



Report
on

Bangladesh Disaster-related Statistics 2021

Climate Change and Natural Disaster Perspectives



Strengthening Environment, Climate Change
and Disaster Statistics (ECDS) Project
Bangladesh Bureau of Statistics
Statistics and Informatics Division
Ministry of Planning
Government of the People's Republic of Bangladesh

Welcome to the Presentation on the BDRS 2021

22nd Meeting of Technical Working Group (TWG) on Disaster-related Statistics

Dhaka, Bangladesh **Date: 31st May 2023**

Brief of the ECDS Project, BBS

Objectives (MAIN OUTPUTS):

- 1) Bangladesh Disaster-related Statistics (BDRS) 2021: Climate Change and Natural Disaster Perspectives
- 2) Compilation of Bangladesh Environmental Statistics 2020
- 3) Bangladesh Environmental Protection, Expenditure, Resource and Waste Management Survey 2022
- 4) Natural Resource: Experimental Ecosystem Accounts/Statistics in Bangladesh 2023
- 5) Multi-sectoral GIS integration of the affected population with area, deaths and missing population due to climate change and natural disasters
- 6) Updating Compilation of Bangladesh Environmental Statistics.
- 7) Nationwide Household Based Environmental Survey (HES) 2023.
- 8) Physical Flow Accounts for the Material Foot Print (MF) and Physical Flow Accounts for the Domestic Material Consumption (DMC).
- 9) Development of time series environmental spreadsheets for international reporting following the Global Environmental Template developed by UNSD.

Objectives of the Survey

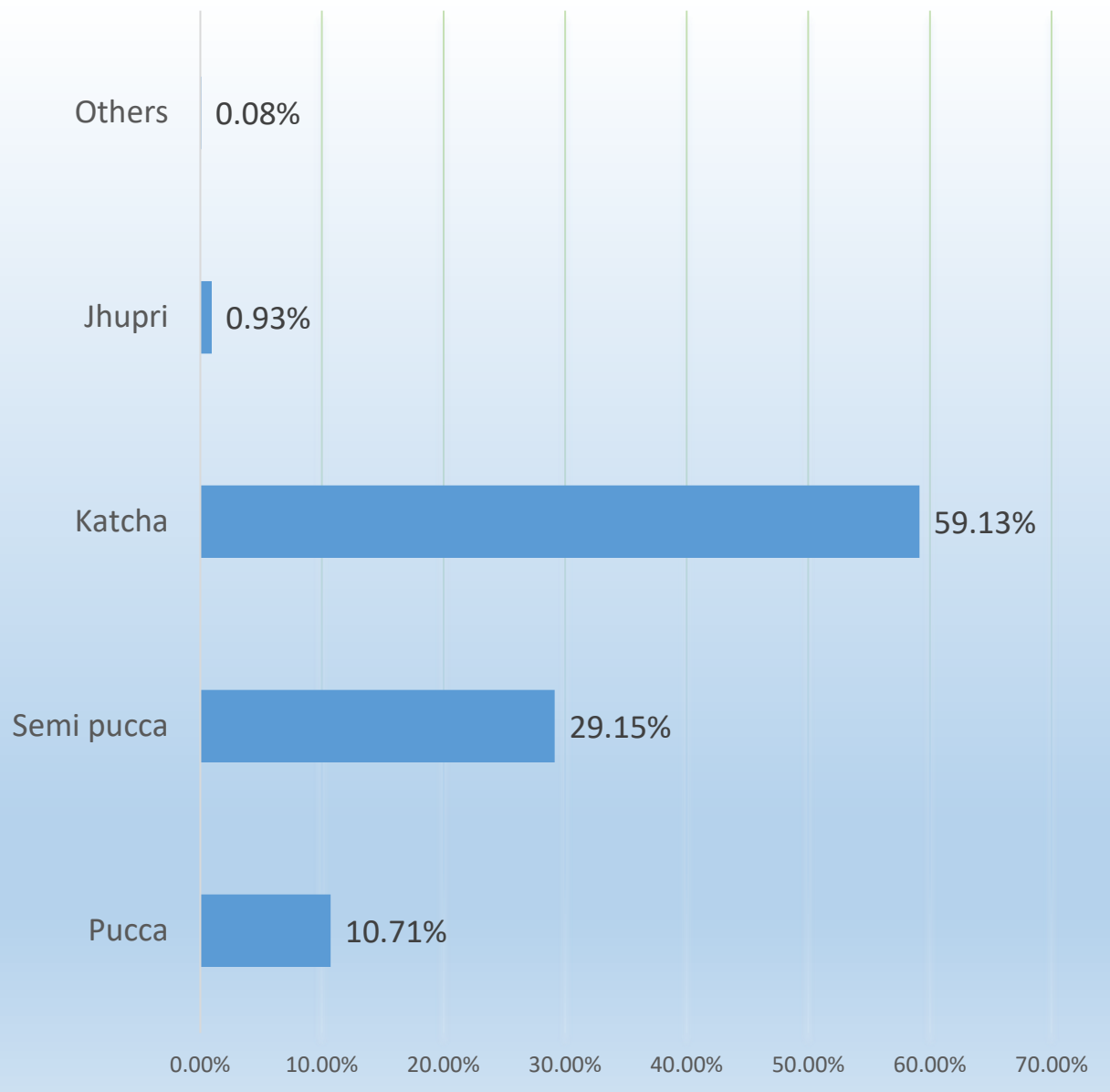
- Socio-economic characteristics of Household in disaster prone area
- Disaster-induced agricultural production losses (Crops, Livestock, Poultryes)
- Damage and loss of cultivable land and useable land;
- Damage and loss of residence (dwelling), cowshed, kitchen

- Health and sanitation condition in the natural disaster prone area;
- Vulnerability of the women, children, aged persons and person with disability; and
- Perception and knowledge about climate , environment, and disasters.

