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Leibniz-Institut für
Agrartechnik und Bioökonomie

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Gefördert durch
Bundesministerium
für Ernährung
und Landwirtschaft
aufgrund eines Beschlusses
des Deutschen Bundestages

# The Intergovernmental Panel on Climate Change (IPCC)

**Prof. UZ Dr. Barbara Amon**

FAO LEAP Conference for LAC, 5th and 6th Nov 2024

Leibniz
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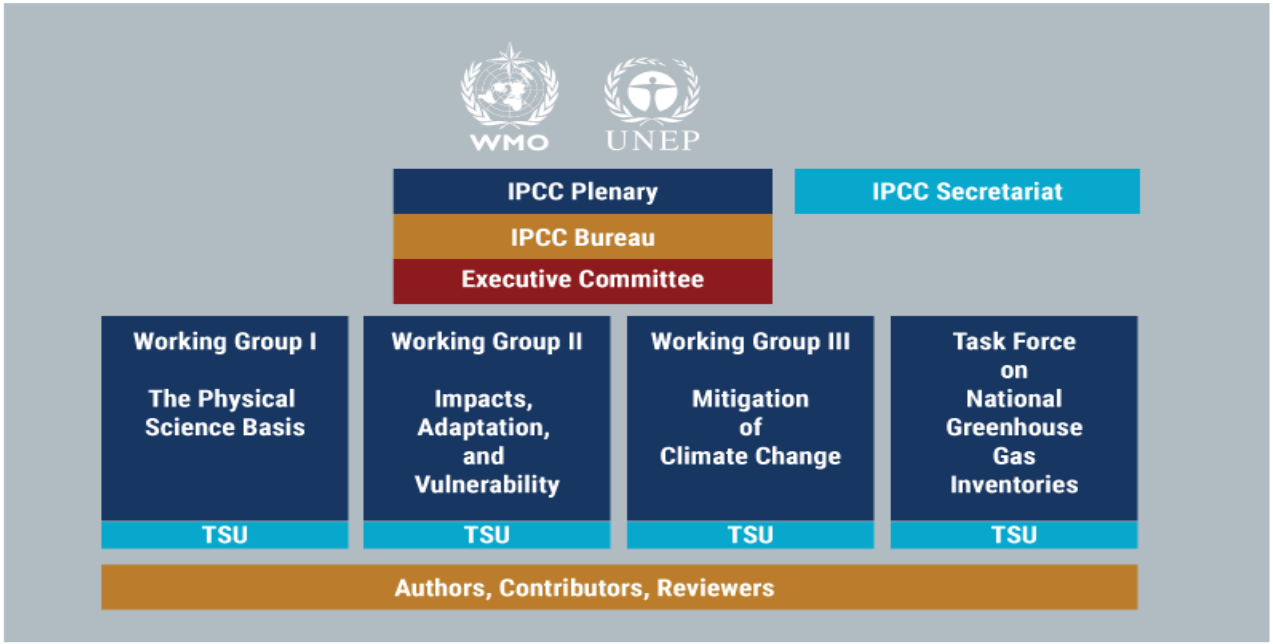
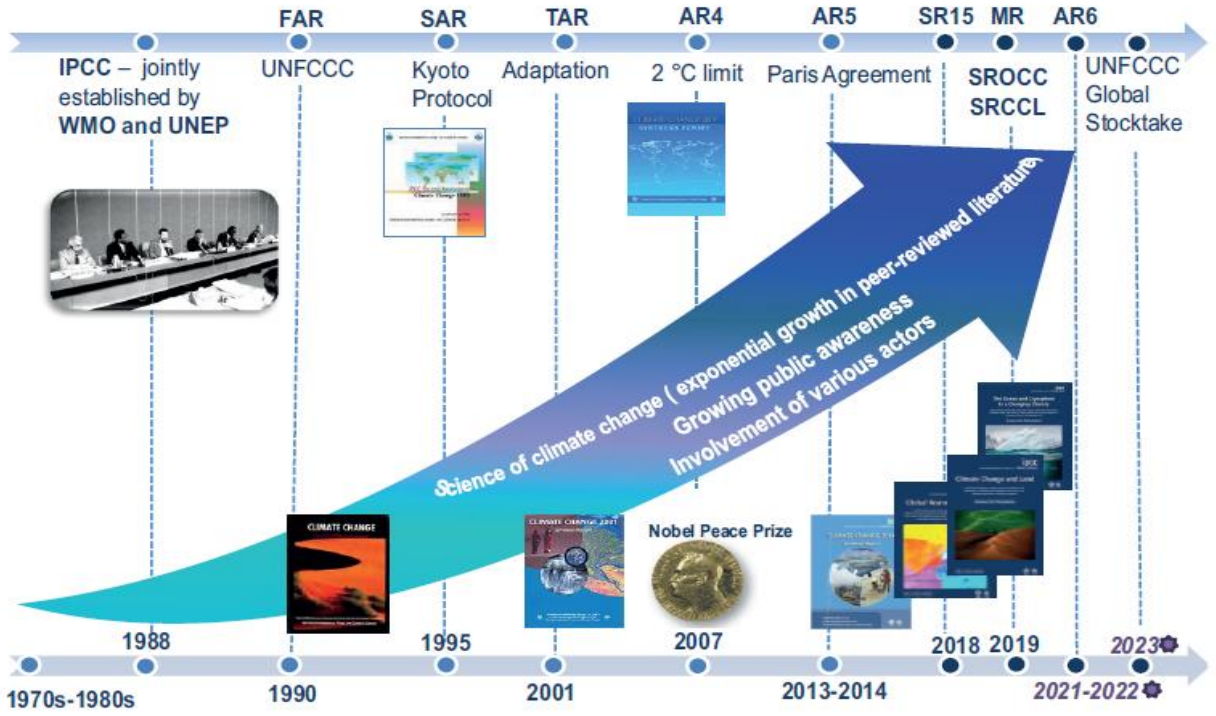
# A brief insight into the work of the IPCC

