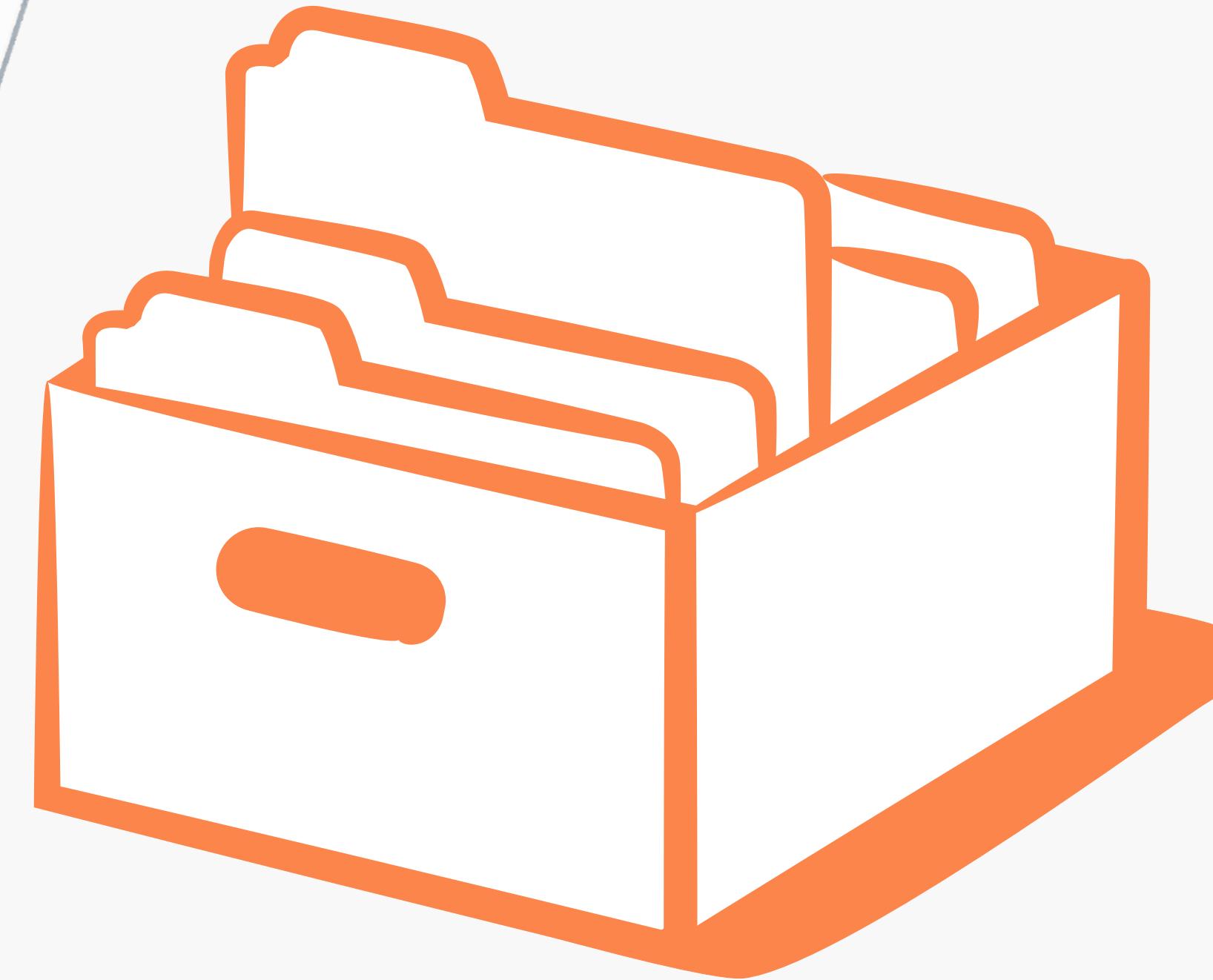
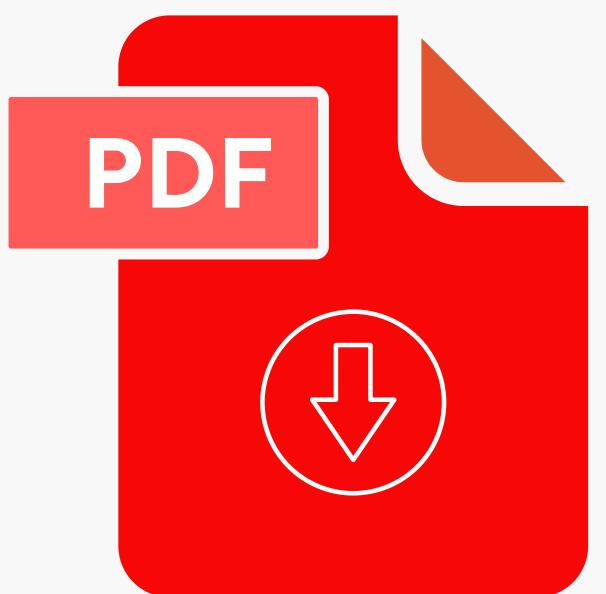




#semantic*Climate*
Transforming information into actionable knowledge

semantic Encyclopedia

- *Transforming Raw Data into Knowledge!*



Executive Summary

Climate-related illnesses, premature deaths, malnutrition in all its forms, and threats to **mental health and well-being** are increasing (*very high confidence*¹). Climate hazards are a growing driver of involuntary migration and displacement (*high confidence*) and are a contributing factor to violent conflict (*high confidence*). These impacts are often inter-connected, are unevenly distributed across and within societies, and will continue to be experienced inequitably due to differences in exposure and vulnerability (*very high confidence*). **Cascading** and compounding risks affecting health due to extreme weather events have been observed in all inhabited regions, and risks are expected to increase with further warming (*very high confidence*) {7.1.3, 7.1.4; Cross-Chapter Box COVID in Chapter 7; 7.2.1, 7.2.2, 7.2.3, 7.2.4, 7.3.1, 7.3.2, 7.3.3, 7.4.1, 7.4.4; Cross-Chapter Box HEALTH in Chapter 7; Cross-Chapter Box ILLNESS in Chapter 2}.