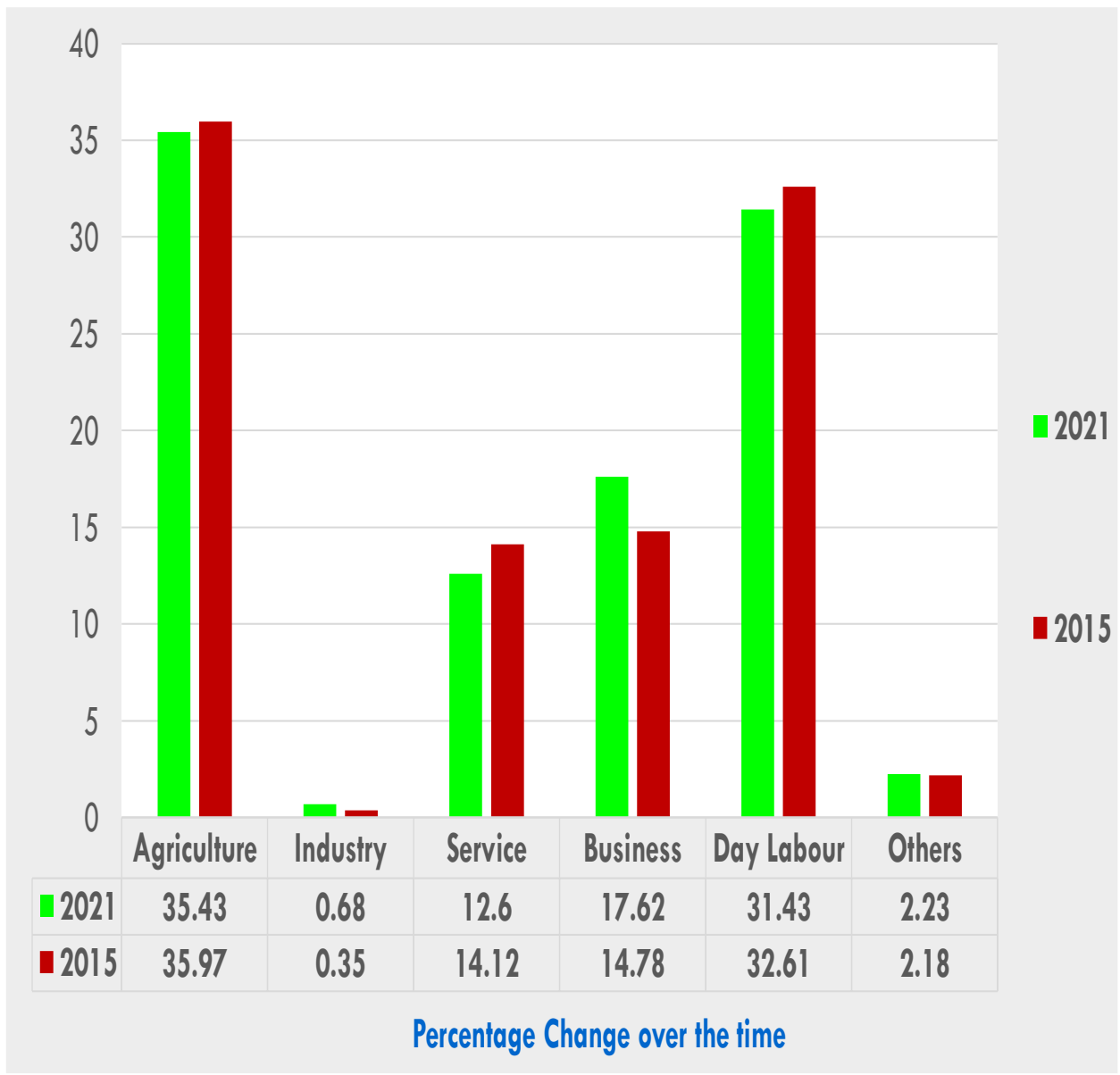
SAMPLING FRAME

- 1) Geographically to cover the **entire area of the country**;
- 2) Survey Frame: A mauza/mahalla list of containing the dominant mauzas in terms of **natural disaster prone mauzas under 64 district**;
- 3) **Two-Stage Sampling Frame** with **Kish Allocation** formula:
- 4) a **simple random sampling (SRS)** selection of the mauzas/mohallas (PSUs) within the stratum under the districts.
- 5) **Systematic sampling** of 30 Households from each of the selected PSUs.
- 6) **Allocation of sample: 4,240 PSUs** (mauzas/mahallas) from **29.20 thousand highest disaster affected PSUs** against 12 main disasters.
- 7) 127,200 households for **district estimation**.

