

Climate Change Knowledge Management and Data Portal

Mr. Sem Savuth
Vice Chief of Office, Department of Climate
Change

Tel: 010 723 250
sem_savuth@yahoo.com



National Council for Sustainable Development
General Directorate of Policy and Strategy
Department of Climate Change



Ministry of Environment

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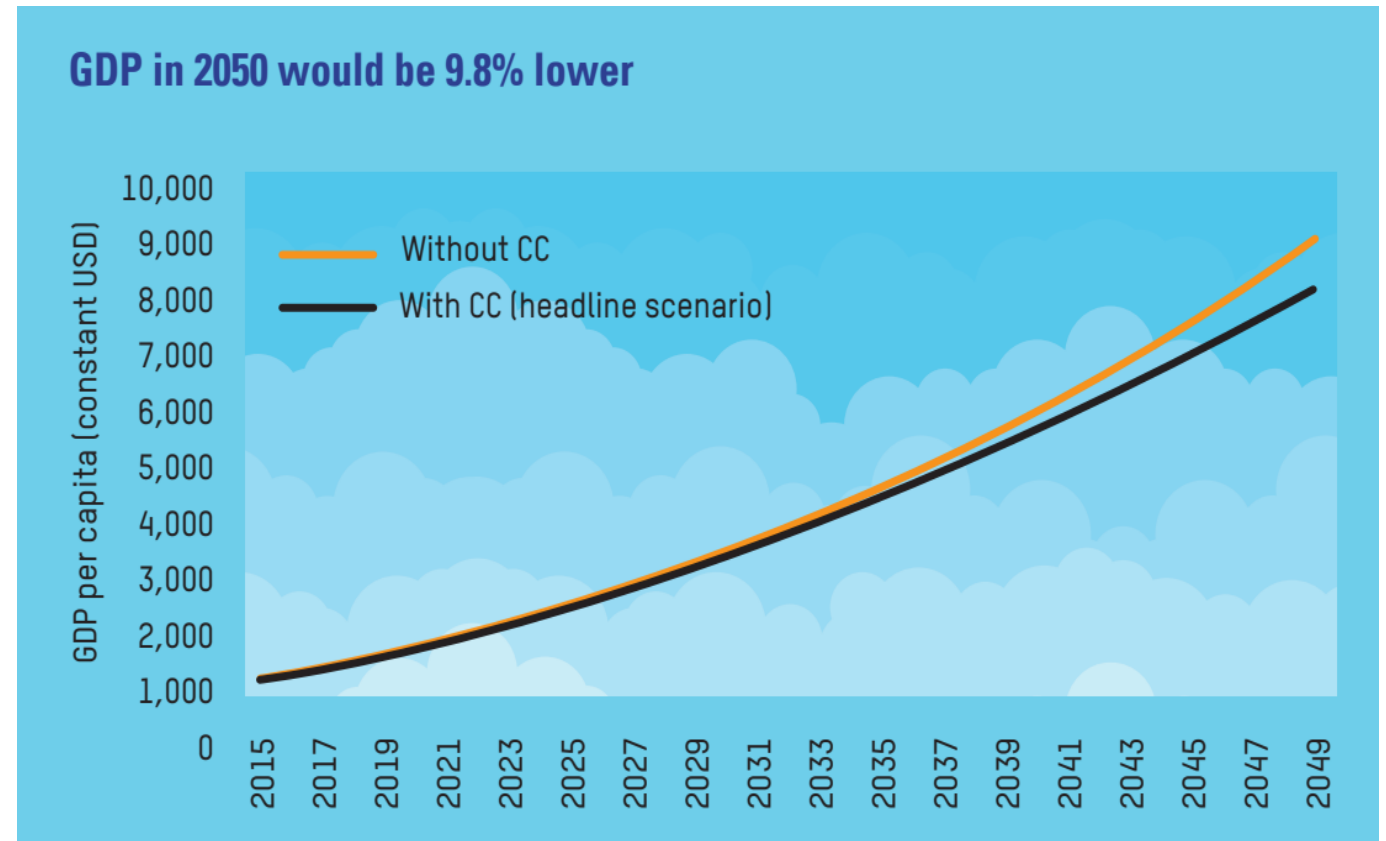
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Overviews of Climate Change in Cambodia

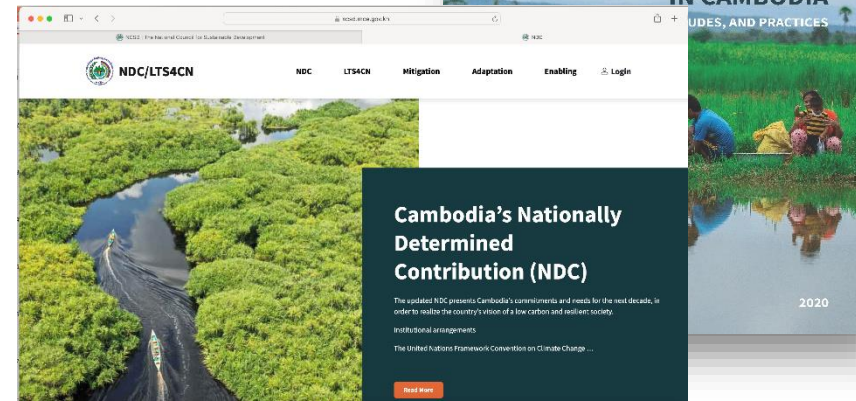
- ❑ Without additional action, Cambodia's GDP could be almost 10% lower than planned by 2050, due to climate change.
- ❑ Adaptation is a key priority to address the impacts of climate change, while Cambodia is also committed to implementing adaptation and mitigation actions in order to reduce GHG emissions and increase climate resilience.