Since AR5, new evidence and awareness of current impacts and projected risks of climate change on health, well-being, migration and conflict have emerged, including greater evidence of the detrimental impacts of climate change on **mental health** (*very high confidence*). New international agreements were reached on climate change (**Paris Agreement**), disaster risk reduction (DRR) (Sendai Agreement), sustainable development (the **Sustainable Development Goals (SDGs)**), urbanisation (The New Urban Agenda), migration (Global Compact for Safe, Orderly and Regular Migration) and refugees (Global Compact on Refugees) that, if achieved, would reduce the impacts of climate change on health, well-being, migration and conflict (*very high confidence*). However the challenges with implementing these agreements are highlighted by the **coronavirus disease 2019 (COVID-19) pandemic**, which exposed systemic weaknesses at community, national and international levels in the ability of societies to anticipate and respond to global risks (*high confidence*). Incremental changes in policies and strategies have proven insufficient to reduce climate-related risks to health, well-being, migration and conflict, highlighting the value of more integrated approaches and frameworks for solutions across systems and sectors that are embodied in these new international agreements (*high confidence*) {7.1.3, 7.2.1, 7.4.1, 7.4.2, 7.4.3, 7.4.6; Cross-Chapter Box COVID in Chapter 7}.

mental health

Cascading

Paris Agreement

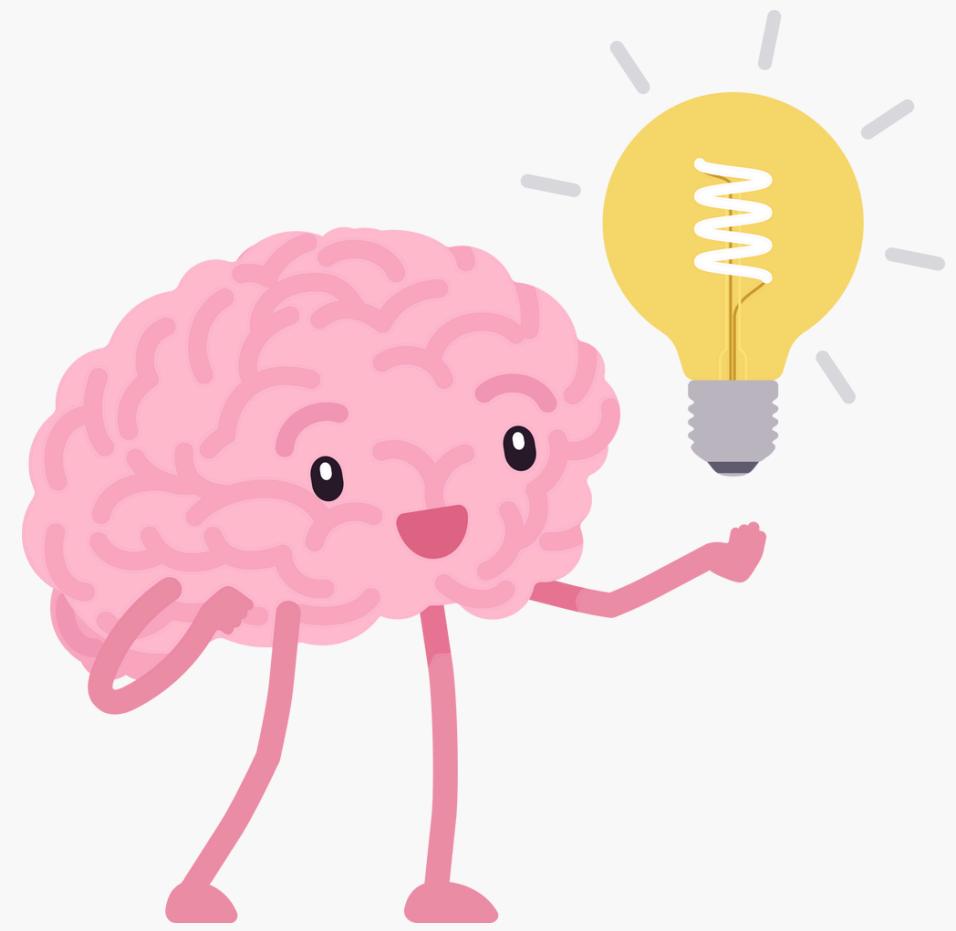
Sustainable Development Goals (SDGs)