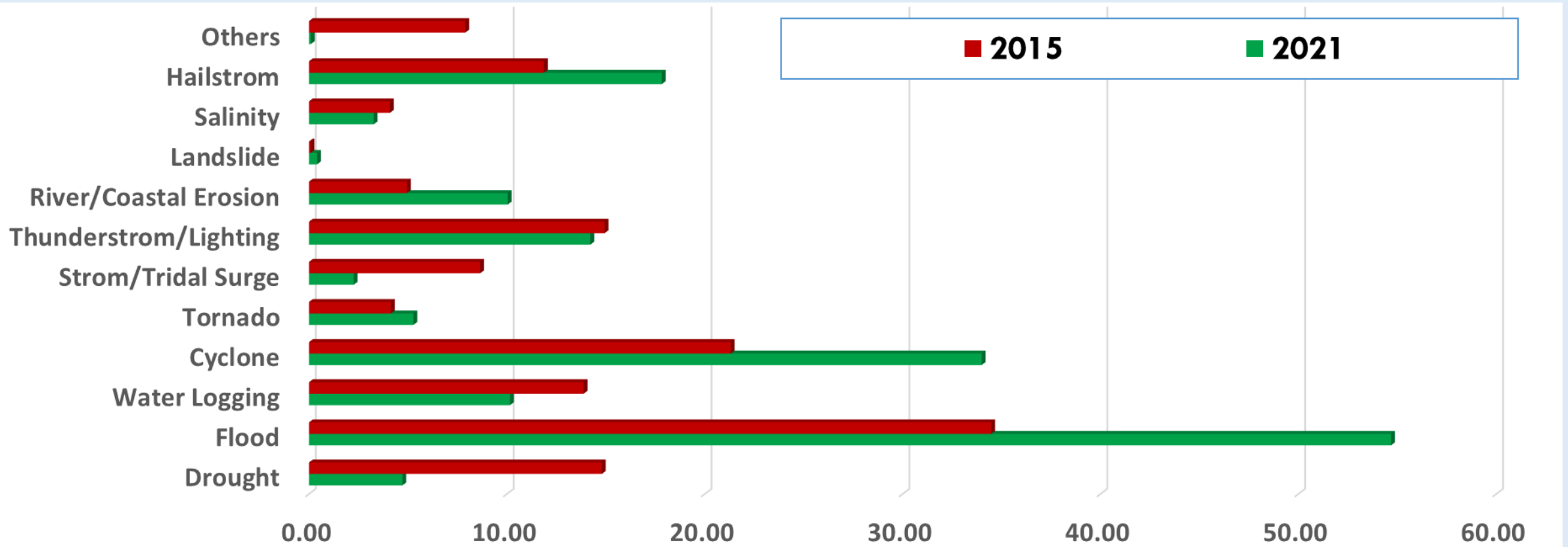
Main Dwelling Structure



Main Source of Household Income

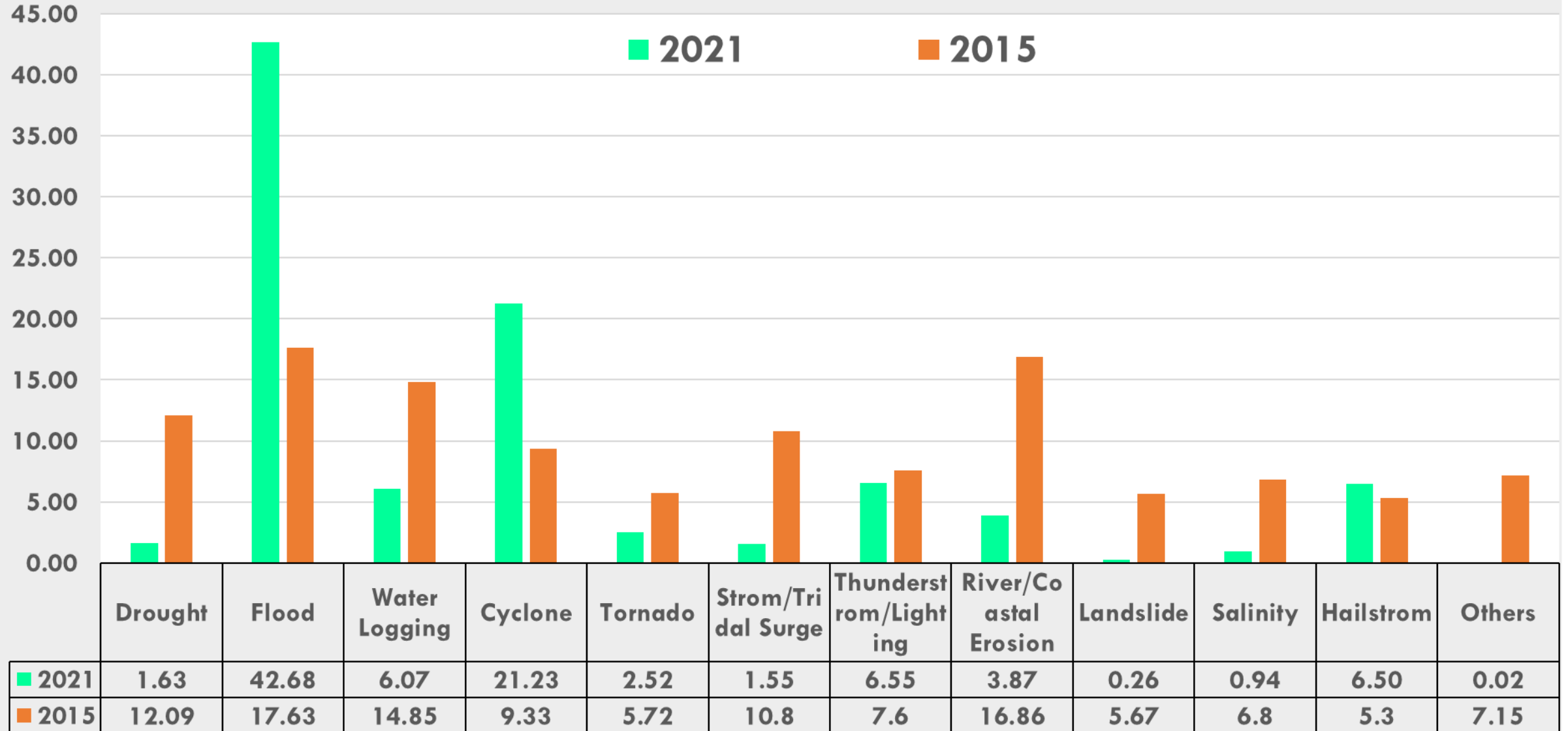


Disaster Affected Household by Type of Disaster

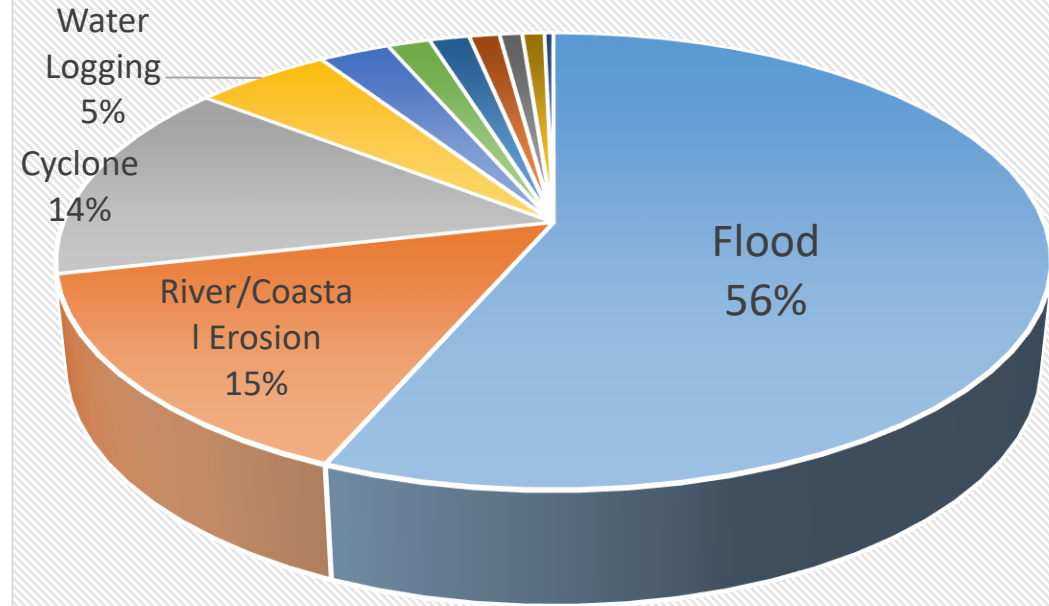


	Drought	Flood	Water Logging	Cyclone	Tornado	Strom/Tridal Surge	Thunderstrom/Lighting	River/Coastal Erosion	Landslide	Salinity	Hailstrom	Others
■ 2015	14.8	34.48	13.88	21.31	4.14	8.65	14.94	4.95	0.08	4.09	11.88	7.9
■ 2021	4.72	54.69	10.16	34.00	5.28	2.26	14.22	10.04	0.40	3.27	17.83	0.09

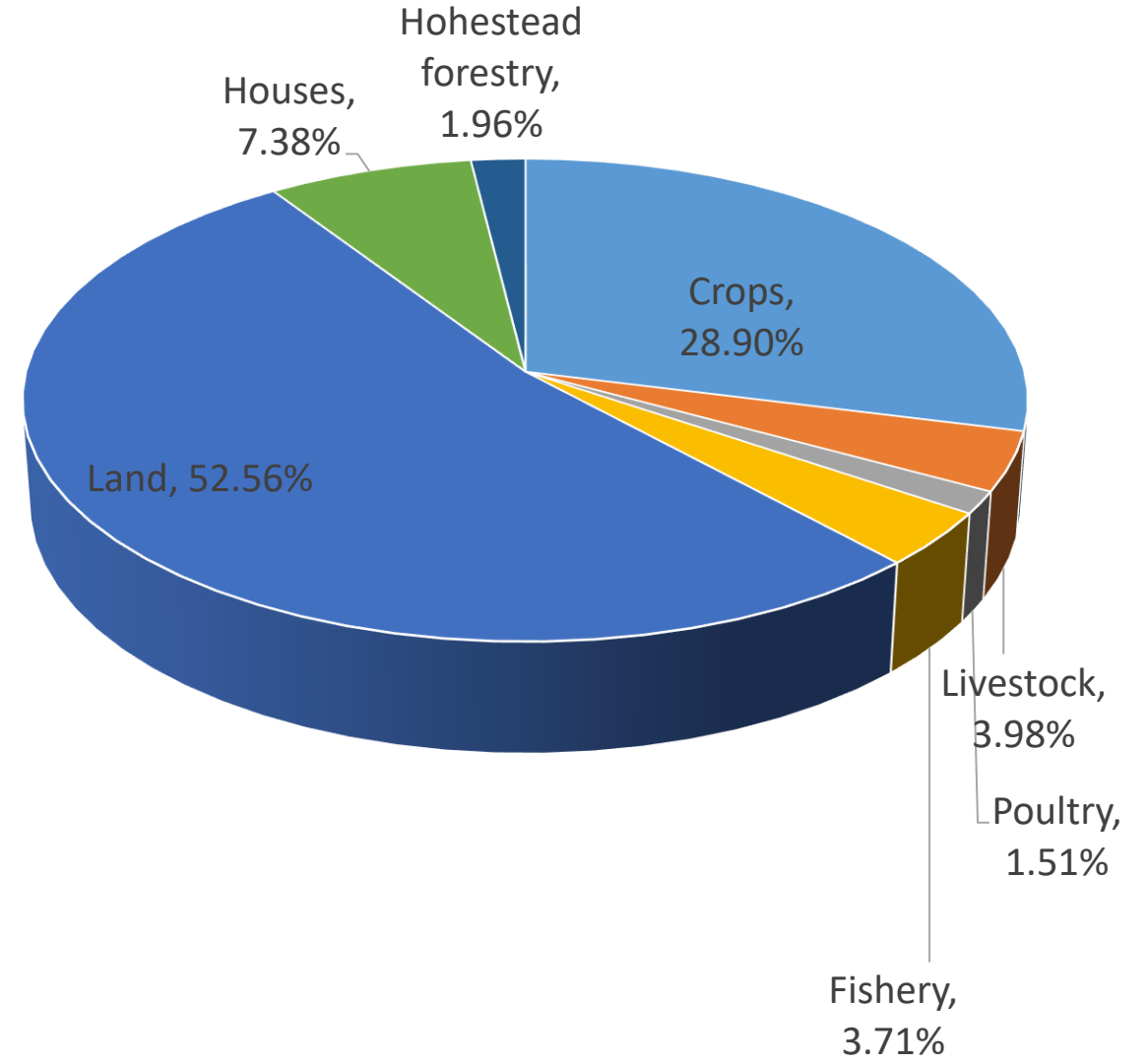
Non-working days due to Last Natural Disaster