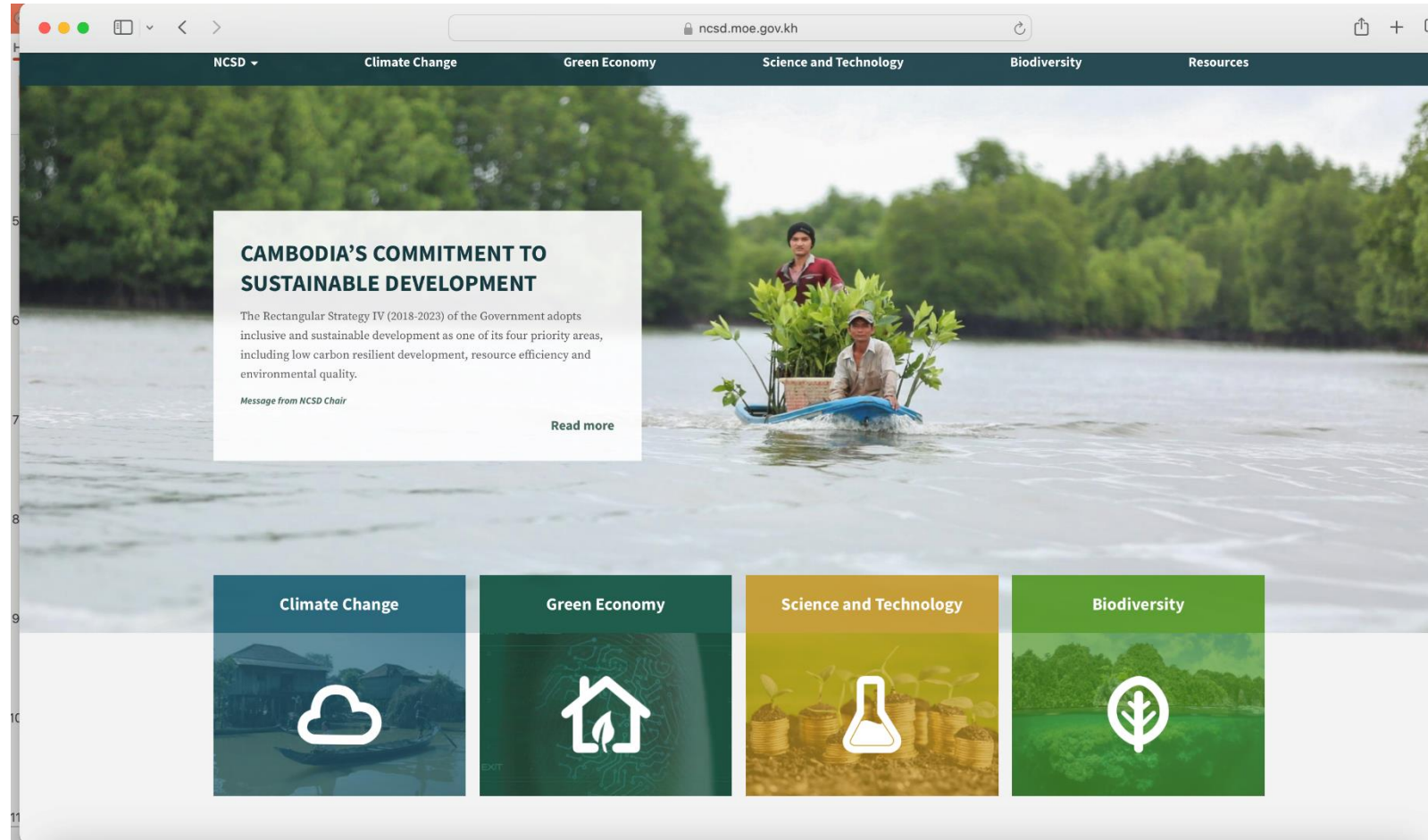
Policies Related to Climate Change

Cambodia has made good progress in terms of setting climate change policy and DRR related, including:

- Cambodia Climate Change Strategic Plan 2014-2023, the first comprehensive national policy document responding to climate change.
- Nationally Determined Contribution (NDC) in 2015 (27% of GHG reduction) and updated it in 2020 (41.7% of GHG reduction).
- Cambodia's first Biennial Update Report (BUR) was submitted in 2020, and the Third National Communication (TNC) in 2022.
- The country submitted her Long-Term Strategy for Carbon Neutrality in December 2021 with 2050 carbon neutral target.
- NDC/LTS4CN Online tracking system.
- KAP study is conducted in every 5 years to track understanding on climate change.
- NCSD's portal on climate change
- Natural Resources and Environmental Code.



Climate Change Knowledge management



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NCSD's climate change data portal

- This data portal intends to bridge this gap by making publicly available quality assured data in different areas of climate change work as they become available. Starting with a small number of datasets covering vulnerability, climate finance, mitigation projects and institutional readiness, there are a total of 16 climate change data portal on the NCSD's website.
- 1) Vulnerability to Climate Hazards: <https://ncsd.moe.gov.kh/dcc/data-portal/vulnerability-climate-hazards>,
- 2) Vulnerability Assessments, <https://ncsd.moe.gov.kh/dcc/data-portal/vulnerability-assessments>
- 3) Families Affected by Climate Hazards: <https://ncsd.moe.gov.kh/dcc/data-portal/families-affected-climate-hazards>,
- 4) Climate Finance: <https://ncsd.moe.gov.kh/dcc/data-portal/climate-finance>
- 5) Institutional Readiness: <https://ncsd.moe.gov.kh/dcc/data-portal/institutional-readiness>
- 6) Greenhouse Gas Emission" <https://ncsd.moe.gov.kh/dcc/data-portal/greenhouse-gas-emission>,
- 7) Knowledge, Attitude, and Practices on Climate Change (KAP): <https://ncsd.moe.gov.kh/dcc/data-portal/knowledge-attitude-and-practices-climate-change-kap>,
- 8) Green Climate Fund: <https://ncsd.moe.gov.kh/dcc/green-climate-fund>,
- 9) NDC/LTS4CN tracking system: <https://ncsd.moe.gov.kh/ndc-tracking/>,
- 10) Expert Roster: <https://ncsd.moe.gov.kh/dcc/experts-roster>
- 11) Project mapping: <https://ncsd.moe.gov.kh/dcc/program/cambodia-climate-change-alliance-ccca-phase-iii>,
- 12) CCCA3 project factsheets: <https://ncsd.moe.gov.kh/dcc/program/cambodia-climate-change-alliance-ccca-phase-iii/innovation-grants-round-1>,
- 13) Online lexicon: <https://ncsd.moe.gov.kh/lexicon>,
- 14) Publications on climate change <https://ncsd.moe.gov.kh/dcc/publication>; 15) Air Quality Monitoring Data Platform: <https://airquality.moe.gov.kh/home>, 16. Gis portal: <https://cemis.arbonaut.com/catalogue/#/>



NCSD's climate change data portal

 <p>Vulnerability to Climate Hazards</p> <p>Standard Reports Download Source Data</p>	 <p>Families Affected by Climate Hazards</p> <p>Standard Reports Download Source Data</p>
 <p>Vulnerability Assessments</p> <p>Standard Reports Download Source Data</p>	 <p>Climate Finance</p> <p>Standard Reports Download Source Data</p>
 <p>Institutional Readiness</p> <p>Standard Reports Download Source Data</p>	 <p>Greenhouse Gas Emission</p> <p>Standard Reports Download Source Data</p>
 <p>Knowledge, Attitude, and Practices on Climate Change (KAP)</p> <p>Standard Reports Download Source Data</p>	 <p>Women's Resilience Index</p> <p>Standard Reports Download Source Data</p>
 <p>Environmental Management Information System</p> <p>Standard Reports</p>	 <p>Air Quality Monitoring Data Platform</p> <p>Standard Reports</p>

It is under management of the DCC/CCCA on the NCSD's website.



<https://ncsd.moe.gov.kh>



What is Vulnerability Index data portal?

For Cambodia, the vulnerability index were produced following the National M&E framework for climate change: Tracking Adaptation and Measuring Development (TAMD), since 2014 until 2021, 2022 is being produced.

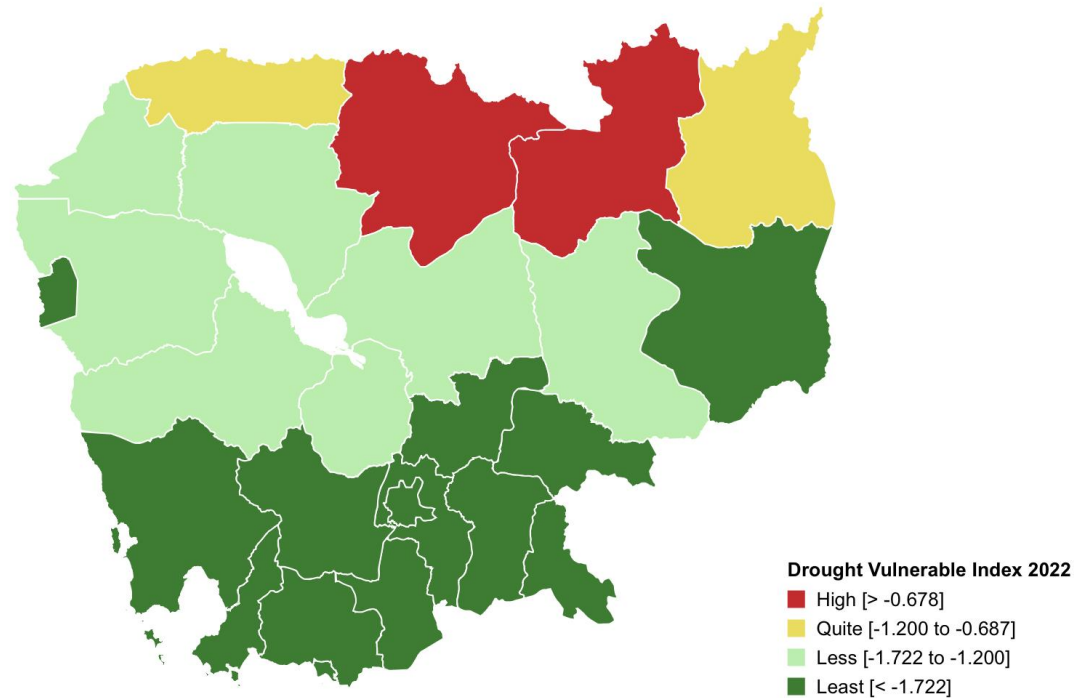
Definition: Proportion of communes are classified as 'high' , 'quite' , 'less' , 'least' to multiple climate change hazards, disaggregated by floods, drought and storms by using vulnerability index (VI) scores. These VI scores are calculated based on the methodology developed by IIED in 2015 and GSSD in 2016 for Cambodia's National Monitoring and Evaluation Framework for Climate Change, expressed as a percentage of total number of communes in the country.