## Structure of IPCC

The following graphic depicts the structure of the IPCC:



# IPCC contribution to climate science and policy making

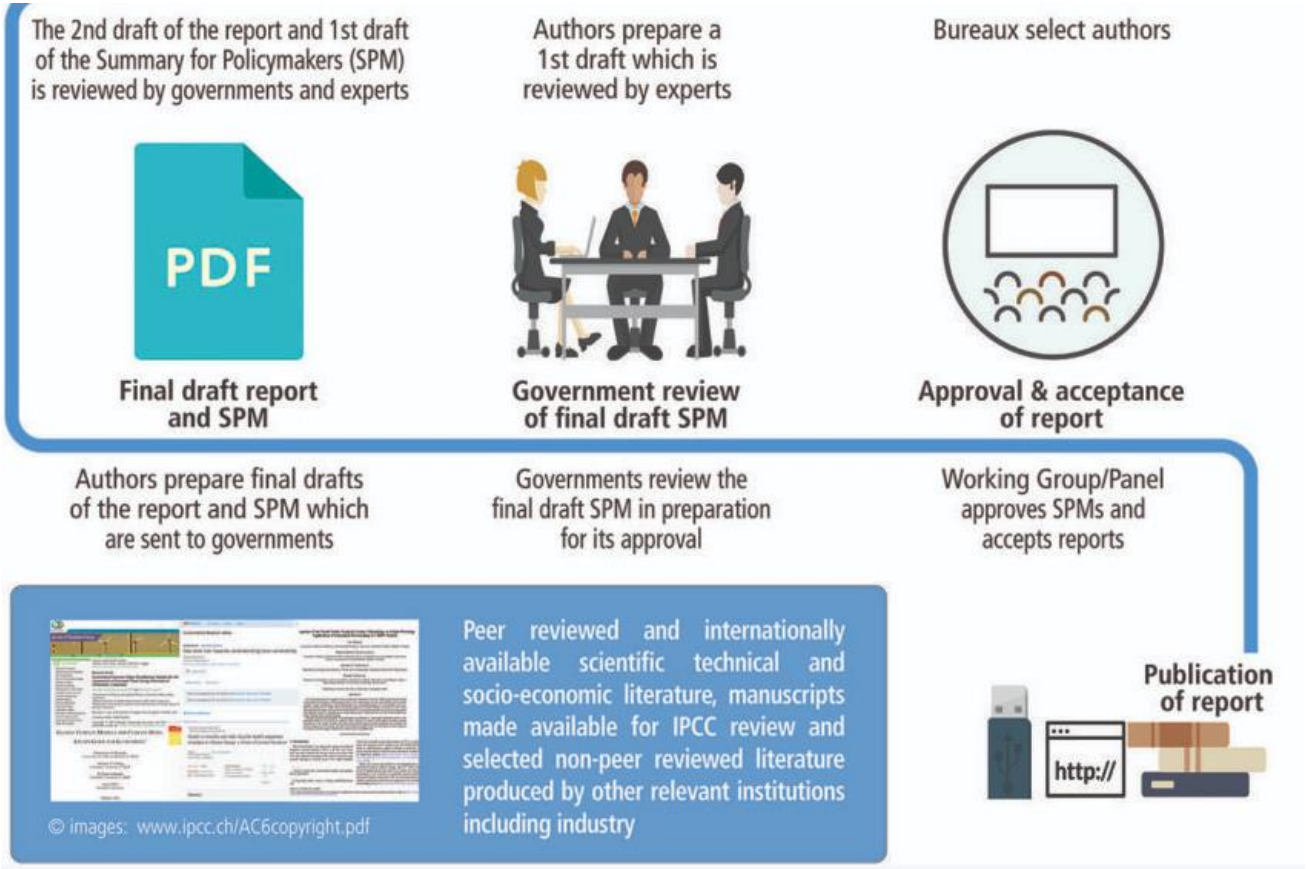



These dates are subject to change.

# Preparation of Reports


https://www.ipcc.ch/about/preparingreports/

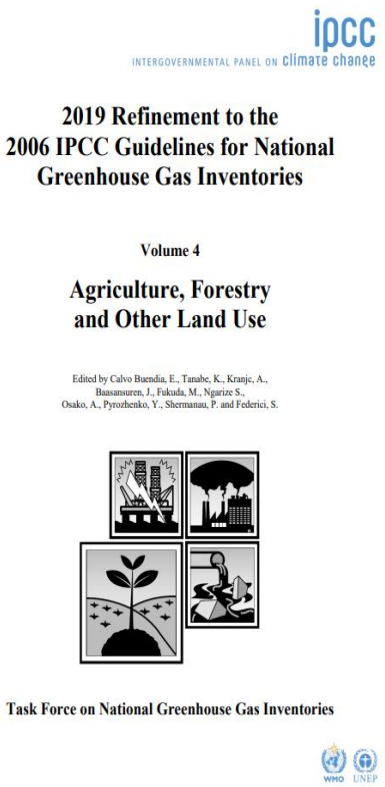