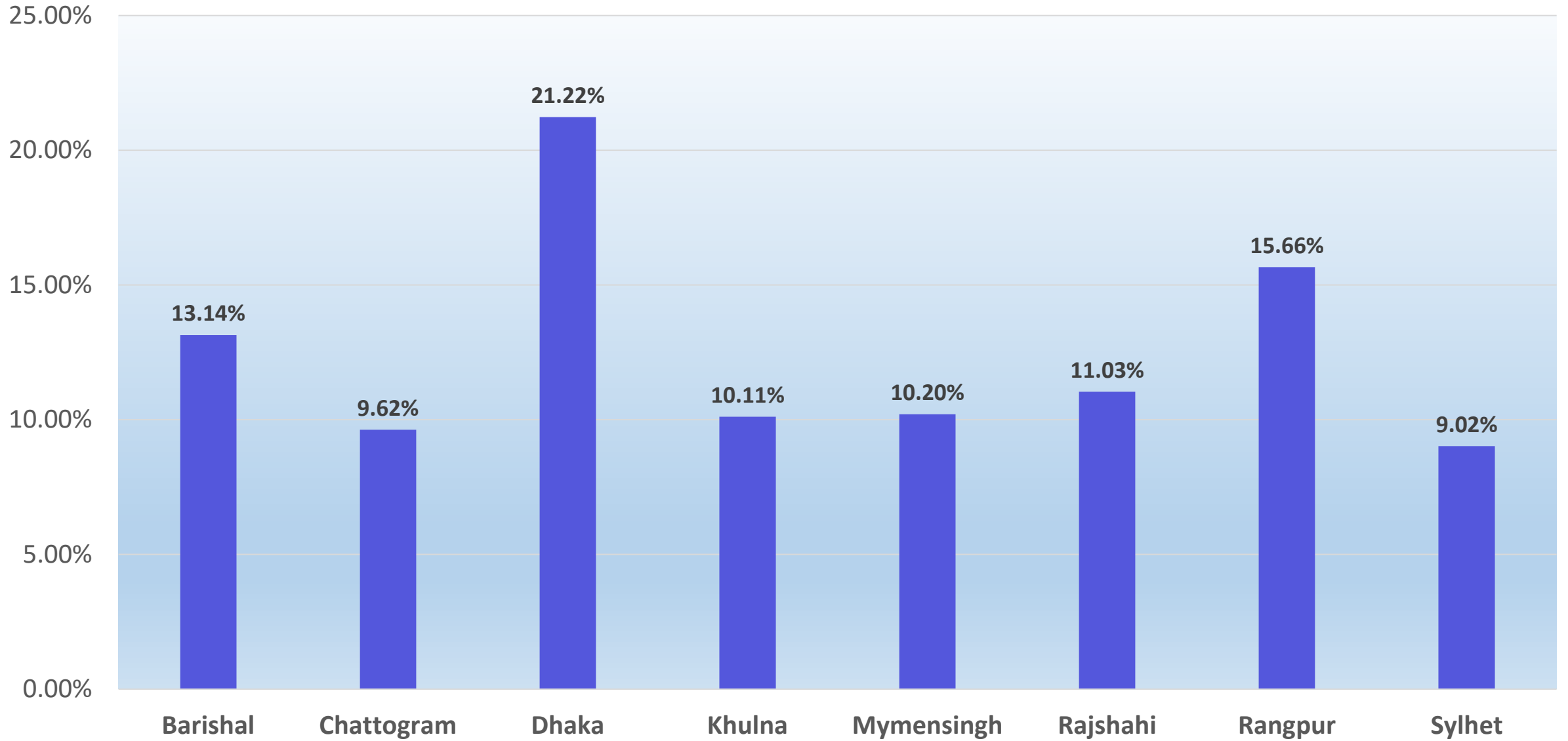
Share of Damage and Loss by Disaster Types (2015-2020)



Share of Damage and Loss due to Disaster by sector (2015-2020)