និយមន័យ៖ ការចាត់ថ្នាក់ចំនួនឃុំងាយរងគ្រោះ 'ខ្លាំងបំផុត' 'ខ្លាំង' 'ខ្លះៗ' 'តិច' ចំពោះគ្រោះថ្នាក់នៃការប្រែប្រួលអាកាសធាតុ មានដូចជា៖ ទឹកជំនន់ គ្រោះរាំងស្ងួត និងខ្យល់ព្យុះ។ ការដាក់ពិន្ទុតាមសន្ទស្សន៍ភាពងាយរងគ្រោះ (VI) ត្រូវការរូបមន្តគណនាដោយផ្អែកលើវិធីសាស្ត្រដែលបង្កើតដោយ IIED ក្នុងឆ្នាំ 2015 និង GSSD ក្នុងឆ្នាំ 2016 ក្របខណ្ឌជាតិសម្រាប់ត្រួតពិនិត្យ និងវាយតម្លៃការប្រែប្រួលអាកាសធាតុ ដែលបង្ហាញជាភាគរយនៃចំនួនឃុំសរុបក្នុងប្រទេស។



The vulnerability index were produced following the National M&E framework for climate change: Tracking Adaptation and Measuring Development (TAMD) in Cambodia.

2022 Drought



Intended users:
 Institution, Academia,
 Government, Non
 Governmental
 Organization, Private
 Sector

Purposes: Planning,
 Study, Research, Personal
 learning or general
 interest

Main objective

Objective: The aim of vulnerability index is to recognize correct actions that can be taken to reduce vulnerability before the possible harm is realized. A tool for policy and decision-makers to prioritize investments and makes the decision making process more transparent. Identifying areas with high vulnerability may guide the decision making process towards a better way of dealing with by societies.

គោលដៅ៖ សន្ទស្សន៍ភាពងាយរងគ្រោះធ្វើឡើងគឺដើម្បីណែនាំពីសកម្មភាព ត្រឹមត្រូវតែគួរអនុវត្ត ដើម្បីកាត់បន្ថយ ភាពងាយរងគ្រោះ មុនពេលគ្រោះថ្នាក់អាចកើតមាន។ វាជាឧបករណ៍ សម្រាប់អ្នកនយោបាយ និងអ្នកធ្វើការ សម្រេចចិត្ត ក្នុងការកំណត់អាទិភាពលើការវិនិយោគ និងកាន់តែមានតម្លាភាព។ ការកំណត់អត្តសញ្ញាណតំបន់ ដែលងាយរងគ្រោះដោយ អាចតម្រង់ទិសក្នុងការសម្រេចចិត្ត កាន់តែល្អប្រសើរជាងមុន ក្នុងការដោះស្រាយបញ្ហា សង្គមទាក់ទងនឹងការប្រែប្រួលអាកាសធាតុ គ្រោះមហន្តរាយ នានា។



Method

The composite VI is based on multiple data from Cambodia's Commune Database (CDB), and is an average of the values of individual vulnerability indices for all three hazards, including floods, drought and storms. The variables from the CDB that build these vulnerability indices were selected based on a significant correlation with observed (time lagged) losses and damages from these hazards.

Concerning the classification of the commune vulnerability, vulnerable communes are those that score as 'highly vulnerable' or 'quite vulnerable' using threshold values for VI based on an analysis of the year distribution of VI results.

សមាសធាតុផ្សំ VI គឺផ្អែកលើទិន្នន័យជាច្រើន មូលដ្ឋានទិន្នន័យឃុំ សង្កាត់ (CDB) តម្លៃជាមធ្យមនៃសន្ទស្សន៍ភាពងាយរងគ្រោះនីមួយៗ គ្រោះមហន្តរាយទាំងបី រួមមាន ទឹកជំនន់ គ្រោះរាំងស្ងួត និងខ្យល់ព្យុះ។ ទិន្នន័យ CDB ដែលបង្កើតសន្ទស្សន៍ភាពងាយរងគ្រោះទាំងនេះត្រូវបានជ្រើសរើសដោយអង្កេតលើភាពទាក់ទងទៅនឹង ពេលវេលា ការបាត់បង់ និងខូចខាត ពីគ្រោះថ្នាក់។

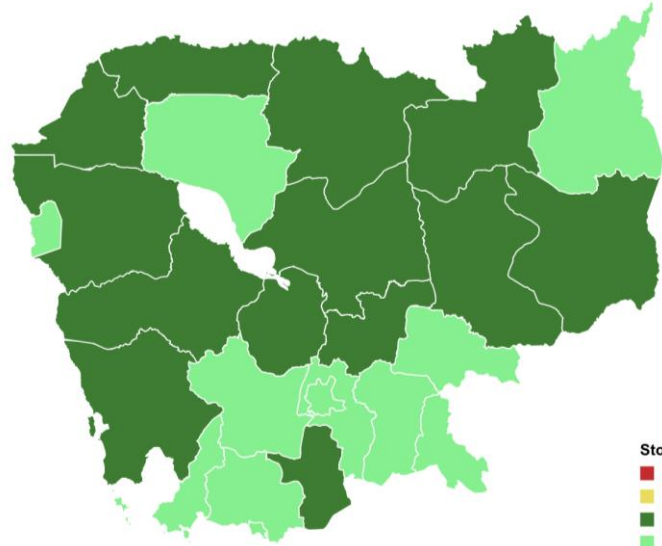
ការឱ្យចំណាត់ថ្នាក់ នៃភាពងាយរងគ្រោះរបស់ឃុំ សង្កាត់ ងាយរងគ្រោះ ដែលមានលំដាប់ពិន្ទុ 'ខ្លាំងបំផុត' 'ខ្លាំង' 'ខ្លះៗ' 'តិច' ដោយប្រើកម្រិតតម្លៃសម្រាប់ VI យោងតាមការវិភាគ ការបែងចែកលទ្ធផល VI ទៅតាមឆ្នាំ។



The vulnerability index were produced following the National M&E framework for climate change: Tracking Adaptation and Measuring Development (TAMD) in Cambodia.

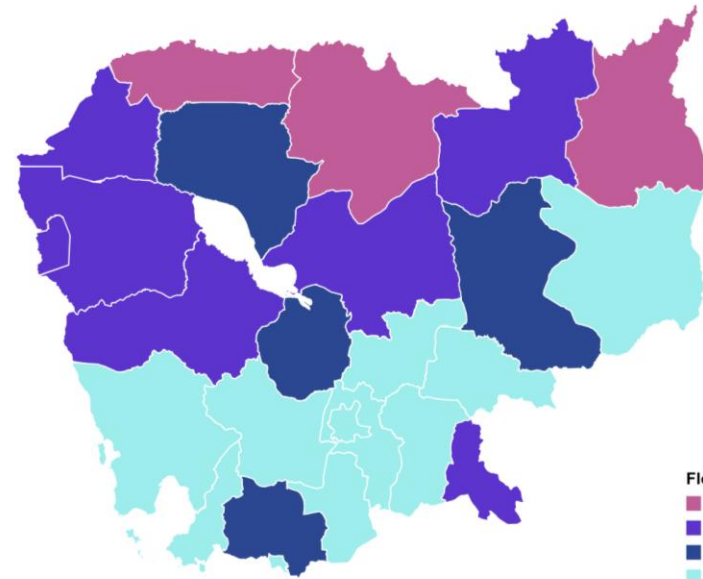
2022 Flood

2022 Storm



Storm Vulnerable Index 2022

- High [> -0.162]
- Quite [-0.229 to -0.162]
- Less [-0.296 to -0.229]
- Least [< -0.296]