coronavirus

pandemic

The Clock Keeps Ticking, The Search Never Ends





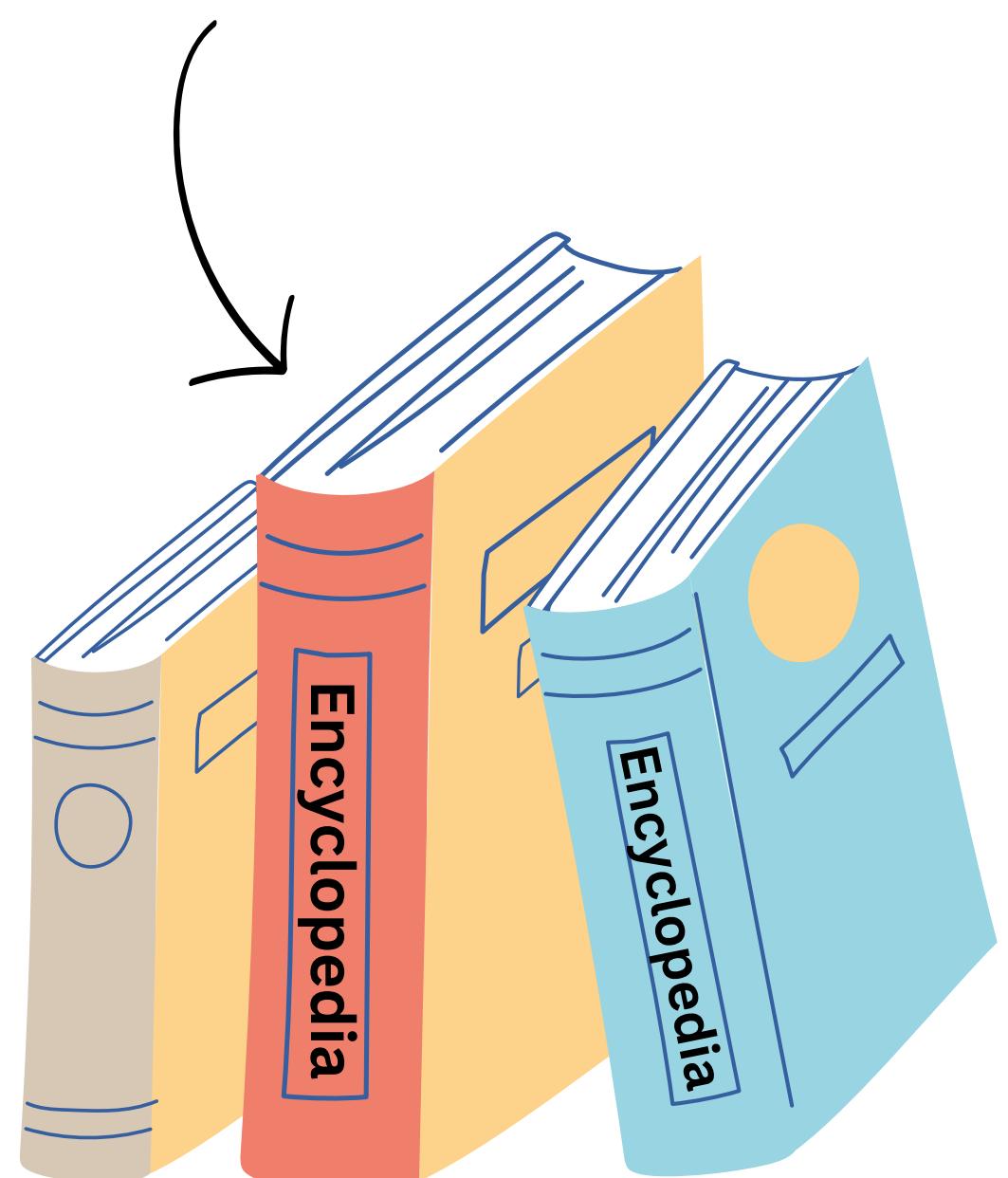
semantic Encyclopedia



Since AR5, new evidence and awareness of current impacts and projected risks of climate change on health, well-being, migration and conflict have emerged, including greater evidence of the detrimental impacts of climate change on **mental health** (*very high confidence*). New international agreements were reached on climate change (**Paris Agreement**), disaster risk reduction (DRR) (Sendai Agreement), sustainable development (the **Sustainable Development Goals (SDGs)**), urbanisation (The New Urban Agenda), migration (Global Compact for Safe, Orderly and Regular Migration) and refugees (Global Compact on Refugees) that, if achieved, would reduce the impacts of climate change on health, well-being, migration and conflict (*very high confidence*). However, the challenges with implementing these agreements are highlighted by the **coronavirus** disease 2019 (COVID-19) **pandemic**, which exposed systemic weaknesses at community, national and international levels in the ability of societies to anticipate and respond to global risks (*high confidence*). Incremental changes in policies and strategies have proven insufficient to reduce climate-related risks to health, well-being, migration and conflict, highlighting the value of more integrated approaches and frameworks for solutions across systems and sectors that are embodied in these new international agreements (*high confidence*) {7.1.3, 7.2.1, 7.4.1, 7.4.2, 7.4.3, 7.4.6; Cross-Chapter Box COVID in Chapter 7}.

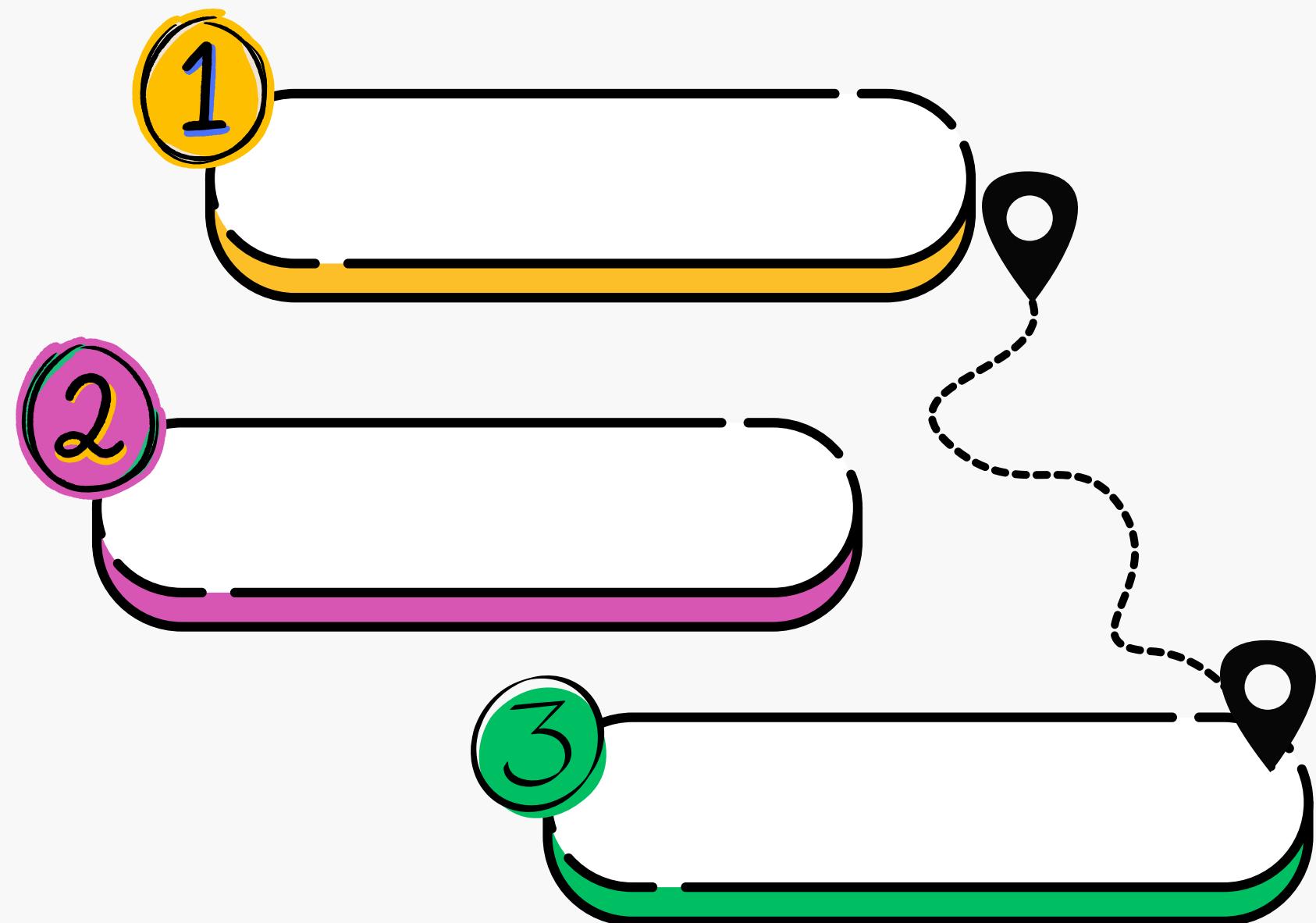
IPCC WG II Ch : 7

- 1 Paris Agreement
- 2 Sustainable Development Goals (SDGs)
- 3 coronavirus
- 4 pandemic
- 5 mental health