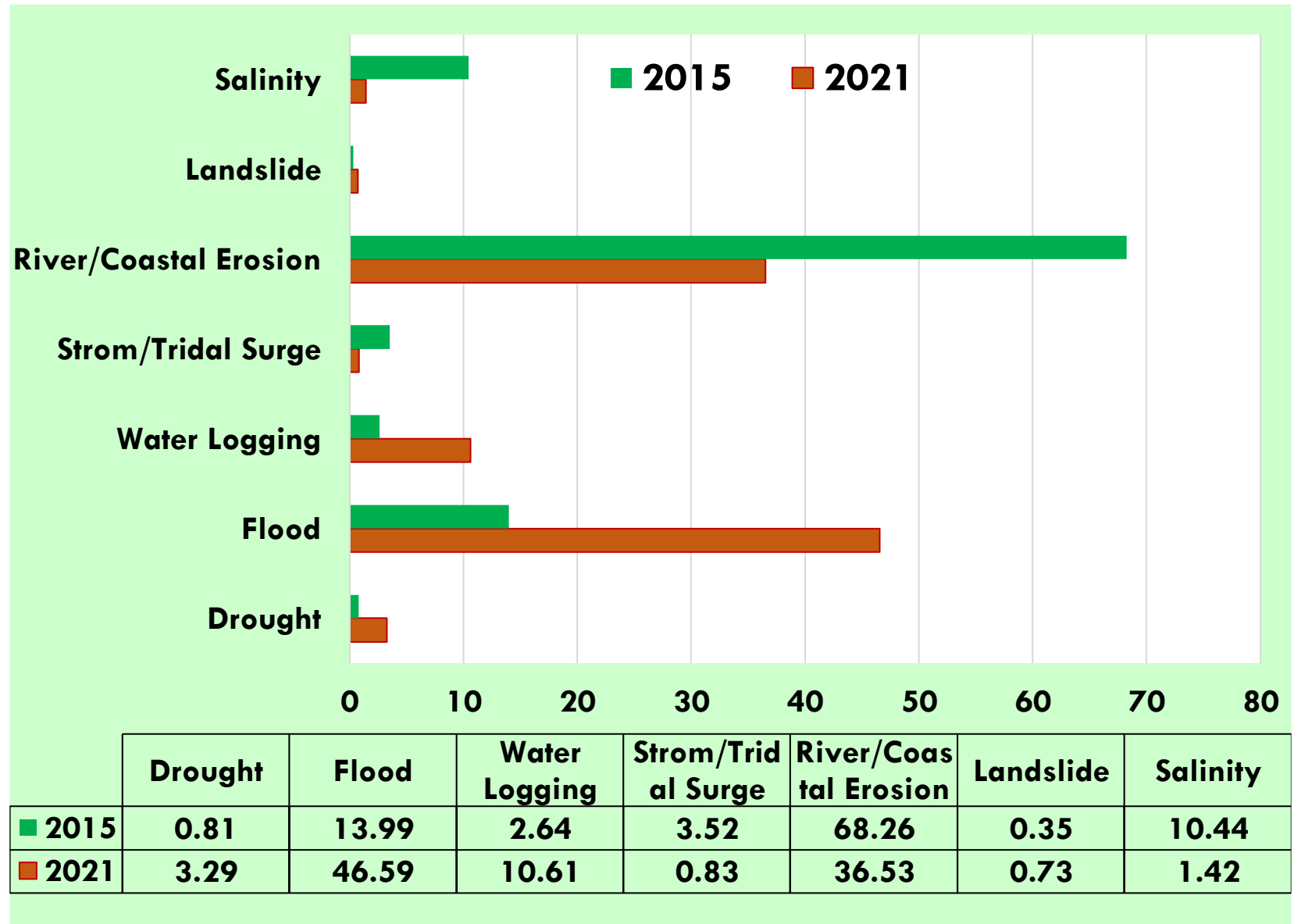


Division wise Damage & Loss

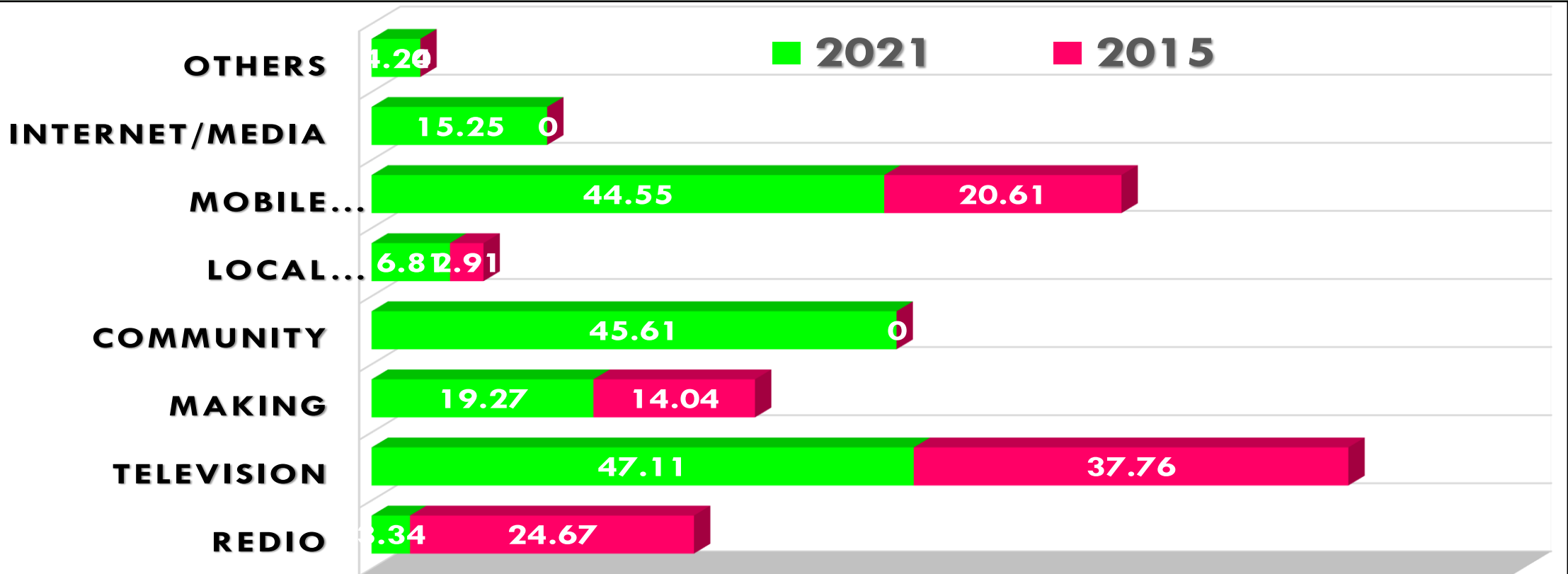


Damage of Land including reduced valuation by type of Disaster

Damage of Land by Disaster including reduced valuation (In Acres) 2015-2020	868206
Drought	28548
Flood	404501
Water Logging	92120
Storm/Tidal Surge	7192
River/Coastal Erosion	317186
Landslide	6295
Salinity	12363



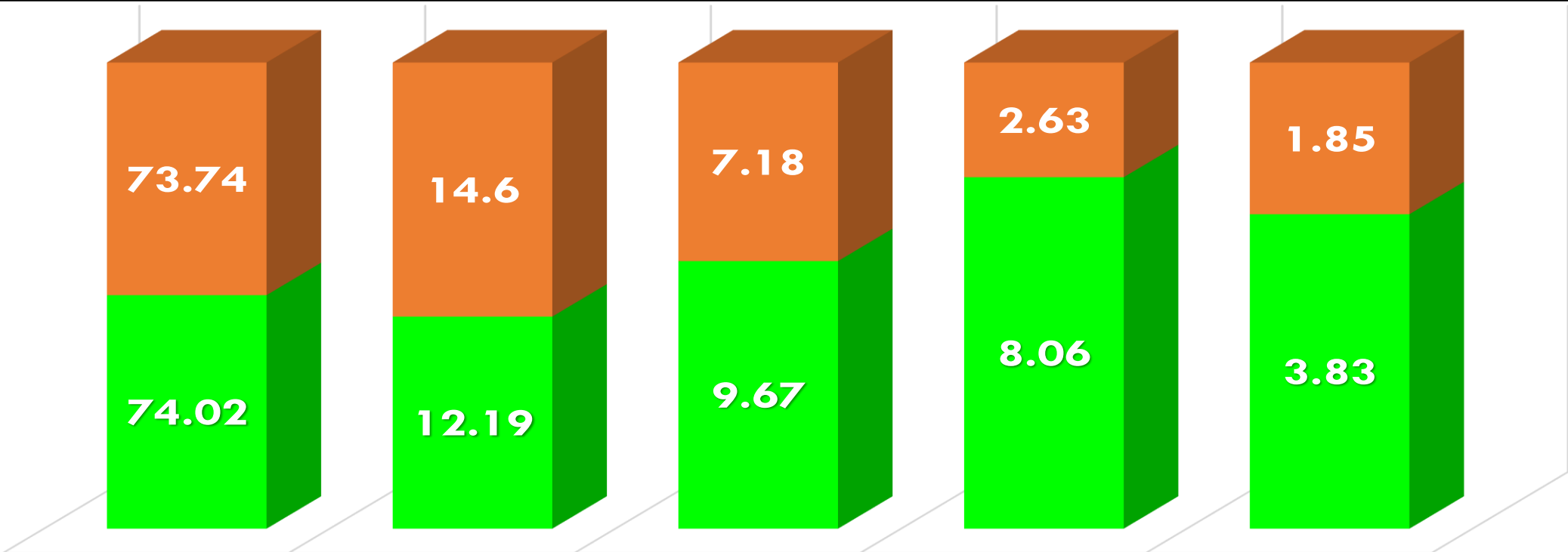
Received Early Warning by type of Media



	Redio	Television	Making	Communit y	Local Administra tion	Mobile Telephone/ SMS	Internet/M edia	Others
2021	3.34	47.11	19.27	45.61	6.81	44.55	15.25	4.24
2015	3.34	37.76	14.04	0	2.91	20.61	0	0

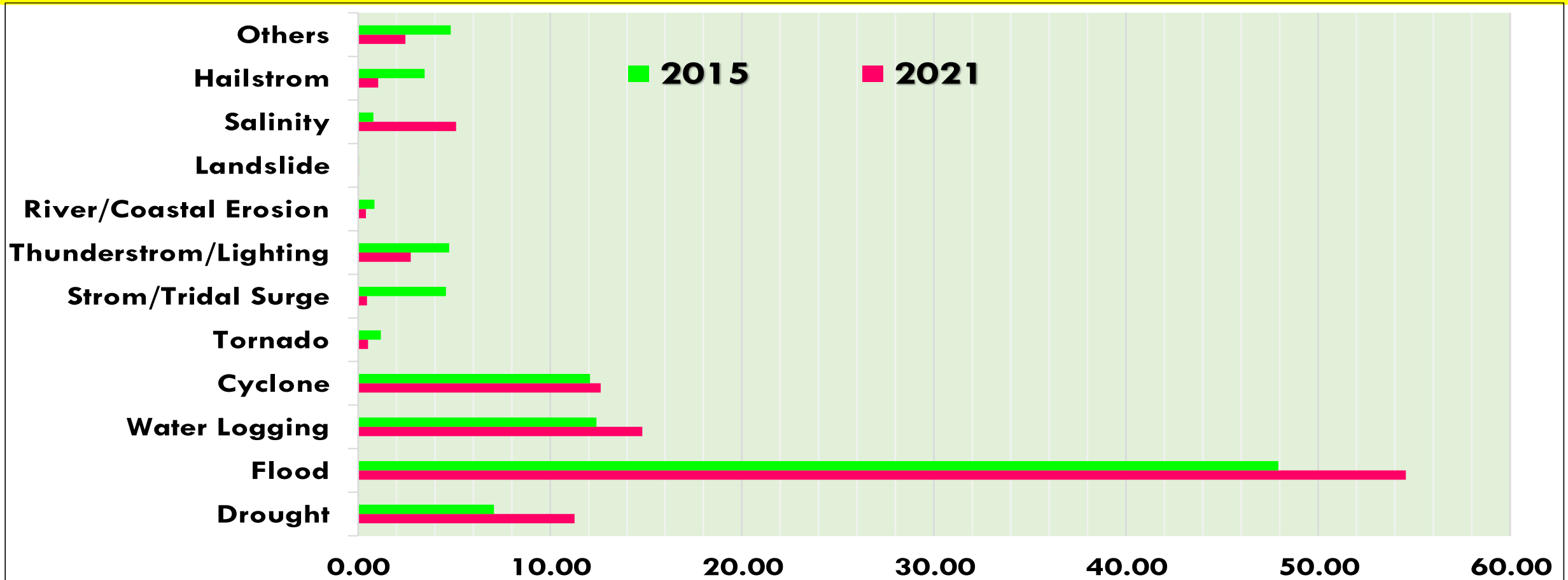
Household Received Financial Support by Organization

■ 2021 ■ 2015



	Government Organization	NGO's/International organizations	Local Elite Person/Local Society Welfare/Cooperative Society	Business enterprises	Others
2015	73.74	14.6	7.18	2.63	1.85
2021	74.02	12.19	9.67	8.06	3.83