# Preparation of Reports



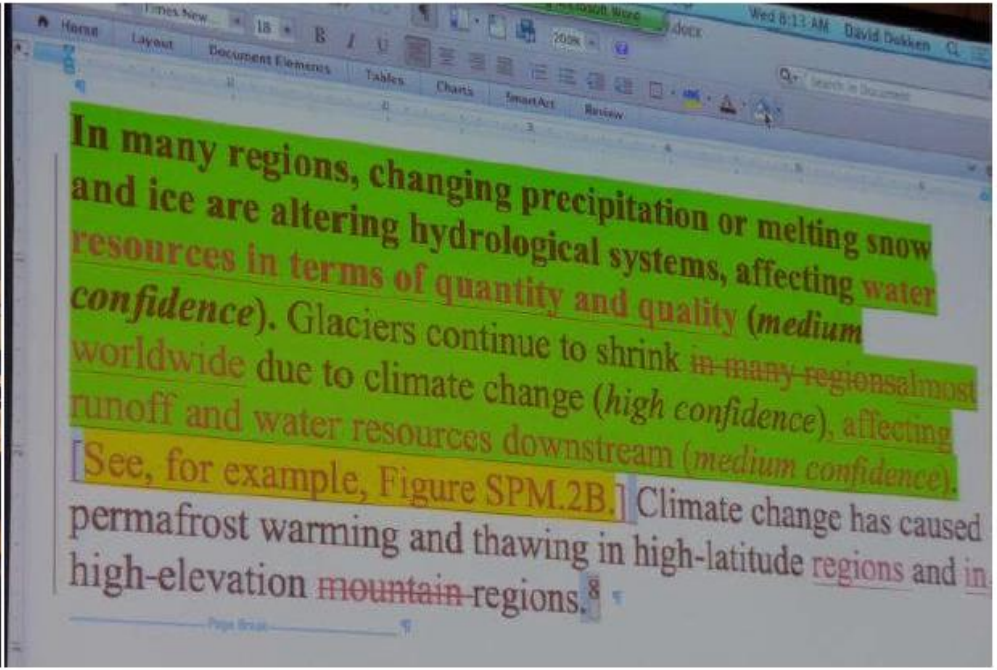

https://www.ipcc.ch/about/preparingreports/

# 2019 refinement of 2006 IPCC guidelines

- To provide an updated and sound scientific basis for the improvement of national GHG inventories
- Updated default values of emission factors
- Additional/updated information and guidance