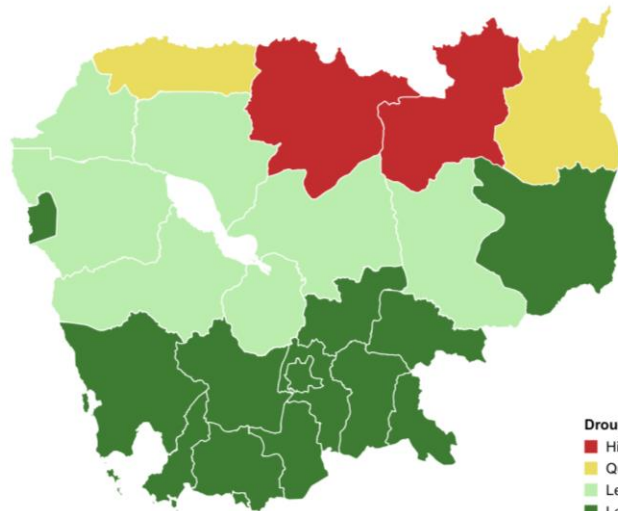


Flood Vulnerable Index 2022

- High [>0.407]
- Quite [-0.38 to 0.407]
- Less [-1.182 to -0.38]
- Least [< -1.182]

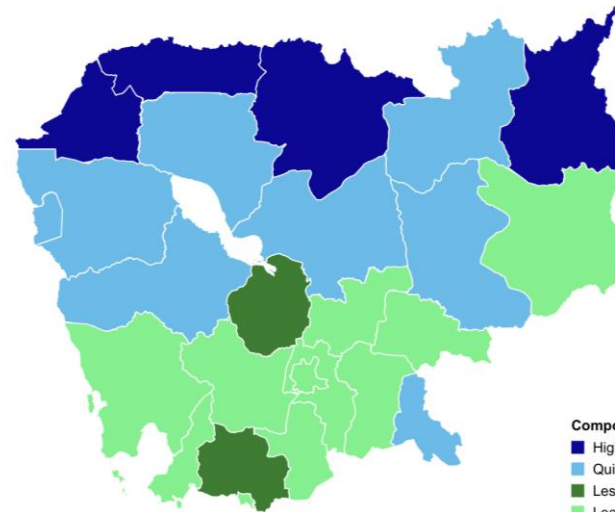
2022 Composite

2022 Drought



Drought Vulnerable Index 2022

- High [> -0.678]
- Quite [-1.200 to -0.687]
- Less [-1.722 to -1.200]
- Least [< -1.722]



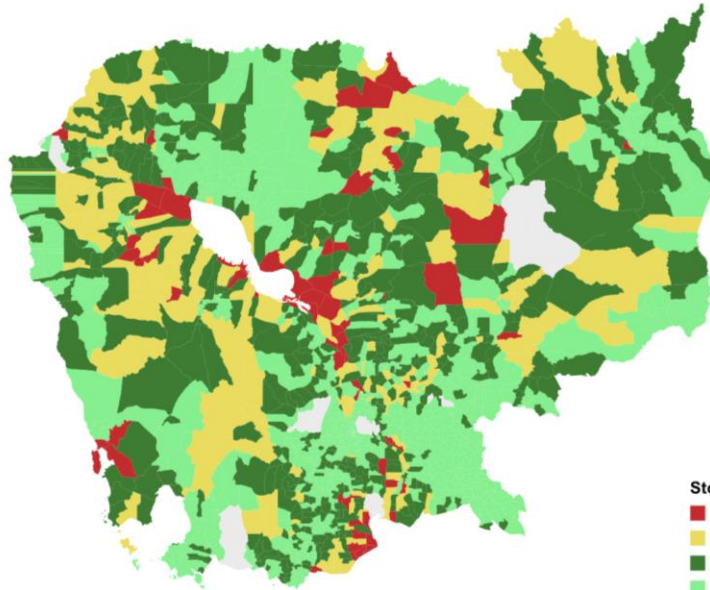
Composite Vulnerable Index 2022

- High [> 0.199]
- Quite [-0.487 to -0.199]
- Less [-1.174 to -0.487]
- Least [< -1.174]