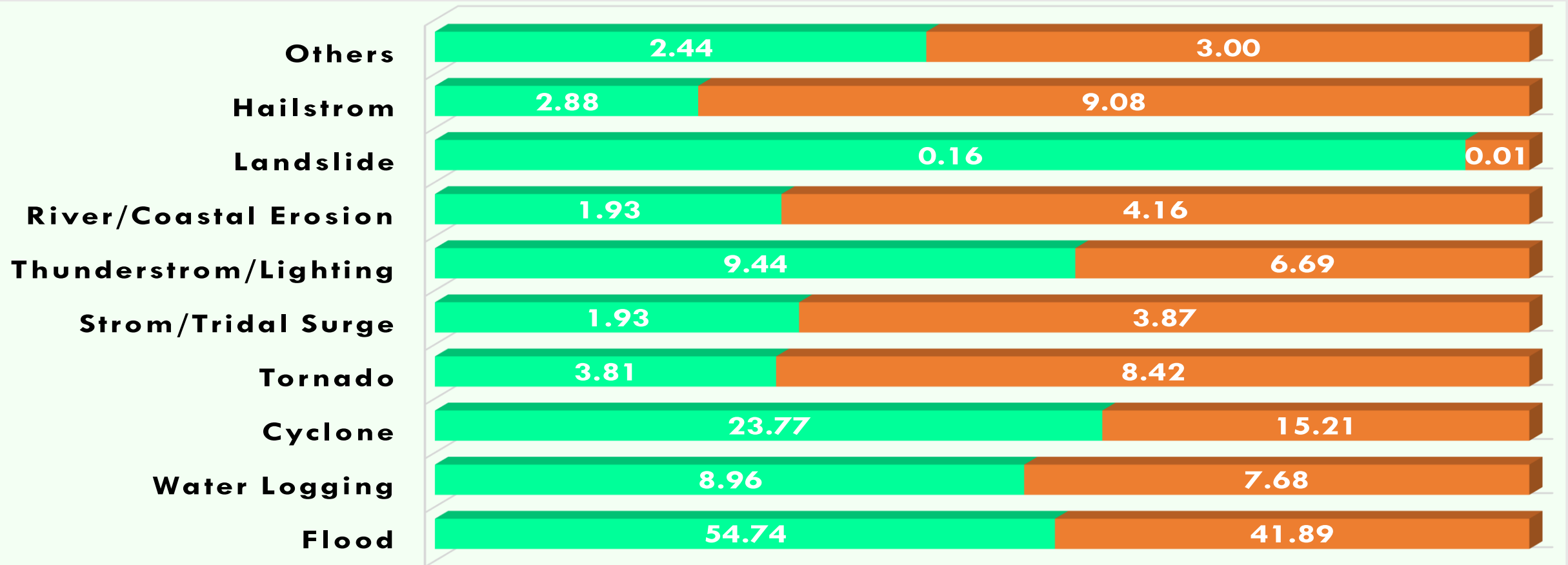
Suffering from Sickness due to Disaster



	Drought	Flood	Water Logging	Cyclone	Tornado	Strom/Tridal Surge	Thunderstrom/Lighting	River/Coastal Erosion	Landslide	Salinity	Hailstrom	Others
■ 2015	7.07	47.91	12.43	12.07	1.2	4.57	4.74	0.85	0.04	0.8	3.48	4.84
■ 2021	11.27	54.57	14.80	12.64	0.53	0.46	2.75	0.43	0.06	5.10	1.06	2.46