# IPCC 2019 refinement - adoption

# IPCC 2019 refinement - adoption

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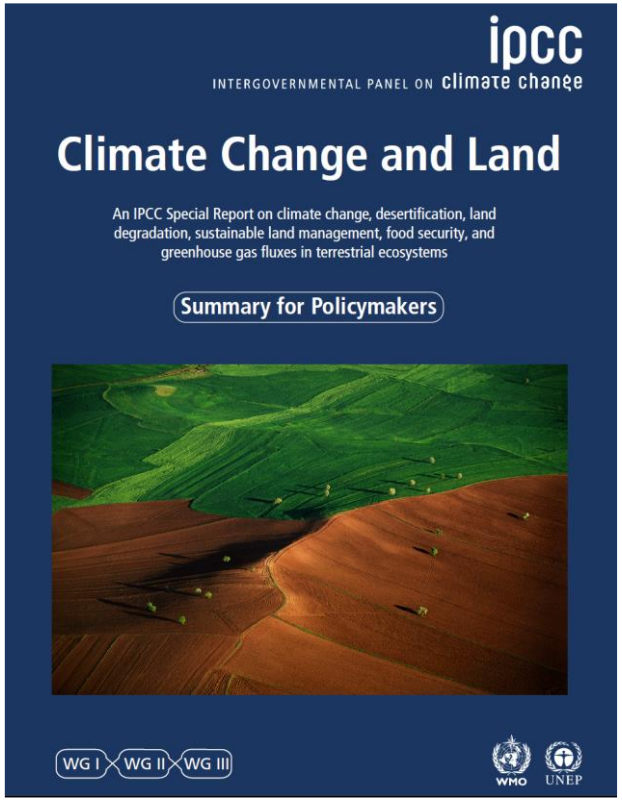
# Relevance of Agriculture for GHG mitigation




„All assessed modelled pathways that limit warming to 1.5ºC or well below 2°C require land-based mitigation and land-use change.“

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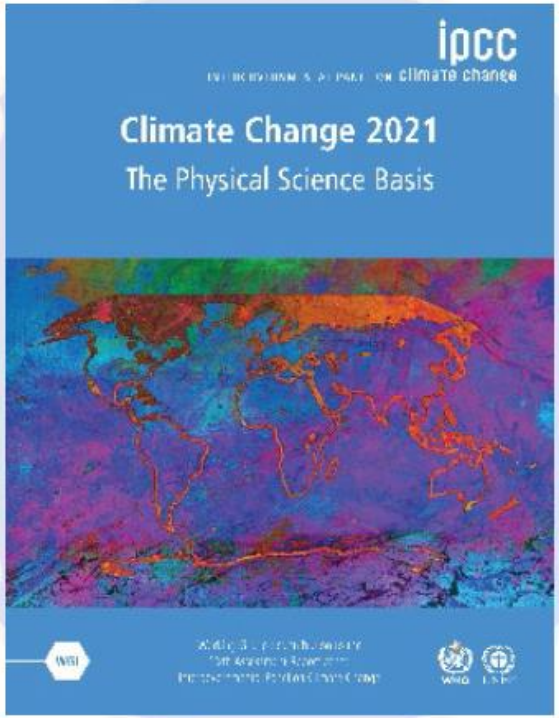
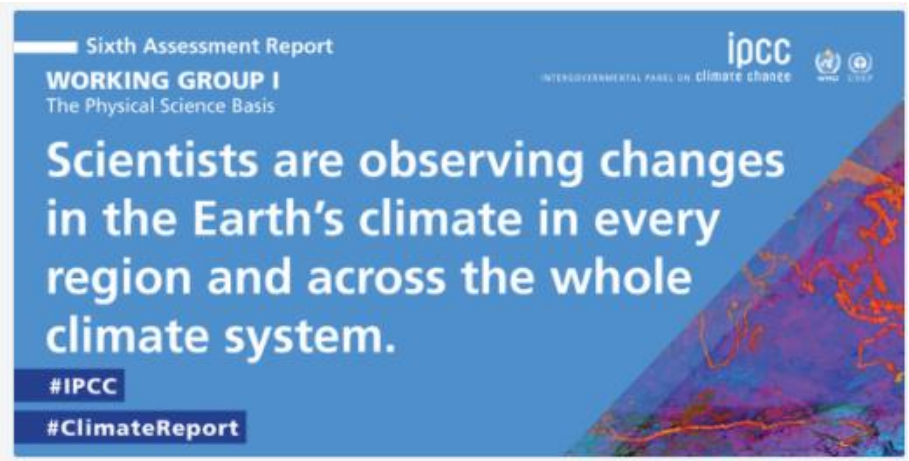
# IPCC - Sixth Assessment Report - WG I "The Physical Science Basis"