Vulnerability index at the commune level

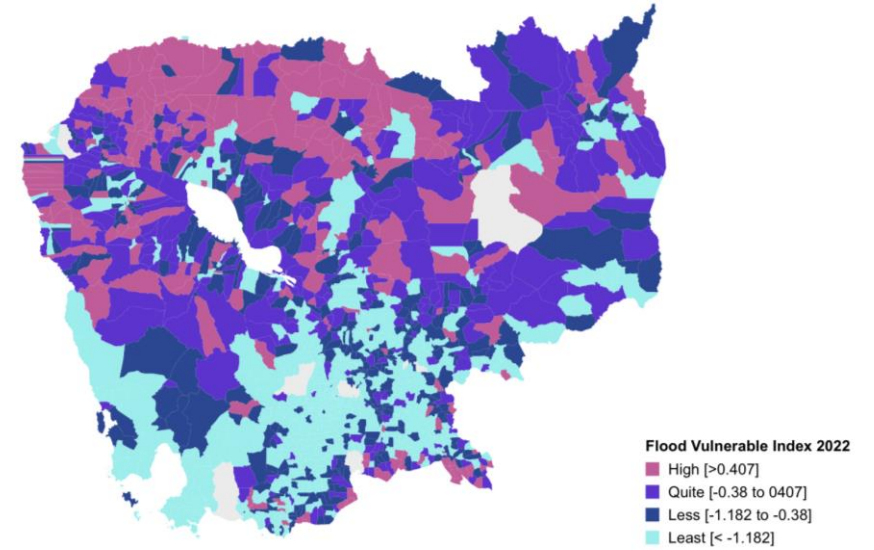
Commune level vulnerability index

2022 Storm



Commune level vulnerability index

2022 Flood



Vulnerability index at the commune level

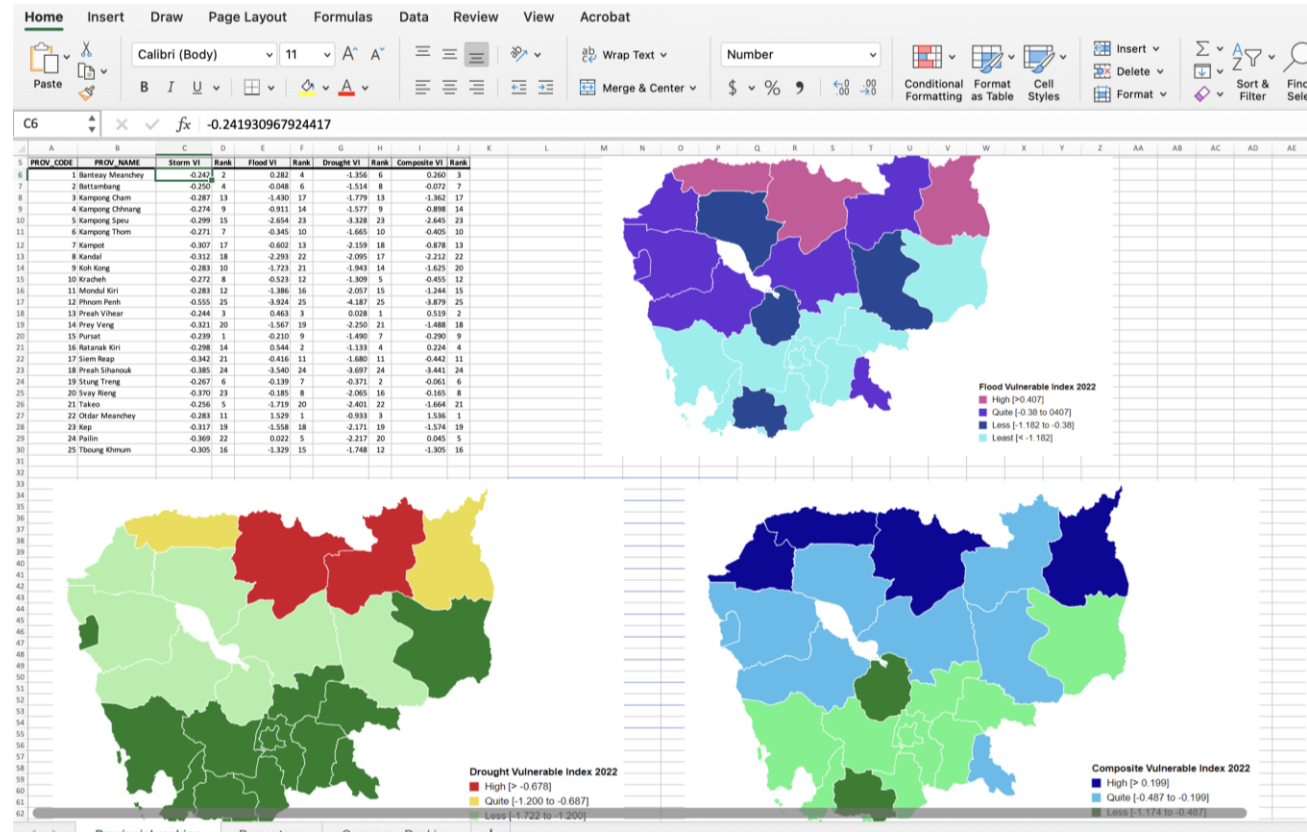
Banteay Meanchey	Mongkol Borei	Kouk Ballangk	-0.1457	55	0.3788	33	-0.3475	61	0.3756	34
Banteay Meanchey	Mongkol Borei	Ou Prasat	-0.1368	57	1.3103	45	-1.2249	22	0.6622	38
Banteay Meanchey	Mongkol Borei	Soca	-0.1515	48	2.1085	53	-0.6719	40	1.4937	51
Banteay Meanchey	Mongkol Borei	Srah Reang	-0.1008	63	2.5382	60	-0.5689	47	1.8242	58
Banteay Meanchey	Mongkol Borei	Ta Lam	-0.0925	65	0.2784	31	-0.7593	35	0.2261	29
Banteay Meanchey	Phnum Srok	Poy Char	-0.1475	53	2.5073	59	-0.3160	63	2.4894	63
Banteay Meanchey	Phnum Srok	Spean Sraeng	-0.1067	62	0.0623	24	-0.5509	49	0.0902	24
Banteay Meanchey	Preah Netr Preah	Chnuor Mean Chey	-0.1449	56	0.9537	39	-0.4874	54	1.0810	44
Banteay Meanchey	Preah Netr Preah	Prasat	-0.1614	42	-0.1872	16	-0.7207	37	-0.2029	14
Banteay Meanchey	Preah Netr Preah	Tean Kam	-0.1504	50	1.1756	44	0.7468	65	1.1461	47

Showing 1 to 10 of 65 entries

Previous 1 2 3 4 5 6 7 Next

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Department of Climate Change Report

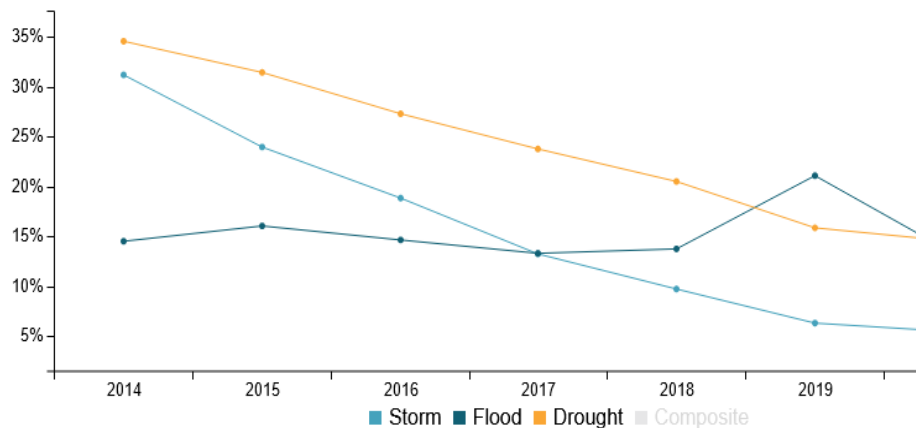
CAMBODIA CLIMATE CHANGE ALLIANCE



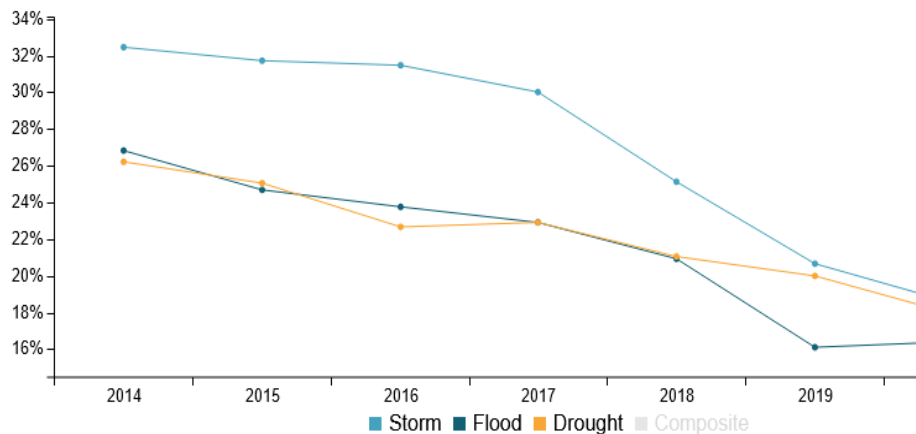
Percentage of vulnerable communes per province