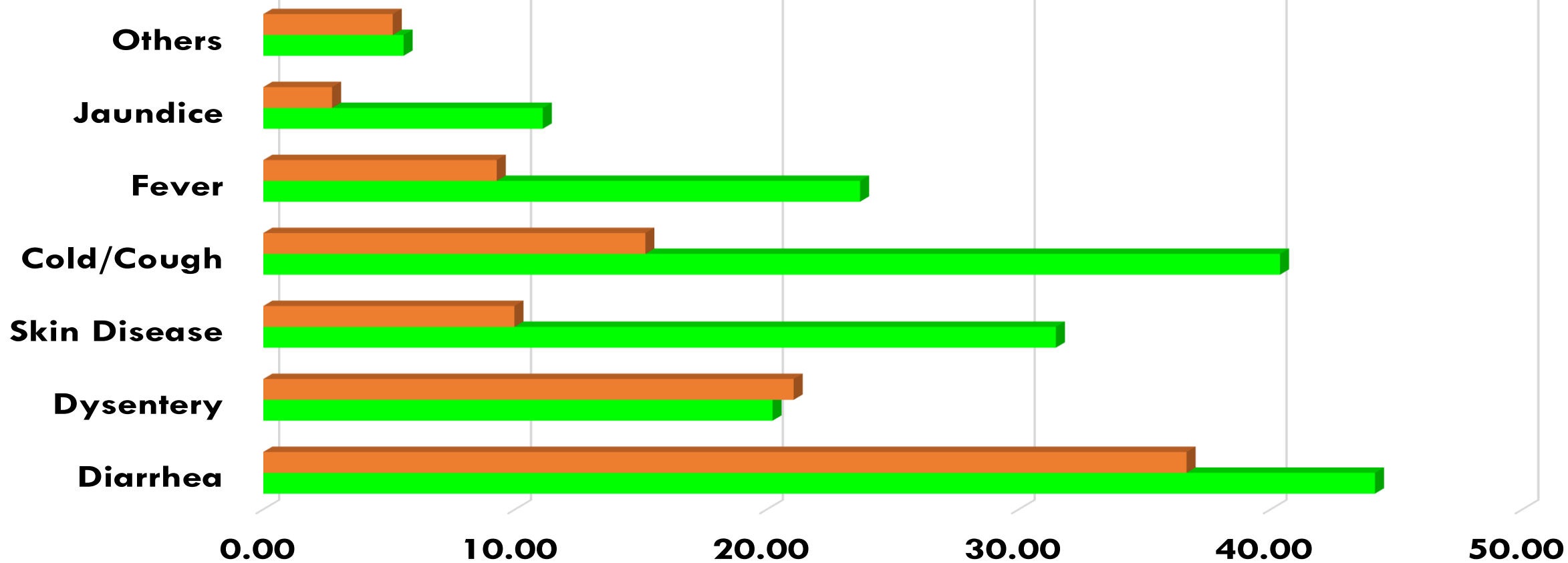


Injured by Disaster



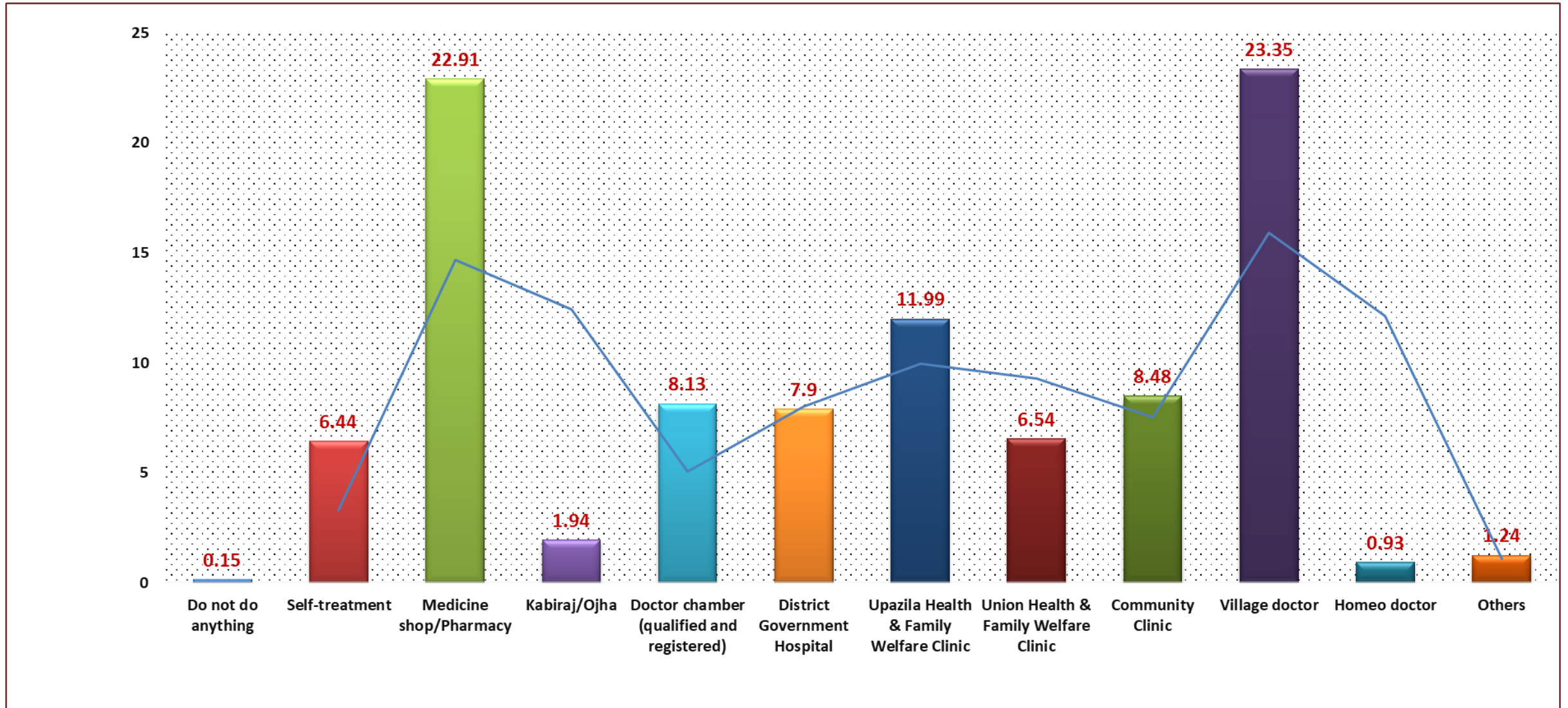
	Flood	Water Logging	Cyclone	Tornado	Strom/Tri dal Surge	Thunders trom/Ligh ting	River/Co astal Erosion	Landslide	Hailstrom	Others
■ 2021	54.74	8.96	23.77	3.81	1.93	9.44	1.93	0.16	2.88	2.44
■ 2015	41.89	7.68	15.21	8.42	3.87	6.69	4.16	0.01	9.08	3.00

Main Diseases due to insufficient Supply of Drinking Water

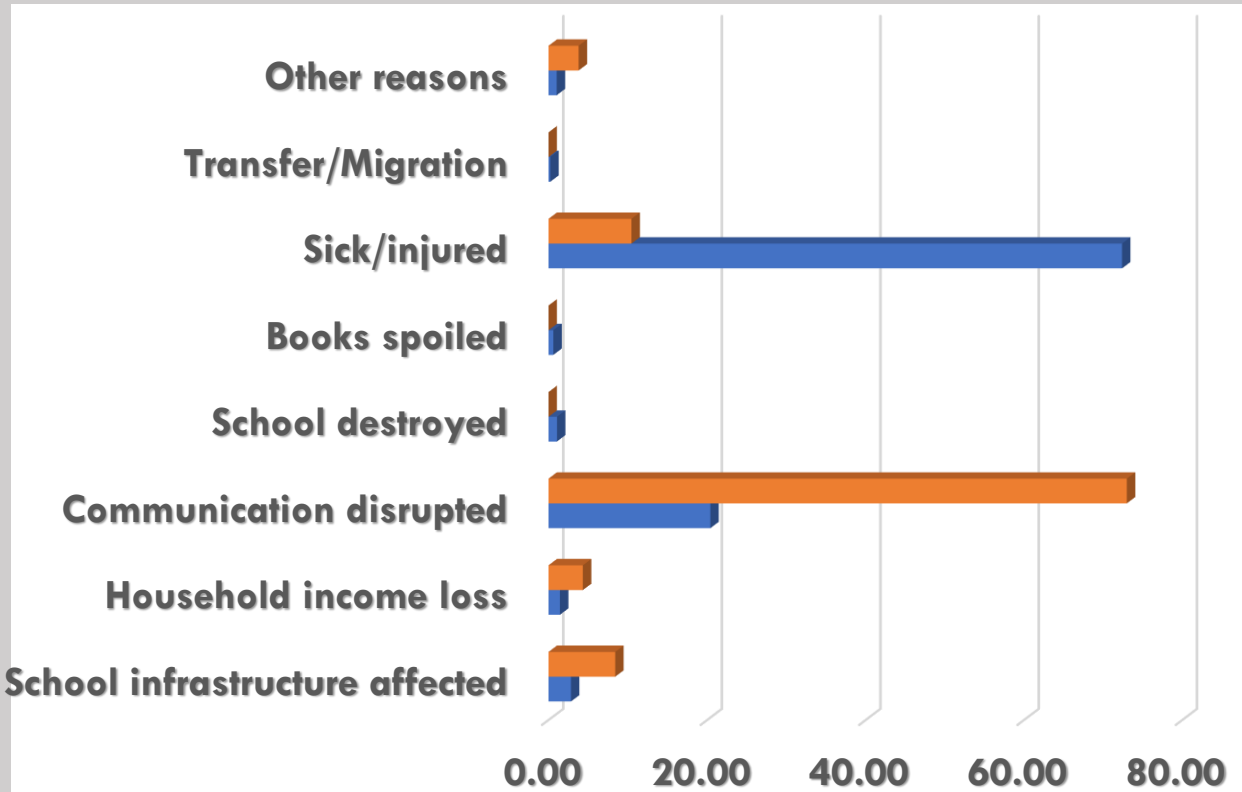


	Diarrhea	Dysentery	Skin Disease	Cold/Cough	Fever	Jaundice	Others
2015	36.66	21.06	9.97	15.17	9.27	2.73	5.14
2021	44.14	20.22	31.47	40.37	23.70	11.10	5.57

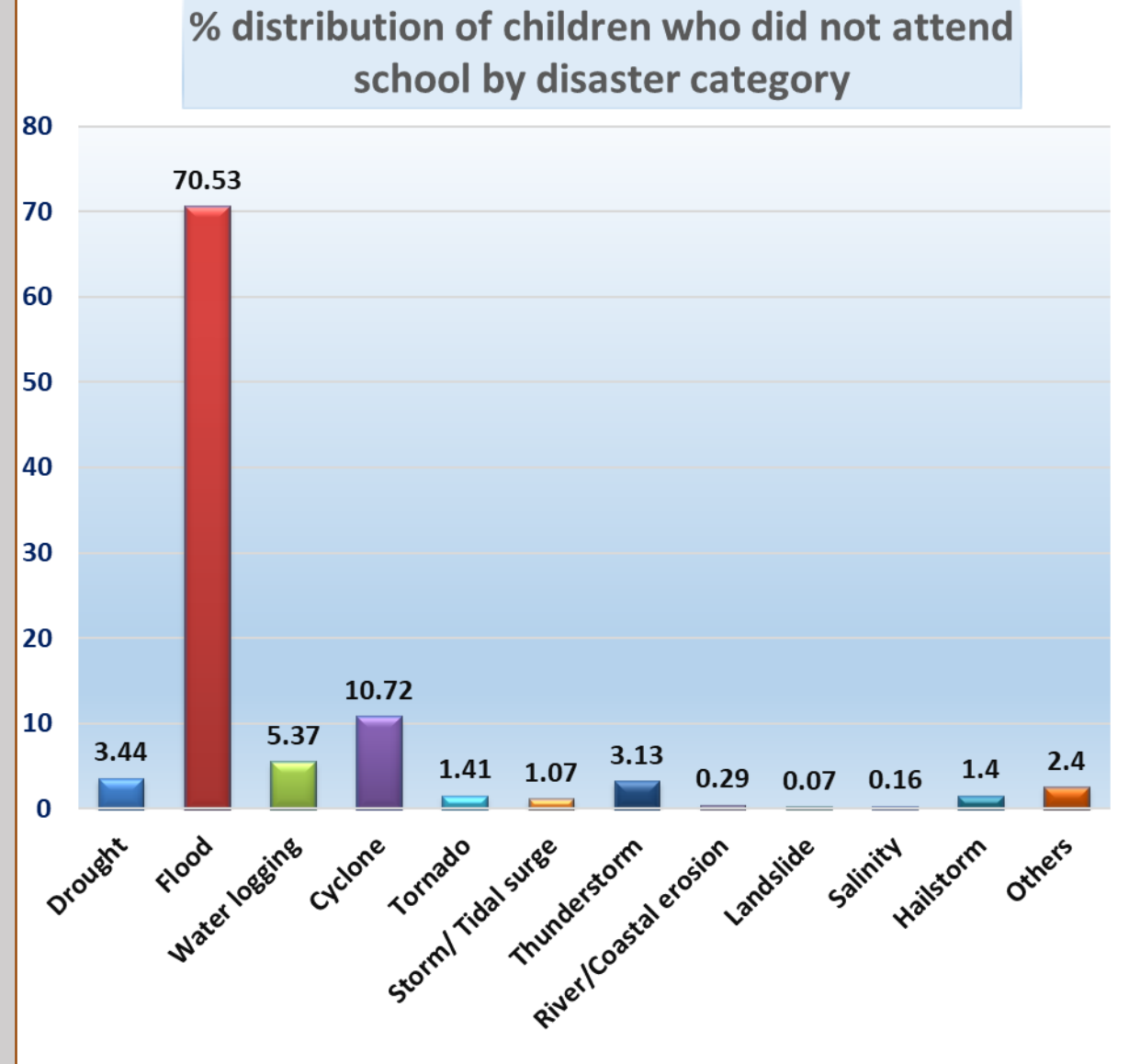
Distribution of households by main mode of treatment