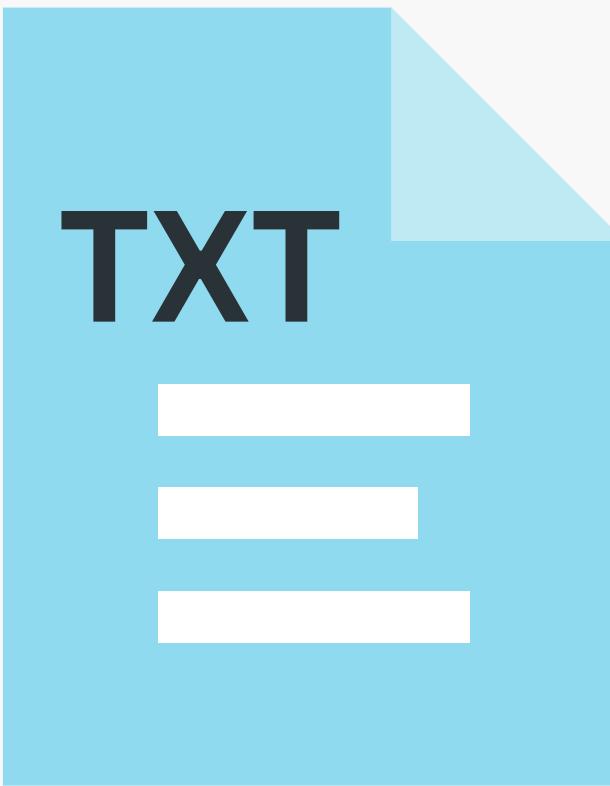
From Documents to Encyclopedia:

Stepwise Process





Convert HTML to Text



```

import os
import argparse
from bs4 import BeautifulSoup

def html_to_txt_folder(input_folder, output_folder):
    # Create output folder if it doesn't exist
    os.makedirs(output_folder, exist_ok=True)

    # Loop through all files in the input folder
    for filename in os.listdir(input_folder):
        if filename.endswith(".html"):
            input_path = os.path.join(input_folder, filename)
            output_filename = os.path.splitext(filename)[0] + ".txt"
            output_path = os.path.join(output_folder, output_filename)

            # Read and parse HTML
            with open(input_path, "r", encoding="utf-8") as f:
                soup = BeautifulSoup(f, "html.parser")
                text = soup.get_text()

            # Write plain text to new file
            with open(output_path, "w", encoding="utf-8") as f:
                f.write(text)

            print(f"Converted: {filename} → {output_filename}")

if __name__ == "__main__":
    parser = argparse.ArgumentParser(description="Convert HTML files to TXT files")
    parser.add_argument("-i", "--input", required=True, help="Input folder containing HTML files")
    parser.add_argument("-o", "--output", required=True, help="Output folder for TXT files")

    args = parser.parse_args()
    html_to_txt_folder(args.input, args.output)

```

Code for Converting HTML to TXT

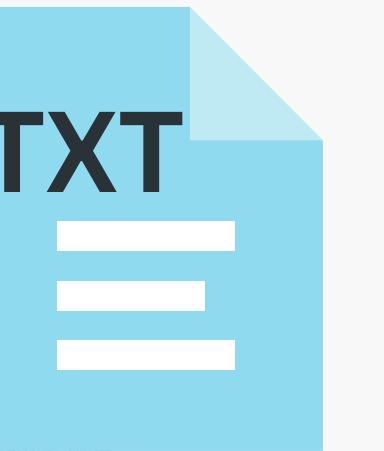
Converted TXT Files

Step 1: Converting HTML to TXT ...

Converted: chapter_11.html → chapter_11.txt
 Converted: chapter_07.html → chapter_07.txt
 Converted: chapter_06.html → chapter_06.txt
 Converted: chapter_10.html → chapter_10.txt
 Converted: chapter_17.html → chapter_17.txt
 Converted: chapter_01.html → chapter_01.txt
 Converted: chapter_16.html → chapter_16.txt
 Converted: chapter_03.html → chapter_03.txt
 Converted: chapter_15.html → chapter_15.txt
 Converted: chapter_14.html → chapter_14.txt
 Converted: chapter_02.html → chapter_02.txt
 Converted: chapter_18.html → chapter_18.txt
 Converted: chapter_05.html → chapter_05.txt
 Converted: chapter_13.html → chapter_13.txt
 Converted: chapter_09.html → chapter_09.txt
 Converted: chapter_08.html → chapter_08.txt
 Converted: chapter_12.html → chapter_12.txt
 Converted: chapter_04.html → chapter_04.txt