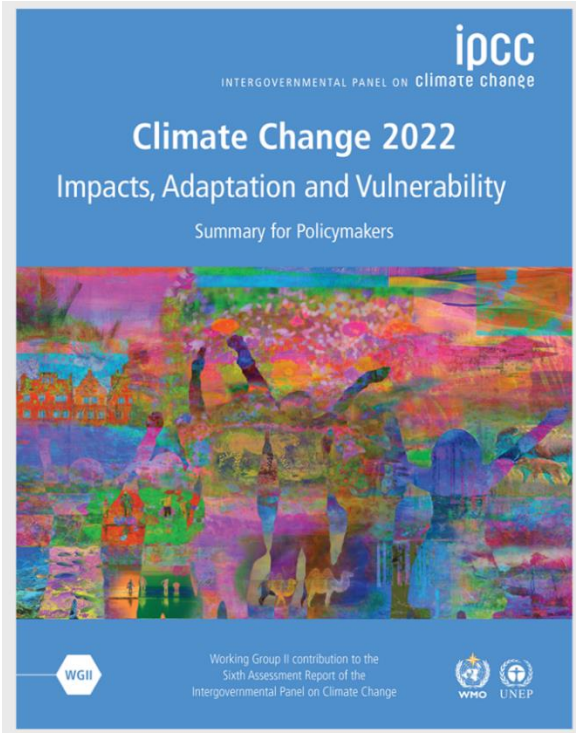



Published on 09.08.2021

# IPCC - Sixth Assessment Report - WG I "The Physical Science Basis" - Key messages

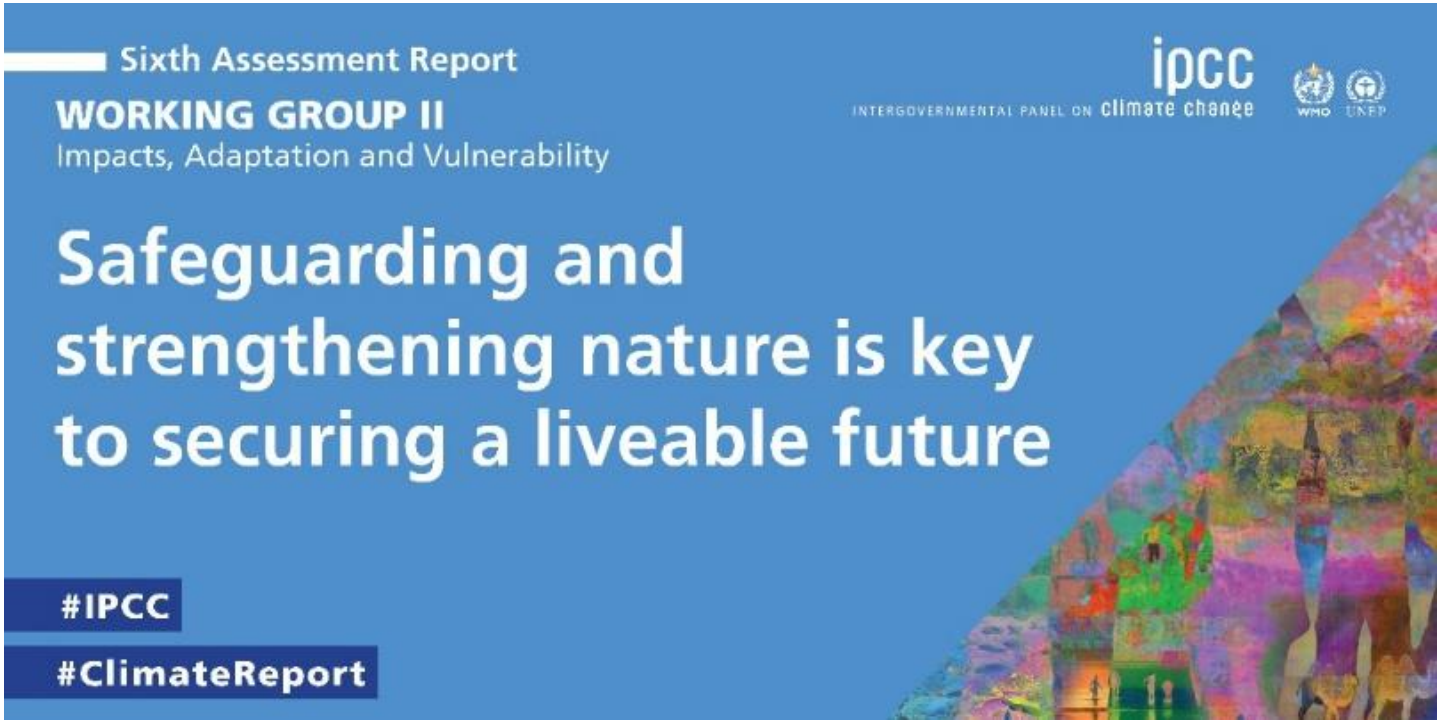



# IPCC - Sixth Assessment Report - WG II “Impacts, Adaptation and Vulnerability”

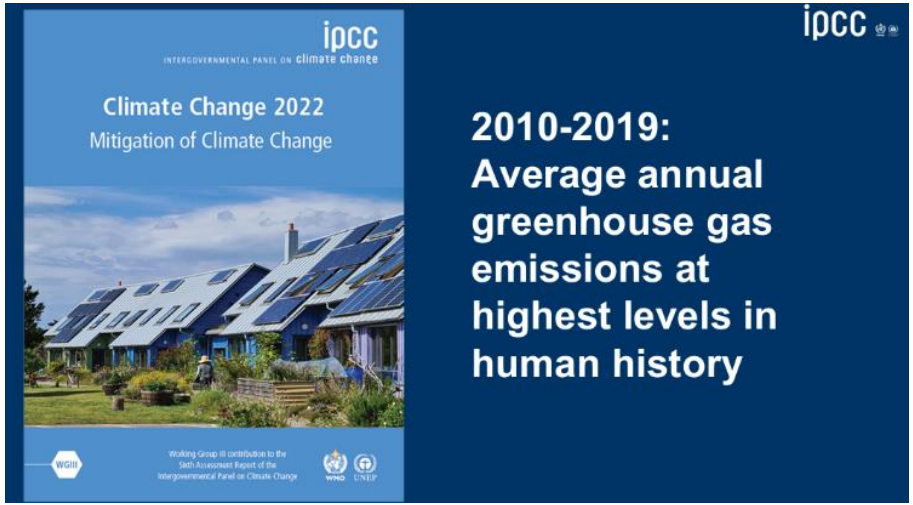