Cause of not attending School of Children due to Disaster



	School infrastructure affected	Household income loss	Communication disrupted	School destroyed	Books spoiled	Sick/injured	Transfer/Migration	Other reasons
2015	8.41	4.33	73.00	0.00	0.00	10.46	0.00	3.80
2021	2.83	1.44	20.41	1.07	0.61	72.39	0.22	1.03



Vulnerability Assessment based on Quintile Income Group

Household Group	Average Annual Income (Tk)	Average Annual Damage and Loss (Tk.) by BDRS 2021 Sample Survey								Proportion of damage and loss to total income
		Crops	Livestock & Feed	Poultry & Egg	Fishery	Land	Housing & Others	Homestead forestry	Total	
1	2	3	4	5	6	7	8	9	10	11
Q1	31001	7380	1334	423	456	17491	2642	399	30125	97.17
Q2	100628	7213	1290	453	603	16792	2981	517	29848	29.66
Q3	158014	8963	1390	484	762	18397	2921	629	33546	21.23
Q4	239275	12241	1437	569	1164	19737	2907	884	38938	16.27
Q5	722903	22142	2500	1081	4509	32506	3229	1493	67459	9.33
Total	246241	11486	1583	598	1474	20885	2934	777	39737	16.14

Lowest Income Group



Highest Income Group

As high as 97.17% of income goes for damage and loss in bottom quintile. While it is only 9.33% for the top quintile. Bottom quintile is more vulnerable (10.4 times) than top quintile in exposure to damage and loss. Proportion of damage and loss decrease as income goes up.

Note: Quintiles are representative of 20% of a given population . Therefore, the first quintile (Q1) represents the lowest fifth of data and top quintile (Q5) represents the last 5th (20%) of a data. Here, we use household income for preparing the quintile

SDGs and SFDRR Indicators from BDRS 2020 & 2015

SDGs Indicators & Sub-Indicators No.	Description of SDGs and SFDRR Indicators	SDGs & SFDRR Indicators 2020	Baseline of SDGs & SFDRR Indicators 2015
1.4.1	Proportion of Population Living in Households with Access to Basic Services [National: Sanitation 96.2%, Electricity 96.2%, (SRVRS 2020), Clean Fuel 19.0% (MICS 2019)]		
	a) Sanitation	52.43	49.90
	b) Electricity	94.06	49.82
	c) Clean Fuel	12.61	1.73
1.5.1, 11.5.1, 13.1.1	Number of Deaths, Missing persons, Injured, Sickness and directly affected persons attributed to disasters per 100,000 population	3765.80	12881
1.5.1.1	a) Disaster Deaths	0.85	
1.5.1.2	b) Missing Persons	0.03	
1.5.1.3	c) Injured Persons	18.09	
1.5.1.4	d) Disaster Sickness	167.77	
1.5.1.5	e) Affected Persons	3578.03	

SDGs and SFDRR Indicators from BDRS 2020 & 2015

SDGs Indicators & Sub-Indicators No.	Description of SDGs and SFDRR Indicators	SDGs & SFDRR Indicators 2020	Baseline of SDGs & SFDRR Indicators 2015
1.5.2, 11.5.2	Direct Economic Loss attributed to Disasters in relation to Gross Domestic Product (GDP) damage to critical infrastructure and number of disruptions to basic services (Proportion of GDP)	1.32	1.30
1.5.2.1	Sector Wise Damage and Loss (% Share)	100.00	100.00
	Crops	28.90	36.20
	Livestock	3.98	4.76
	Poultry	1.51	1.21
	Fishery	3.71	5.82
	Land Degradation	52.56	26.72
	Dwelling & Others Infrastructures	7.38	17.19
	Homestead Forestry	1.96	8.10

SDGs and SFDRR Indicators from BDRS 2020 & 2015

SDGs Indicators & Sub-Indicators No.	Description of SDGs and SFDRR Indicators	SDGs & SFDRR Indicators 2020	Baseline of SDGs & SFDRR Indicators 2015
1.5.2, 11.5.2	Direct Economic Loss attributed to Disasters in relation to Gross Domestic Product (GDP) damage to critical infrastructure and number of disruptions to basic services (Proportion of GDP)	1.32	1.30
1.5.2.2	Damage and Loss by Disaster (% Share)	100.00	100.00
	Drought	1.53	5.74
	Flood	56.41	23.23
	Water Logging	5.24	8.72
	Cyclone	14.25	15.41
	Tornado	0.85	2.33
	Storm/Tidal Surge	0.86	6.88
	Thunderstorm/Lighting	1.63	5.94
	River/Coastal Erosion	14.99	19.76
	Landslide	0.34	0.14
	Salinity	1.16	3.30
	Hailstorm	2.73	6.23
	Others	0.01	2.34


SDGs and SFDRR Indicators from BDRS 2020 & 2015

SDGs Indicators & Sub-Indicators No.	Description of SDGs and SFDRR Indicators	SDGs & SFDRR Indicators 2020	Baseline of SDGs & SFDRR Indicators 2015
4.1.2	Completion rate of Education (National: Primary: 82.6%; Lower Secondary: 64.7%; Upper Secondary: 29.4%)[MICS 2019, BBS]		
	Primary (Class I to V & Equivalent)	34.18	32.58
	Secondary (Class VI to IX & Equivalent)	23.67	18.56
	SSC/HSC/Equivalent/Diploma	14.48	9.23
4.3.1	Participation Rate of Youth and Adults in Formal Education [National: a) Secondary 75.62% b) H. Secondary 48.39% c) Tertiary 20.07 % (BANBEIS, 2020)]		
	(a) Secondary	23.67	18.56
	(b) Higher Secondary	14.48	9.23
	(c) Tertiary	3.26	1.29
7.1.1	Proportion of Population with Access to Electricity [National 96.2% (2020) SVRS, BBS]	94.06	49.82

Challenges

- **Integration** of environment, climate change and disaster related data in national planning process;
- Development of **institutional mechanism** for implementation;
- **Lack of strong coordination** among the relevant agencies. Focal Point from respective agencies/organization.
- **Understanding** the **global** and **local DRR & DRM indicators** set to integrate into the questionnaire.
- **Capacities** for developing new surveys. Capacity on DRR statistics is still lagging behind.
- **Resources allocation** is needed for regular basis DRR survey.
- Issues with data **accessibility, quality and timeliness**;
- Data collection in **digital platform**;

Thank You!



Questions?

Comments?

Suggestions?