Keyphrases Extraction



Summary overall key messages Africa is one of the lowest contributors to greenhouse gas emissions to climate change, yet key development sectors have already experienced widespread losses and damage attributable to human-induced climate change, including biodiversity loss, water shortages, reduced food production, loss of lives and reduced economic growth (high confidence). {9.1.1, 9.1.6, 9.2, 9.10.2, 9.11.1, Box 9.4} Between 1.5°C and 2°C global warming—assuming localised and incremental adaptation—negative impacts are projected to become widespread and severe with reduced food production, reduced economic growth, increased inequality and poverty, biodiversity loss, increased human morbidity and mortality (high confidence). Limiting global warming to 1.5°C is expected to substantially reduce damages to African economies, agriculture, human health, and ecosystems compared to higher levels of global warming (high confidence). {9.2, 9.6.2, 9.8.2, 9.8.5, 9.10.2, 9.11.2} Exposure and vulnerability to climate change in Africa are multi-dimensional with socioeconomic, political and environmental factors intersecting (very high confidence). Africans are disproportionately employed in climate-exposed sectors: 55–62% of the sub-Saharan workforce is employed in agriculture and 95% of cropland is rainfed. In rural Africa, poor and female-headed households face greater livelihood risks from climate hazards. In urban areas, growing informal settlements without basic services increase the vulnerability of large populations to climate hazards, especially women, children and the elderly. {9.8.1, 9.9.1, 9.9.3, 9.11.4, Box 9.1} Adaptation in Africa has multiple benefits, and most assessed adaptation options have medium effectiveness at reducing risks for present-day global warming, but their efficacy at future warming levels is largely unknown (high confidence) . {9.3, 9.6.4, 9.8.3, 9.11.4} Enabling Climate Resilient Development Climate-related research in Africa faces severe data constraints, as well as inequities in funding and research leadership that reduces adaptive capacity (very high confidence). Many countries lack regularly reporting weather stations, and data access is often limited. From 1990–2019, research on Africa received just 3.8% of climate-related research funding globally: 78% of this funding for Africa went to EU and north American institutions and only 14.5% to African institutions. The number of climate research publications with locally based authors are among the lowest globally and research led by external researchers may focus less on local priorities. Increased funding for African partners, and direct control of research design and resources can provide more actionable insights on climate risks and adaptation options in Africa. {9.1.5, 9.4.5, 9.5.2} Adaptation generally is cost-effective, but annual finance flows targeting adaptation for Africa are billions of US dollars less than the lowest adaptation cost estimates for near-term climate change (high confidence). Finance has not targeted more vulnerable countries (high confidence). From 2014–2018 more finance commitments were debt than grants and excluding multilateral development banks—only 46% of commitments were disbursed (compared to 96% for other development projects). {9.4.1} Adaptation costs will rise rapidly with global warming (very high confidence). Increasing public and private finance flows by billions of dollars per year, increasing direct access to multilateral funds, strengthening project pipeline development and shifting more finance to project implementation would help realise transformative adaptation in Africa (high confidence). Concessional finance will be required for adaptation in low-income settings (high confidence). Aligning sovereign debt relief with climate goals could increase finance by redirecting debt-servicing payments to climate resilience. {9.4.1} Governance for climate resilient development includes long-term planning, all-of-government approaches, transboundary cooperation and benefit-sharing, development pathways that increase adaptation and mitigation and reduce inequality, and implementation of Nationally Determined Contributions (NDCs) (high confidence). {9.3.2, 9.4.2, 9.4.3} Cross-sectoral ‘nexus’ approaches provide significant opportunities for large co-benefits and/or avoided damages (very high confidence). For example, climate change adaptation benefits pandemic preparedness, ‘One Health’ approaches benefit human and ecosystem health, and ecosystem-based adaptation can deliver adaptation and emissions mitigation (high confidence). {9.4.3, 9.6.4, 9.11.5; Box 9.6} Without cross-sectoral, transboundary and long-term planning, adaptation and mitigation response options in one sector can become response risks, exacerbating impacts in other sectors and causing maladaptation (very high confidence). For example, maintaining indigenous forest benefits biodiversity and reduces greenhouse gas emissions, but afforestation—or wrongly targeting ancient grasslands and savannas for reforestation—harms water security and biodiversity, and can increase carbon loss to fire and drought. Planned hydropower projects may increase risk as rainfall changes impact water, energy and food security, exacerbating trade-offs between users, including across countries. {9.4.3, Boxes 9.3, 9.5} Robust legislative frameworks that develop or amend laws to mainstream climate change into their empowerment and planning provisions will facilitate effective design and implementation of climate change response options (high confidence). {9.4.4} Climate information services that are demand driven and context specific (e.g., for agriculture or health) combined with climate change literacy can be the difference between coping and informed adaptation responses (high confidence). Across 33 African countries, 23–66% of people are aware of human-caused climate change—with larger variation at sub-national scales (e.g., 5–71% among states in Nigeria). Climate change literacy increases with education level but is undermined by poverty, and literacy rates average 12.8% lower for women than men. Around 71% of Africans that are aware of climate change agree it should be stopped. Production of salient climate information in Africa is hindered by limited availability of and access to weather and climate data. {9.4.5, 9.5.1, 9.8.4, 9.10.3} Ecosystem-based adaptation can reduce climate risk while providing social, economic and environmental benefits (high confidence). Direct human dependence on ecosystem services



keyword	count
civil unrest	10
pandemic	10
GHG emissions	8
Hurricane Sandy	8
climate resilience	7
remittances	7
salmonellosis	7
PTSD	7
Solomon Islands	6

```

class KeyphraseExtractionPipeline(TokenClassificationPipeline):
    """
    A customized Hugging Face TokenClassificationPipeline
    for extracting keywords/keyphrases.
    """

    def __init__(self, model_name, *args, **kwargs):
        super().__init__(
            model=AutoModelForTokenClassification.from_pretrained(model_name),
            tokenizer=AutoTokenizer.from_pretrained(model_name),
            *args,
            **kwargs
        )

    def postprocess(self, *args, **kwargs):
        results = super().postprocess(
            *args,
            aggregation_strategy=AggregationStrategy.SIMPLE,
            **kwargs
        )

        return [result.get("word").strip() for result in results if result.get("word")]

```

CSV saved successfully: keywords/chapter_10_keywords.csv
Total unique keywords: 6257
Top 10 keywords: [('climate change', 396), ('Asia', 319), ('China', 240), ('India', 177), ('South Asia', 107), ('Bangladesh', 93), ('Climate Change', 82), ('Southeast Asia', 69), ('Philippines', 69), ('Central Asia', 60)]
Processing keyword extraction: chapter_11.txt ...
Total text chunks to process: 6207
First chunk preview: Chapter 11: Australasia | Climate Change 2022: Impacts, Adaptation and VulnerabilityChapter 11: AustralasiaCoordinating Lead Authors: Judy Lawrence (New Zealand) and Brendan Mackey (Australia)Lead Aut...
Hardware accelerator e.g. GPU is available in the environment, but no `device` argument is passed to the `Pipeline` object. Model will be on CPU.
Extracting keywords: 100%|██████████| 388/388 [10:00<00:00, 1.55s/it]
CSV saved successfully: keywords/chapter_11_keywords.csv
Total unique keywords: 4900
Top 10 keywords: [('New Zealand', 282), ('Australia', 280), ('climate change', 212), ('medium confidence', 57), ('sea level rise', 47), ('Climate Change', 41), ('climate change adaptation', 38), ('Climate change', 37), ('drought', 34), ('adaptation', 31)]
Processing keyword extraction: chapter_05.txt ...
Total text chunks to process: 12581
First chunk preview: Chapter 5: Food, Fibre and Other Ecosystem Products | Climate Change 2022: Impacts, Adaptation and VulnerabilityChapter 5: Food, Fibre and Other Ecosystem ProductsCoordinating Lead Author: Rachel Bez...
Hardware accelerator e.g. GPU is available in the environment, but no `device` argument is passed to the `Pipeline` object. Model will be on CPU.
Extracting keywords: 100%|██████████| 787/787 [55:42<00:00, 4.25s/it]
CSV saved successfully: keywords/chapter_05_keywords.csv
Total unique keywords: 8784
Top 10 keywords: [('climate change', 670), ('food security', 177), ('medium confidence', 111), ('Climate change', 100), ('aquaculture', 84), ('agriculture', 80), ('ecosystem services', 76), ('Climate Change', 73), ('Africa', 65), ('drought', 63)]

Code for Keyphrase Extraction

Running the Code in the Terminal

Extracted Keyphrases →

 chapter_01_keywords.csv
 chapter_02_keywords.csv
 chapter_03_keywords.csv
 chapter_04_keywords.csv
 chapter_05_keywords.csv
 chapter_06_keywords.csv
 chapter_07_keywords.csv
 chapter_08_keywords.csv
 chapter_09_keywords.csv
 chapter_10_keywords.csv
 chapter_11_keywords.csv
 chapter_12_keywords.csv
 chapter_13_keywords.csv
 chapter_14_keywords.csv
 chapter_15_keywords.csv
 chapter_16_keywords.csv
 chapter_17_keywords.csv
 chapter_18_keywords.csv