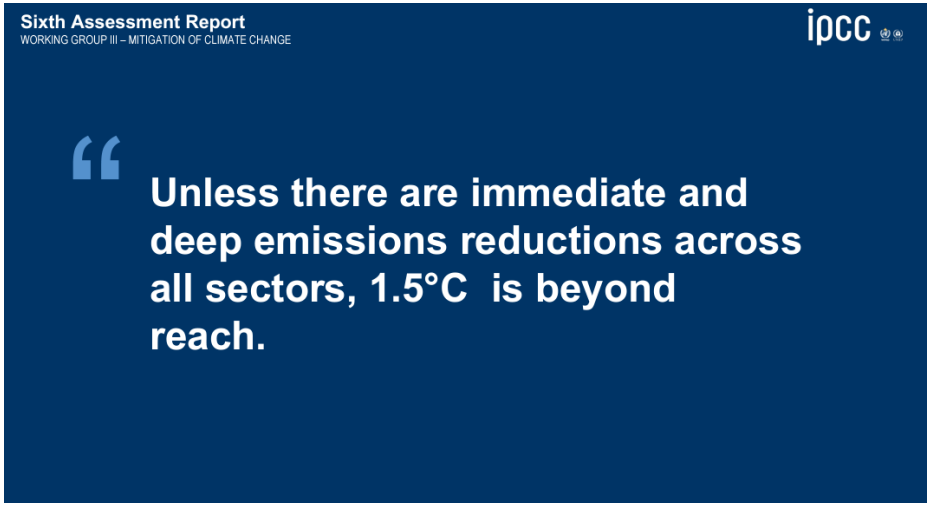

Published on 28.02.2022

# IPCC - Sixth Assessment Report - WG II "Impacts, Adaptation and Vulnerability"



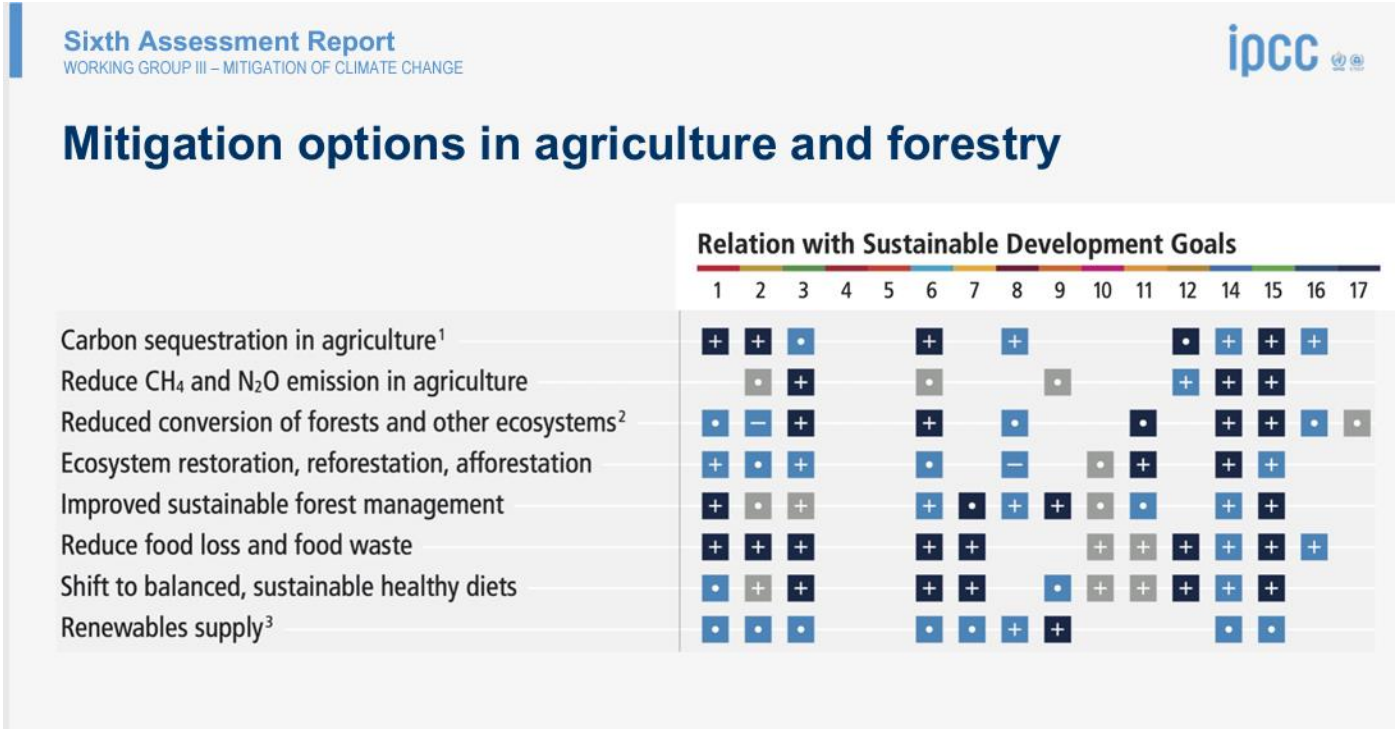
# IPCC - Sixth Assessment Report - WG III “Mitigation of Climate Change”




Published on 04.04.2022

# IPCC - Sixth Assessment Report - WG III "Mitigation of Climate Change"




Published on 04.04.2022

# Why Emission Inventories are Important?

1. There is an urgent need for emission reductions
2. Mitigation measures must show up in the inventory

Emission reductions must also be reflected in the inventories!

