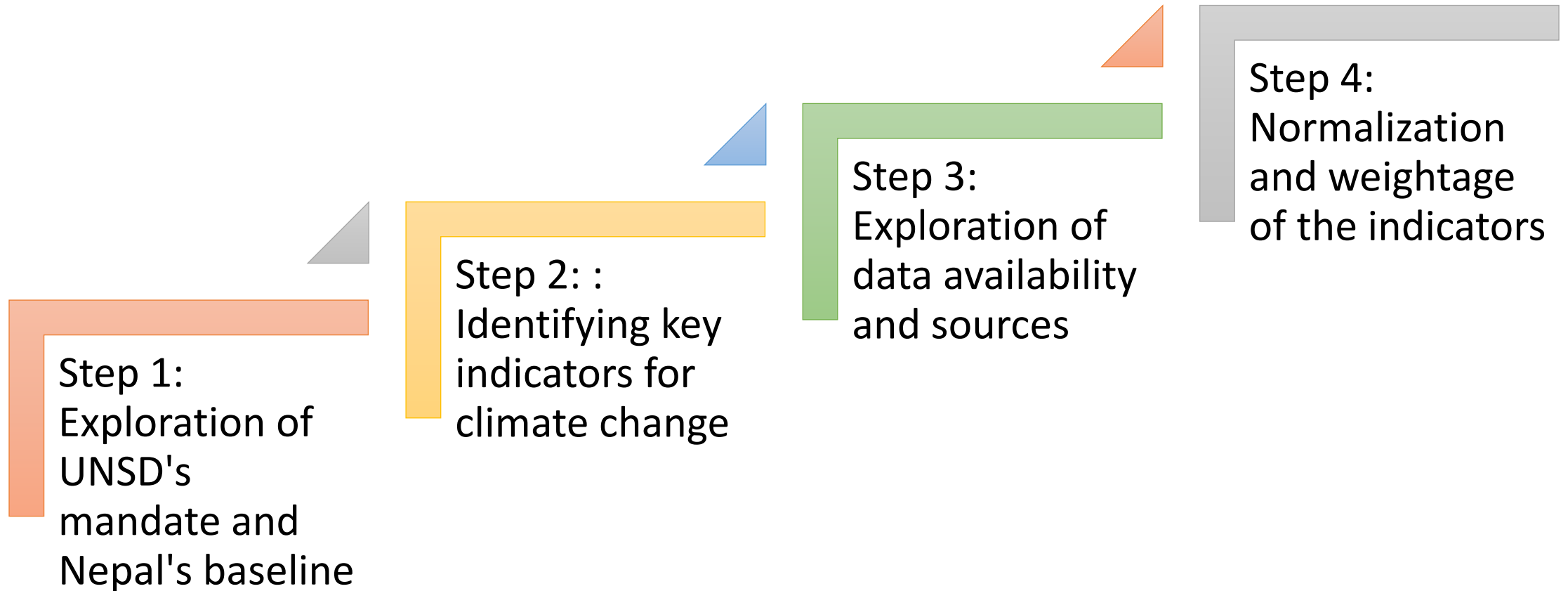
Global Set of Climate Change Statistics and Indicators

- UNSD develop a Global Set of Climate Change Statistics and Indicators, in collaboration with UNFCCC to promote the policy and statistics interface
- The set has been organized according to the five areas of the Intergovernmental Panel on Climate Change (IPCC) framework to promote linkage to both science and policy
- NSO has provided inputs to UNSD on global set of indicators in expert forum(online meeting)
- Global Set of Climate Change Statistics and Indicators is a comprehensive statistical framework, with statistics, indicators and metadata, designed to support countries in preparing their own sets of climate change statistics and indicators according to their individual concerns, priorities and resources

Background

- NSO has been collaborating with United Nation's Statistical Division to provide input on the global set of climate change statistics and indicators
- Building on this global set of indicators, NSO is working to contextualize national level indicators
- The technical committee was formed within the chairmanship of DDG of NSO. Various consultation with the TCs and wider stakeholder were done during the process.

Framework for identification of climate change indicators



Areas of climate change indicators

1. GHG sources or drivers
2. Climate change indicators: extreme events and climate-induced disasters
3. Impact/L&D from climate extreme events and climate induced disasters
4. Exposure
5. Sensitivity
6. Adaptive capacity
7. Mitigation capacity

SN	Area	Sub Area	No. of indicators
1	GHG sources or drivers	4	23
2	Climate change indicators: extreme events and climate-induced disasters	1	25
3	Impact/L&D of climate extreme events and climate induced disasters	7	39
4	Exposure	6	26
5	Sensitivity	5	34
6	Adaptive capacity	8	84
7	Mitigation capacity	3	29
	Total	32	260

Out of 260 indicator, data of 150 indicator are available and while remaining 110 are meant to be generated by the relevant stakeholders.

Major sources of data

- Governmental Organization and the data of the such organizations which are official statistics

Examples: MoFE, MoHA, MoALD, MoF, MoEWRI, MoHP, FRTC, DNPWC, DoED, CBS, DHM, DoTM, DFRS, DoFSC, NDRRMA, DWRI, DoED, DoTM, DoR, NPC, NEA, AEPC, ICIMOD, UNEP

The major outputs of this process

- Understanding climate change drivers and root causes (GHG emissions);
- Understanding climate change impacts in the major sectors, across ecological regions and geography, including loss and damage (both economic and non-economic loss and damage);
- Understanding climate change risk and vulnerability in major sectors including cross-cutting sectors, seven provinces covering different geographic regions types;
- Understanding the adaptation and mitigation capacity and potentials.

Usefulness of Indicators

- Communication and awareness-raising purposes
- Integrating climate change indicators in development sectors
- Establishing a monitoring and reporting framework for the implementation of NDC, LTS, NAP, and TNC
- Assisting science-based decision-making process

The indicators proposed and used in this document are not all-inclusive or exhaustive. As a result, these indicators will be updated based on what has been learning and implementation.

THANK YOU