Creating a semantic Encyclopedia



petermr/amilib



Python library of `ami` software especially NLP,
HTML, downloading and related convenience
utilities

5

Contributors

3

Used by

14

Discussions

2

Stars

2

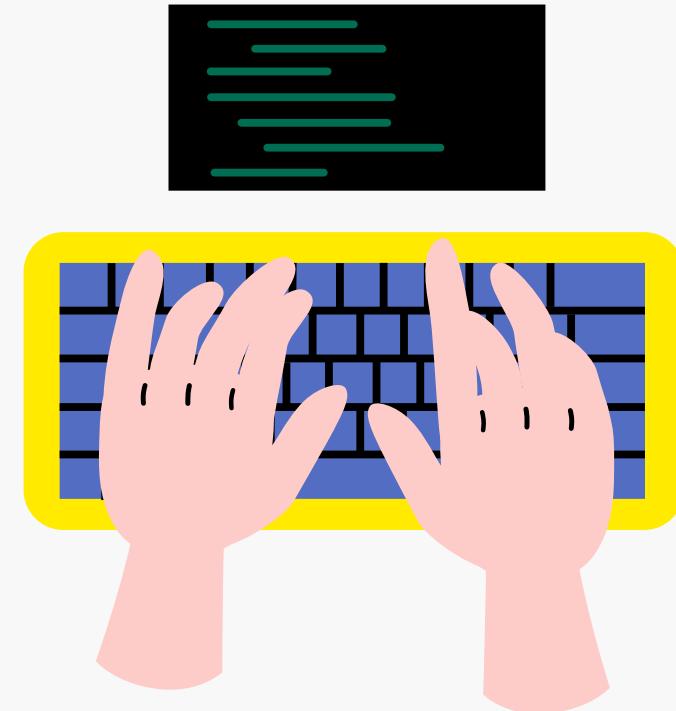
Forks



petermr/amilib: Python library of `ami` software especially NLP, HTML, downloading and related...

Python library of `ami` software especially NLP, HTML, downloading and related convenience utilities - petermr/amilib

GitHub



```
pip install amilib==1.0.0a2
```

(Installation)



```
amilib DICT --words wordlist.txt --description wikipedia --dict output_dict_path.html --figures --operation create
```

(command to create dictionary)



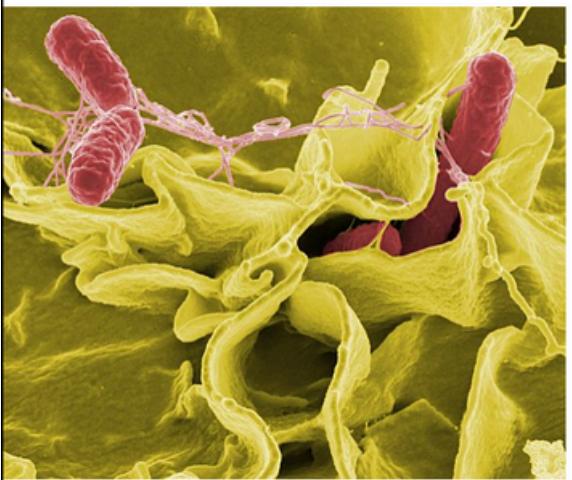
```
INFO amix.py:505:***** amilib VERSION 1.0.0a2 *****
INFO:amilib.amix:***** amilib VERSION 1.0.0a2 *****
INFO amix.py:167:command: ['DICT', '--words', 'wordlist.txt', '--description', 'wikipedia', '--dict', 'output_dict_path.html', '--figures', '--operation', 'create']
INFO:amilib.amix:command: ['DICT', '--words', 'wordlist.txt', '--description', 'wikipedia', '--dict', 'output_dict_path.html', '--figures', '--operation', 'create']
DEBUG dict_args.py:53:creating HTML Args
DEBUG:amilib.dict_args:creating HTML Args
DEBUG dict_args.py:53:creating HTML Args
DEBUG:amilib.dict_args:creating HTML Args
DEBUG dict_args.py:124:DICT process_args {'version': False, 'command': 'DICT', 'description': 'wikipedia', 'dict': 'output_dict_path.html', 'figures': [], 'operation': 'create', 'title': 'unknown', 'validate': False, 'words': 'wordlist.txt'}
DEBUG:amilib.dict_args:DICT process_args {'version': False, 'command': 'DICT', 'description': 'wikipedia', 'dict': 'output_dict_path.html', 'figures': [], 'operation': 'create', 'title': 'unknown', 'validate': False, 'words': 'wordlist.txt'}
INFO dict_args.py:253:creating dictionary from ['civil unrest', 'pandemic', 'GHG emissions']...
INFO:amilib.dict args:creatina dictionarv from ['civil unrest'. 'pandemic'. 'GHG emissions']...
```

Generated Encyclopedia (HTML)

```
<> output_dict_path.html > 📁 html
1   <html><head><style>div[role] {border:solid 1px; margin:1px;}</style><base h
2   </p>
3   <div title="figure"><figure class="mw-default-size" typeof="mw:File/Thumb"
4   </div><p></p></div><div name="pandemic" term="pandemic" role="ami_entry"><
5   </p><div title="figure"><figure typeof="mw:File/Thumb"><a href="/wiki/File:
6   </div><p></p></div><div name="GHG emissions" term="GHG emissions" role="am
7   </p><div title="figure"><figure class="mw-default-size" typeof="mw:File/Th
8   </div><p></p></div><div name="Hurricane Sandy" term="Hurricane Sandy" role
9   </p><div title="figure"><a href="/wiki/File:Sandy_2012-10-25_0320Z_(cropp
10  </p><div title="figure"><figure class="mw-default-size" typeof="mw:File/Th
11  </div><p></p></div><div name="remittances" term="remittances" role="ami_en
12  </p><div title="figure"><figure class="mw-default-size" typeof="mw:File/Th
13  </div><p></p></div><div name="salmonelliosis" term="salmonelliosis" role="am
```

search term: salmonellosis [Wikipedia Page](#)