# Inventory preparation

Emission = Emission Factor X Activity Data

New science

National activities
e.g. surveys

# IPCC Tier 1, 2 and 3 methodology for emission estimations

- **Tier 1**
  - Simple to use
  - Default EFs and other parameters provided
  - Less accurate
- **Tier 2**
  - More complex
  - More country specific activity data
  - More accurate
- **Tier 3**
  - More complex
  - Detailed models and factors
  - More accurate

# Inventory preparation – activity data

- Detailed data on a wide range of activities are required:

  feed intake, animal diet, animal performance, manure production, housing systems, storage outside housing systems, grazing, manure processing, manure application, etc.
- Optimum: acquire data by regular national surveys

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MELS

# MELS – Mitigating Emissions from Livestock Systems

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agresearch
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INRAE

eagasc
Agriculture and Food Development Authority

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University College Cork, Ireland

UNIVERSITY OF ZIELONA GÓRA

INIA

FACCE ERA-GAS

ERA-NET SUSAN

ICT AGRI era-net

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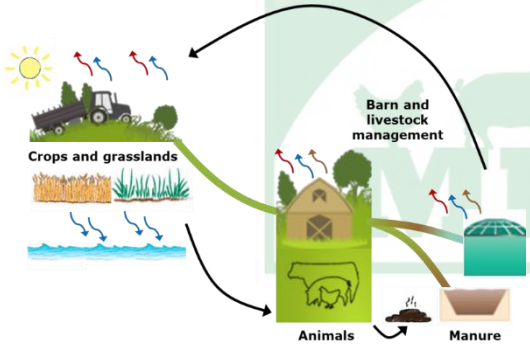
*Farming for a Better Climate (FarmClim).* Design of an Inter- and Transdisciplinary Research Project Aiming to Address the "Science-Policy Gap"

Editorial | Published: 13 October 2020

**Evidence synthesis for sustainability**

*Nature Sustainability* **3**, 771(2020) |

Adapted from Gerber et al. (2013)




Functional relationships

Data collation

Stakeholder interaction

United Nations Climate Change

UNECE

Farm-scale GHG DSS

United Nations Climate Change

IPCC

LRTAP

Improved national inventories

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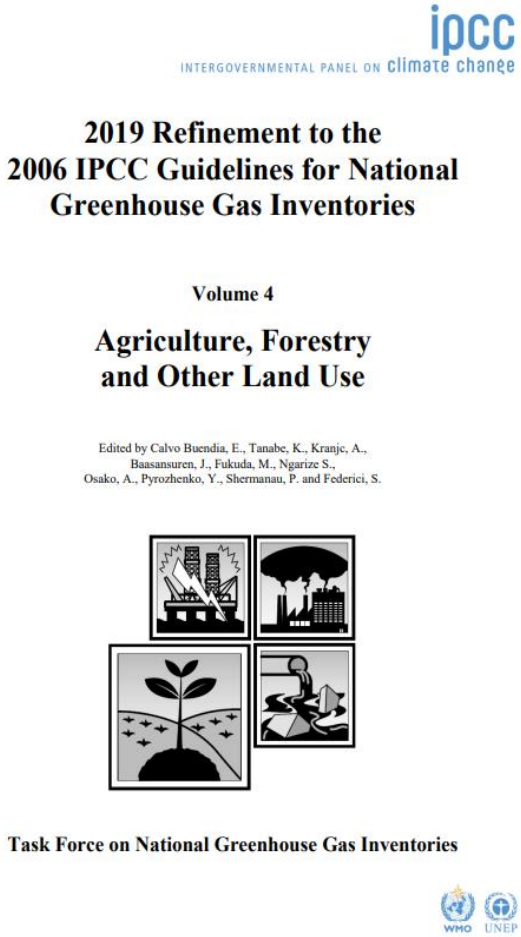


# High quality inventories are an essential instrument for implementing emission mitigation measures

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