Percentage of vulnerable communes per province National

Highly vulnerable

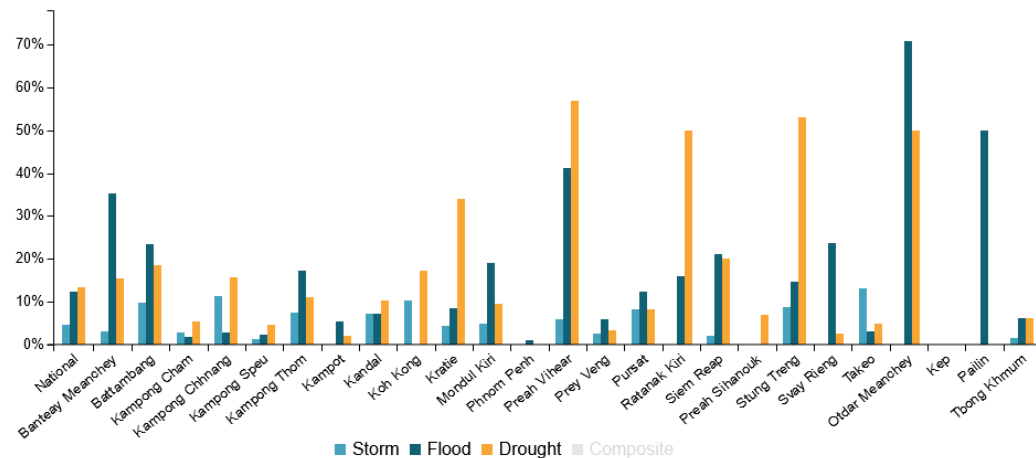


Quite vulnerable

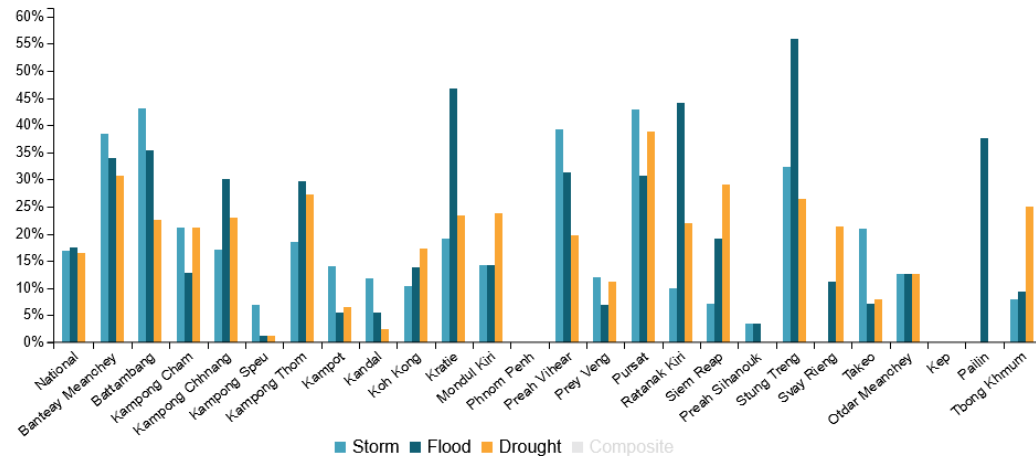


Percentage of vulnerable communes per year 2021

Highly vulnerable



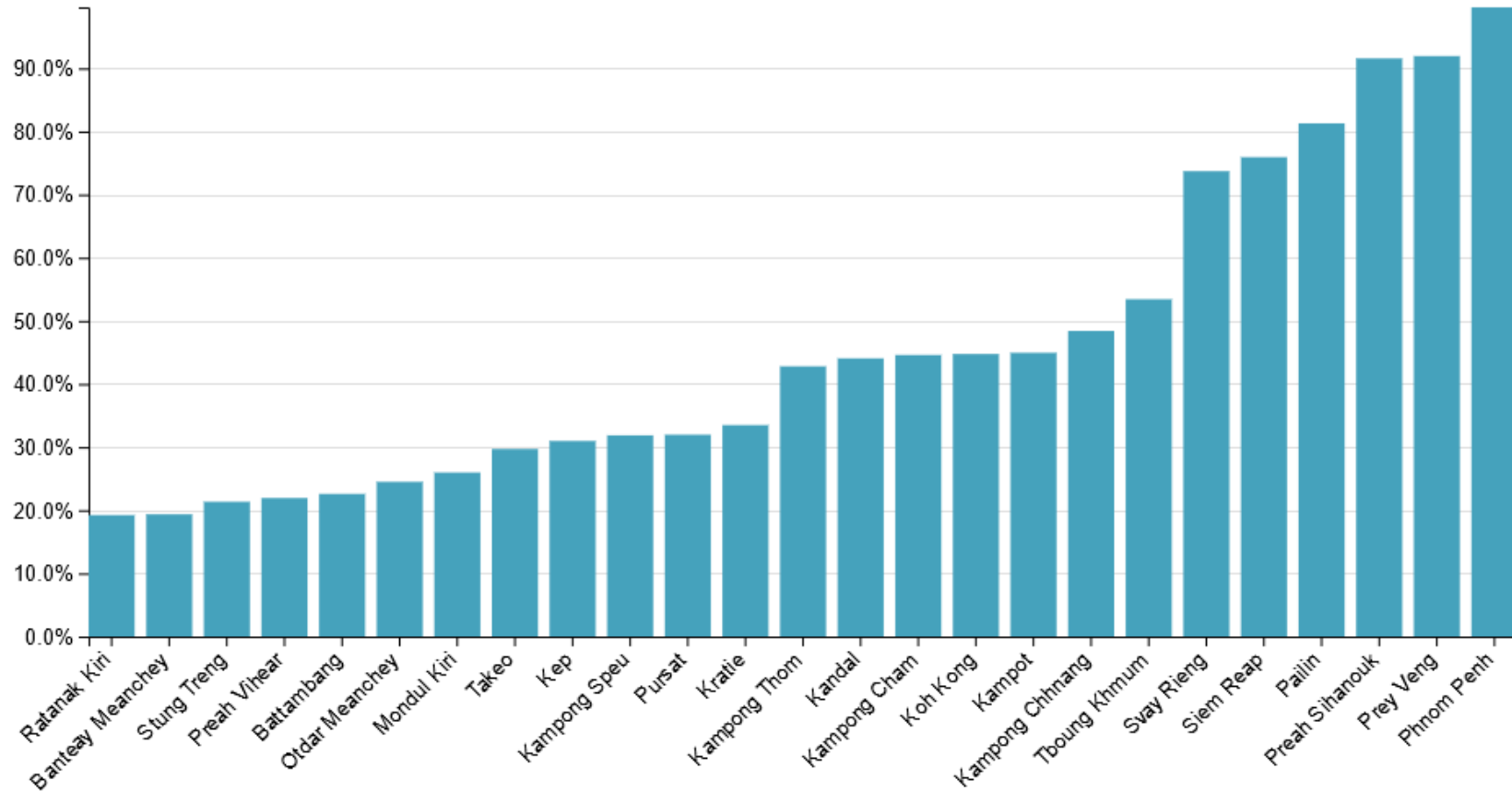
Quite vulnerable





Vulnerability - Indicator View

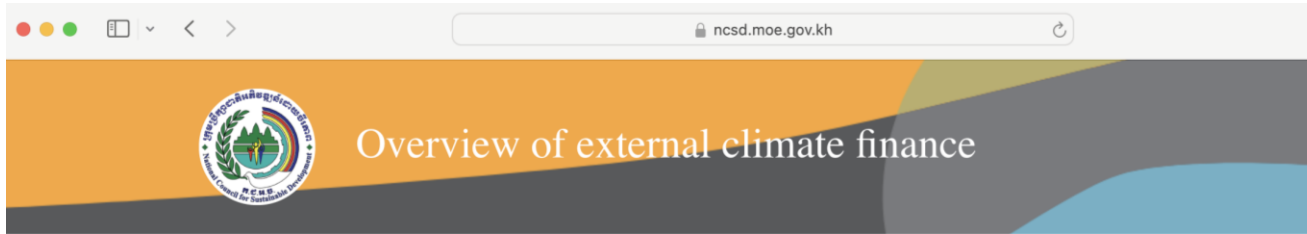
The vulnerability index were produced following the National M&E framework for climate change: Tracking Adaptation and Measuring Development (TAMD) in Cambodia.



Vulnerability – View by **multifunction of Indicators** (Water, Agriculture irrigation, Dengue, Pollution, etc.)

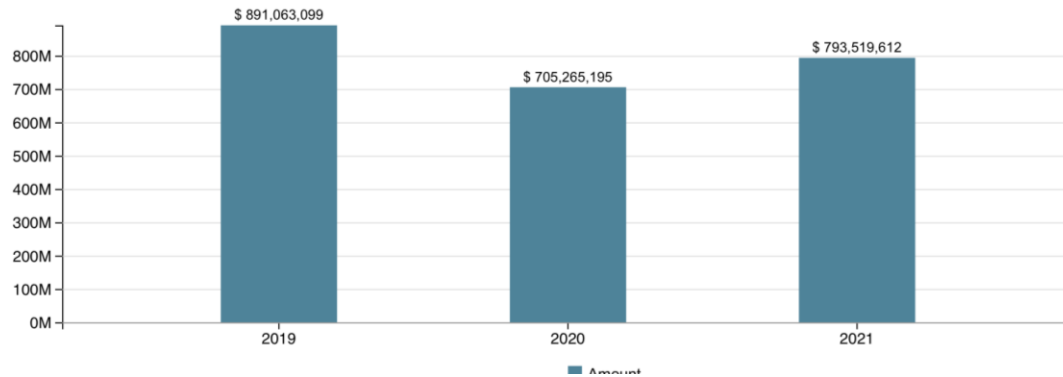
Open data, available to download in PDF, Excel

Climate finance

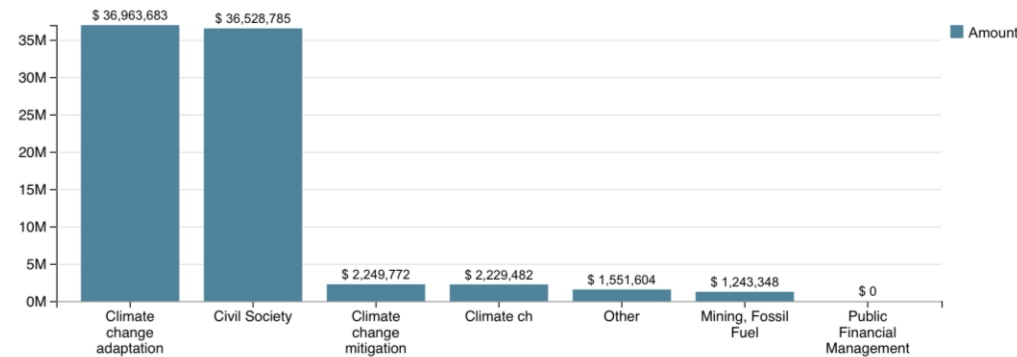


Data presented here is extracted from the Cambodia ODA database, and based on self-reporting by development partners.