Salmonellosis is a [symptomatic infection](#) caused by [bacteria](#) of the *Salmonella* type.^[1] It is the most common disease to be known as **food poisoning** (though the name refers to [food-borne illness](#) in general). These are defined as disease [output_dict_path](#) or infectious or toxic in nature, caused by agents that enter the body through the ingestion of food. In humans, the most common symptoms are [diarrhea](#), [fever](#), [abdominal cramps](#), and [vomiting](#).^[1] Symptoms typically occur between 12 hours and 36 hours after exposure, and last from two to seven days.^[4] Occasionally more significant disease can result in [dehydration](#).^[4] The old, young, and others with a [weakened immune system](#) are more likely to develop severe disease.^[1] Specific types of *Salmonella* can result in [typhoid fever](#) or [paratyphoid fever](#).^{[1][3]} [Typhoid fever](#) and [paratyphoid fever](#) are specific types of salmonellosis, known collectively as [enteric fever](#),^[6] and are, respectively, caused by *salmonella typhi* and *paratyphi* bacteria, which are only found in humans.^[7] Most commonly, salmonellosis cases arise from *salmonella* bacteria from animals,^[8] and chicken is a major source for these infections.^[9]



search term: PTSD [Wikipedia Page](#)

Post-traumatic stress disorder (PTSD)^[b] is a [mental disorder](#) that develops from experiencing a [traumatic](#) event, such as [sexual assault](#), [domestic violence](#), [child abuse](#), [warfare](#) and its associated traumas, natural disaster, bereavement, [traffic collision](#), or other threats on a person's life or well-being.^{[1][7][8]} Symptoms may include disturbing thoughts, feelings, or [dreams](#) related to the events, mental or physical [distress](#) to [trauma](#)-related cues, attempts to avoid trauma-related cues, alterations in the way a person thinks and feels, and an increase in the [fight-or-flight response](#).^{[1][4][9]} These symptoms last for more than a month after the event and can include triggers such as [misophonia](#).^[1] Young children are less likely to show distress, but instead may express their memories through [play](#).^{[10][11]}



Service members use [art to relieve PTSD symptoms](#).

How It Can Be Applied?



Content Indexing and Search



Chapter 7

Health, Wellbeing and the Changing Structure of Communities

Executive Summary

Climate-related illnesses, premature deaths, malnutrition in all its forms, and threats to mental health and well-being are increasing (*very high confidence*). Climate hazards are a growing driver of involuntary migration and displacement (*high confidence*) and are a contributing factor to violent conflict (*high confidence*). These impacts are often inter-connected, are unevenly distributed across and within societies, and will continue to be experienced inequitably due to differences in exposure and vulnerability (*very high confidence*). Cascading and compounding risks affecting health due to extreme weather events have been observed in all inhabited regions, and risks are expected to increase with further warming (*very high confidence*) (7.1.3, 7.1.4; Cross-Chapter Box COVID in Chapter 7; 7.2.1, 7.2.2, 7.2.3, 7.2.4, 7.3.1, 7.3.2, 7.3.3, 7.4.1, 7.4.4; Cross-Chapter Box HEALTH in Chapter 7; Cross-Chapter Box ILLNESS in Chapter 2).

Since AR5, new evidence and awareness of current impacts and projected risks of climate change on health, well-being, migration and conflict have emerged, including greater evidence of the detrimental impacts of climate change on mental health (*very high confidence*). New international agreements were reached on climate change (Paris Agreement), disaster risk reduction (DRR) (Sendai Agreement), sustainable development (the Sustainable Development Goals (SDGs)), urbanisation (The New Urban Agenda), migration (Global Compact for Safe, Orderly and Regular Migration) and refugees (Global Compact on Refugees) that, if achieved, would reduce the impacts of climate change on health, well-being, migration and conflict (*very high confidence*). However, the challenges with implementing these agreements are highlighted by the coronavirus disease 2019 (COVID-19) pandemic, which exposed systemic weaknesses at community, national and international levels in the ability of societies to anticipate and respond to global risks (*high confidence*). Incremental changes in policies and strategies have proven insufficient to reduce climate-related risks to health, well-being, migration and conflict, highlighting the value of more integrated approaches and frameworks for solutions across systems and sectors that are embodied in these new international agreements (*high confidence*) (7.1.3, 7.2.1, 7.4.1, 7.4.2, 7.4.3, 7.4.6; Cross-Chapter Box COVID in Chapter 7).

With proactive, timely and effective adaptation, many risks for human health and well-being could be reduced and some potentially avoided (*very high confidence*). A significant adaptation gap exists for human health and well-being and for responses to disaster risks (*very high confidence*). Nationally Determined Contributions (NDCs) to the Paris Agreement from low- and middle-income countries identify health as a priority concern. National planning on health and climate change is advancing, but the comprehensiveness of strategies and plans need to be strengthened, and implementing action on key health and climate change priorities remains challenging (*high confidence*). Multi-sectoral collaboration on health and climate change policy is evident, with uneven progress, and financial support for health

adaptation is only 0.5% of dispersed multi-lateral climate finance projects (*high confidence*). This level of investment is insufficient to protect population health and health systems from most climate-sensitive health risks (*very high confidence*) (7.4.1, 7.4.2, 7.4.3).

Climate resilient development has a strong potential to generate substantial co-benefits for health and well-being and to reduce risks of involuntary displacement and conflict (*very high confidence*). Sustainable and climate resilient development that decreases exposure, vulnerability and societal inequity and that increases timely and effective adaptation and mitigation more broadly, has the potential to reduce but not necessarily eliminate climate change impacts on health, well-being, involuntary migration and conflict (*high confidence*). This development includes greenhouse gas (GHG) emission reductions through clean energy and transport; climate-resilient urban planning; sustainable food systems that lead to healthier diets; universal access to healthcare and social protection systems; wide-scale, proactive adaptive capacity building for climate change; and achievement of the SDGs (*very high confidence*). Meeting the objectives of the Global Compact for Safe, Orderly, and Regular Migration and building inclusive and integrative approaches to climate-resilient peace would help prevent health risks related to migration and conflict (*high agreement, medium evidence*). The net global financial gains from these co-benefits to health and well-being, including avoided hospitalisations, morbidity and premature deaths, exceed the financial costs of mitigation (*high confidence*). As an example of co-benefits, the financial value of health benefits from improved air quality alone is projected to be greater than the costs of meeting the goals of the Paris Agreement (*high confidence*). All pathways to climate resilient development, including those for the health and healthcare systems, involve balancing complex synergies and trade-offs between development pathways and the options that underpin climate mitigation and adaptation pathways (*very high confidence*) (7.4.6; Cross-Chapter Box HEALTH in Chapter 7; Cross-Chapter Box MIGRATE in Chapter 7).