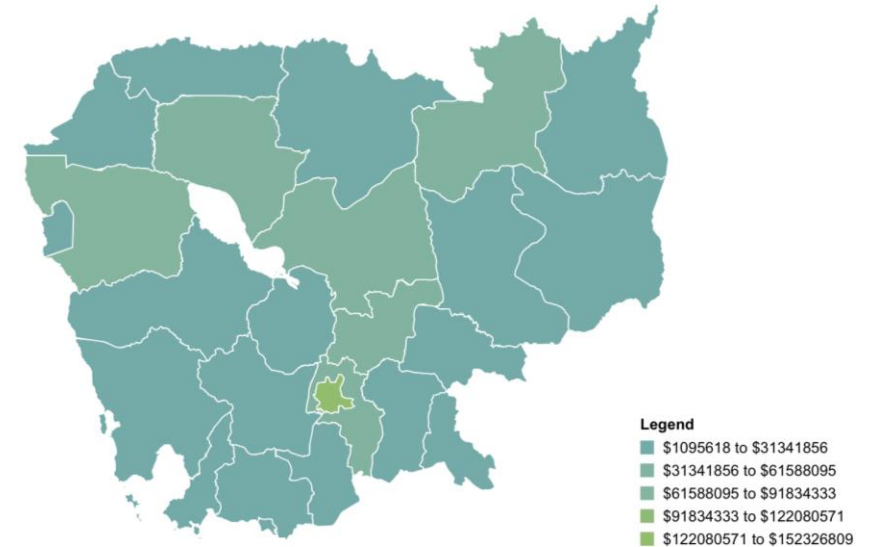
A. Total disbursements for projects delivering some climate benefits



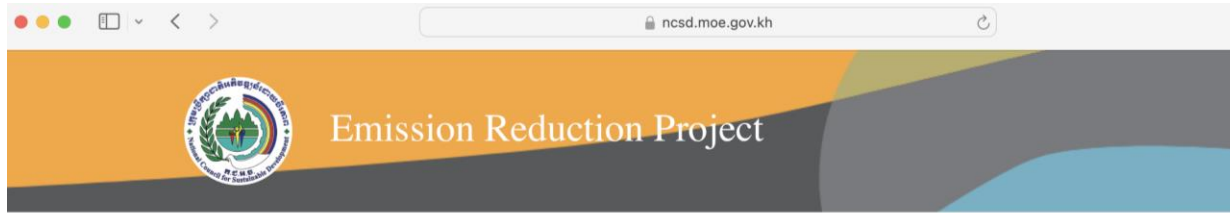
C. Type of financing for the climate change sector last available year



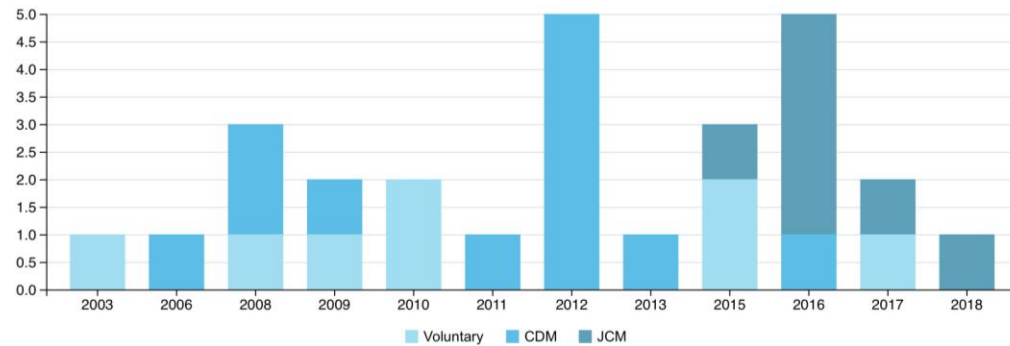
E. Geographical distribution of projects delivering climate change benefits last available year



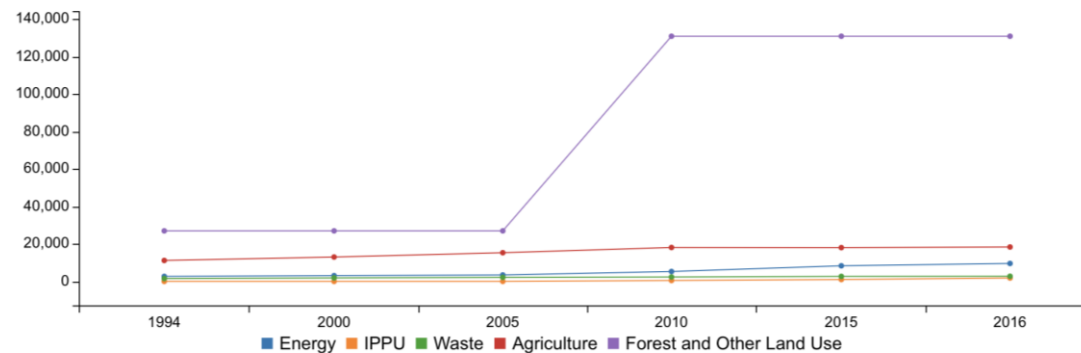
GHGs emissions



A. Total number of registered projects per year and per type of mechanism

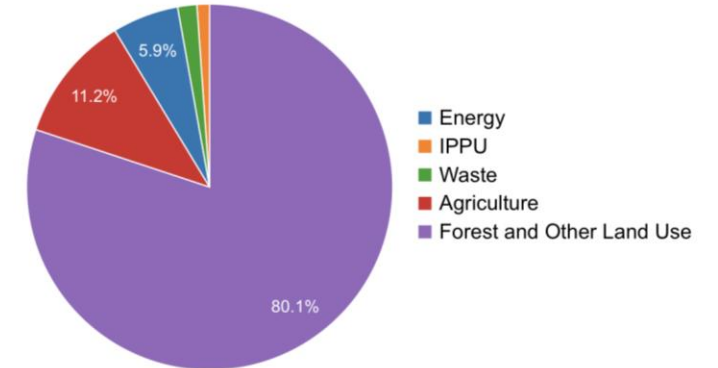


3. GHG Emissions by Sector from 1994 to 2016 (GgCO2eq)



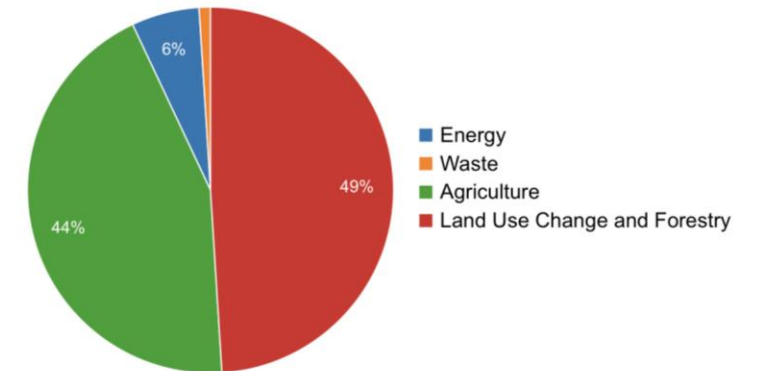
Source: First Biennial Update Report (GSSD, 2020)