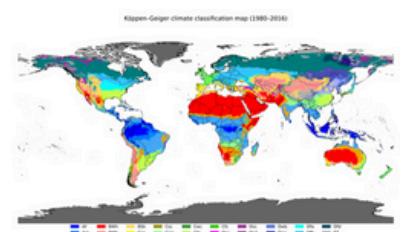
Key transformations are needed to facilitate climate resilient development pathways (CRDPs) for health, well-being, migration and conflict avoidance (*high confidence*). The transformational changes will be more effective if they are responsive to regional, local and Indigenous knowledge and consider the many dimensions of vulnerability, including those that are gender- and age-specific (*high confidence*). A key pathway towards climate resilience in the health sector is universal access to primary healthcare, including mental healthcare (*high confidence*). Investments in other sectors and systems that improve upon the social determinants of health have the potential to reduce vulnerability to climate-related health risks (*high confidence*). Links between climate risks, adaptation, migration and labour markets highlight the value of providing better mobility options as part of transformative change (*medium confidence*). Strong governance and gender-sensitive approaches to natural resource management can reduce the risk of inter-group conflict in climate-disrupted areas (*medium confidence*).

Q climate

Found on 128 pages

< > Done

Climate is the long-term weather pattern in a region, typically averaged over 30 years.^{[1][2]} More rigorously, it is the mean and variability of meteorological variables over time. Some of the meteorological variables that are commonly measured are temperature, humidity, atmospheric pressure, wind, and precipitation. In a broader sense, climate is the long-term state of a region's atmosphere, hydrosphere, cryosphere, lithosphere, and biosphere and the interactions between them.^[1] The climate of a location is affected by its latitude, longitude, and elevation.^[3]



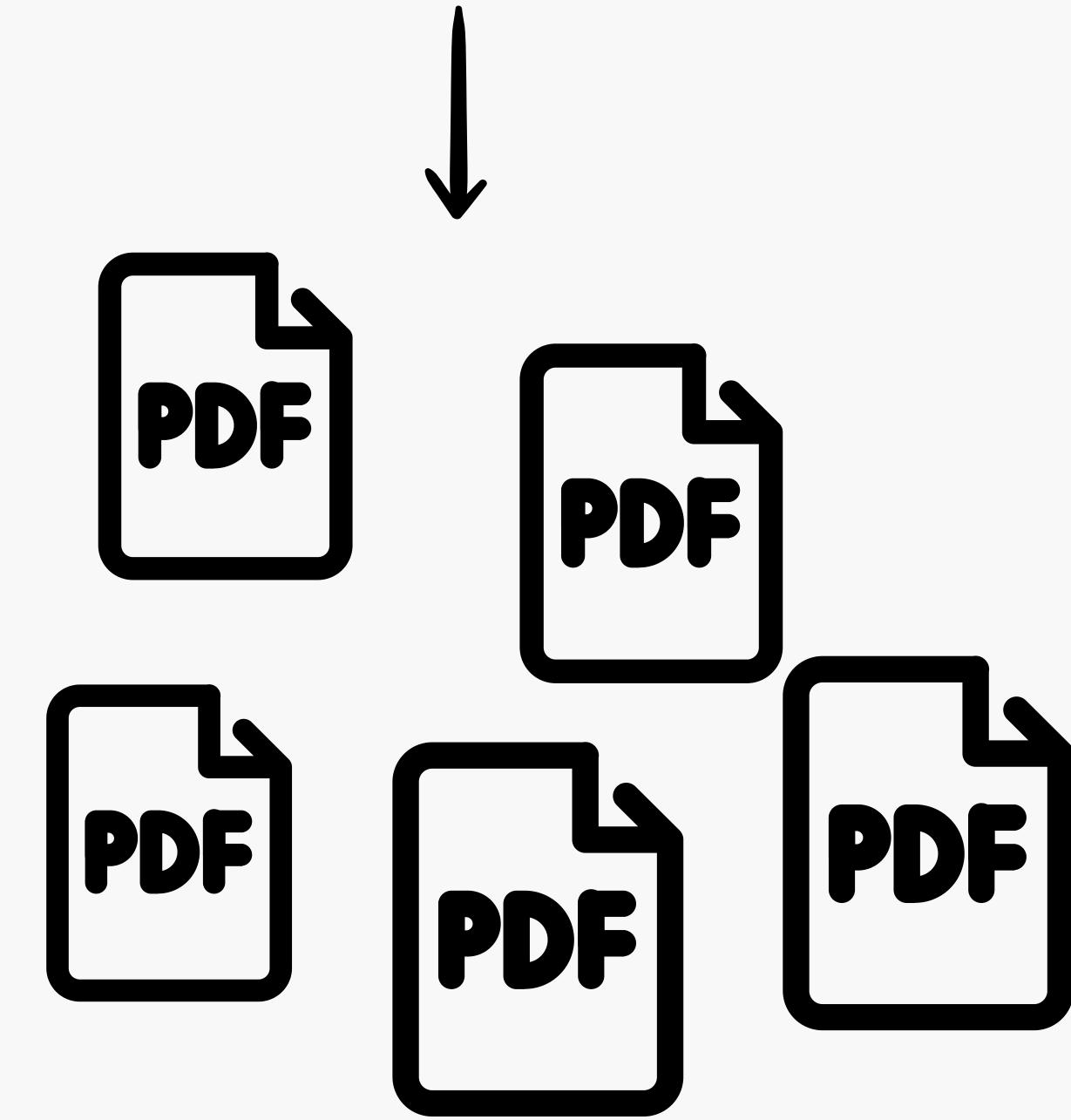
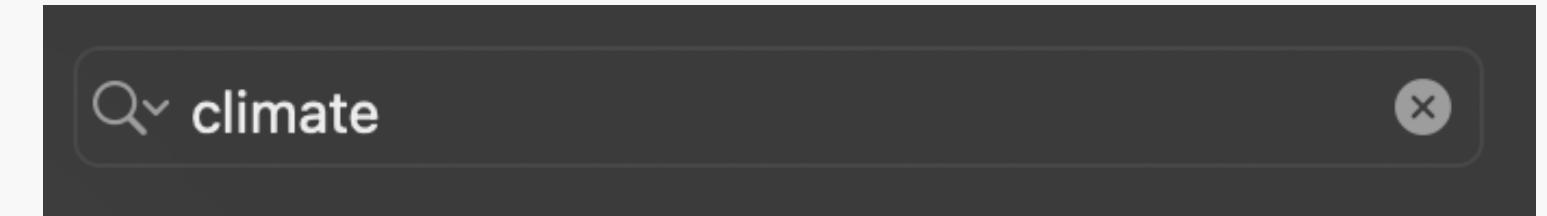
Worldwide Köppen climate classifications

¹ In this Report, the following summary terms are used to describe the available evidence: limited, medium, or robust; and for the degree of agreement: low, medium, or high. A level of confidence is expressed using five qualifiers: very low, low, medium, high, and very high, and typeset in italics, e.g., *medium confidence*. For a given evidence and agreement statement, different confidence levels can be assigned, but increasing levels of evidence and degrees of agreement are correlated with increasing confidence.

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