1. GHG Emissions by Sector in 2016 (GgCO2eq)



Source: First Biennial Update Report (GSSD, 2020)

2. GHG Emissions by Sector in 2000 (GgCO2eq)

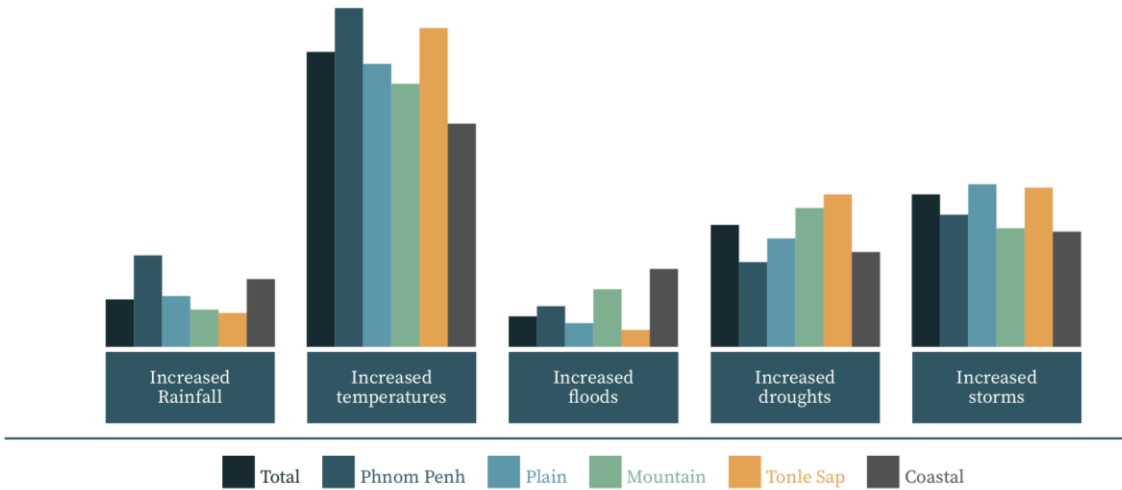


Source: Cambodia's Second National Communication (GSSD, 2015)

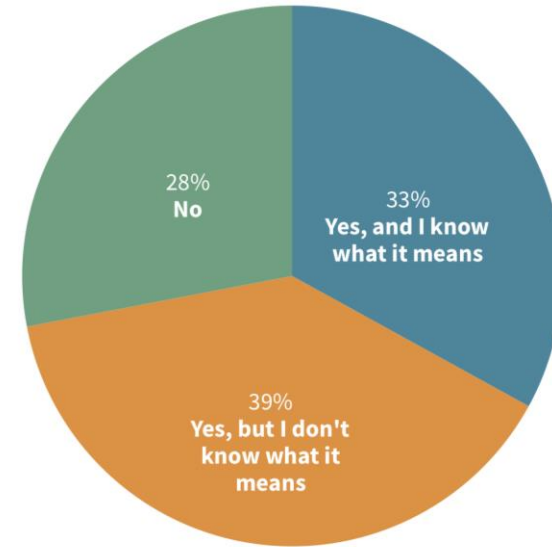


Knowledge, Attitude, and Practices on Climate Change (KAP)

Perceptions of changes in weather patterns over the past 10 years by region



Nearly three-quarter (72%) of Cambodians have heard of the term 'Climate Change'



The source of dataset is based on the actual results of research in every five years.



NDC/LTS4CN tracking system



<https://ncsd.moe.gov.kh/ndc-tracking/public/mitigation/>

- ❑ Under Paris Agreement, Cambodia submitted its first NDC in 2015 and the Updated NDC in 2020.
- ❑ The Updated NDC includes:
 - ❑ 33 prioritized mitigation actions in seven sector
 - ❑ includes 58 prioritized adaptation actions
 - ❑ 29 prioritized enabling actions
- ❑ Achieving these goals comes with a financial price. The Updated NDC estimates the cost of transition at US\$ 5.8 billion for mitigation action and US\$ 2 billion for adaptation by 2030.
- ❑ To track all implementations made, all line ministries and DPs need to go the online NDC/LTS₄CN tracking system on the NCSD's website and update their updated actions annually.



Collaborations and activities for climate change knowledge and data management



CC and DRR Projects Implementation at the Ground Level

Upgrading the climate investment information database of sub-national government of Cambodia

Overall objective: 1)- Sub-national database has climate investment data and the report on climate investment data could be extracted;
2)- data transfer between NCDDS and NCSD is effective;
3)- VRA data at pilot sites are available in NCSD data portal and new data collection system approach is proposed)

Location: Selected provinces

Partners: NCDD and CCCA3



Research and Development on related CC and DRR

Appropriate costing methods of climate change adaptation in infrastructure development: experimental studies for road and related infrastructure projects in Cambodia (CAMI)

Overall objective: Enhance the climate resilience capacity of roads and related development sectors in Cambodia

Location: selected provinces

Partners: Royal University of Phnom Penh, AIT, University of Freiburg, and CCCA3



Other CC and DRR related projects



Soil organic carbon research



Community resilient drinking water



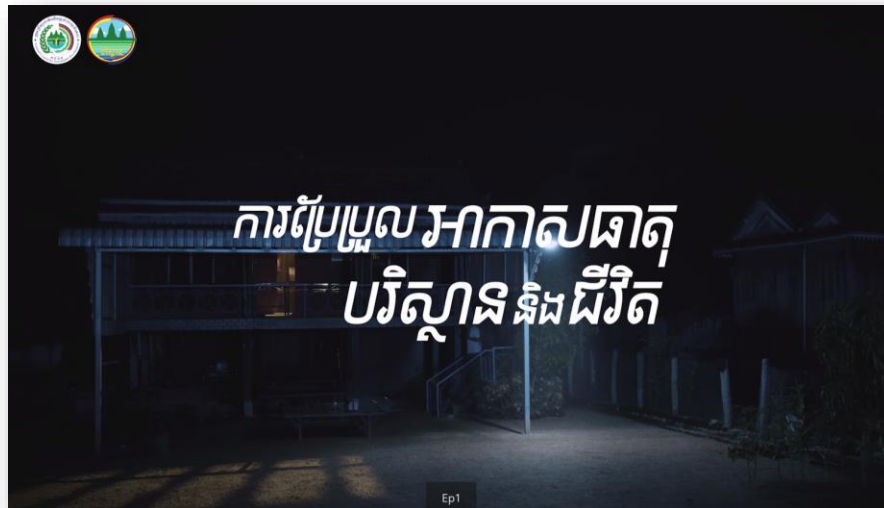
Smart agriculture practices

Mainstreaming/ integrated climate change into education and related institution

Climate change was mainstreamed/integrated into national curriculum (primary – higher education) and parliament.



Communication materials development on CC and DRR



Capacity building and awareness raising on CC and DRR

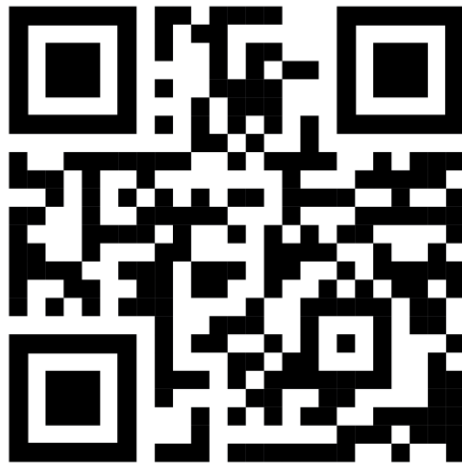


Challenges

- Limited data at the ground, ex. VRA raw data
- Lack of human resources (IT, and climate change modeling)
- Lack of communications between the key stakeholders
- Access to the portal (limited users on the data portal)



Thank you for your attention!



 <https://ncsd.moe.gov.kh>

