



GOVERNMENT OF  
WESTERN AUSTRALIA

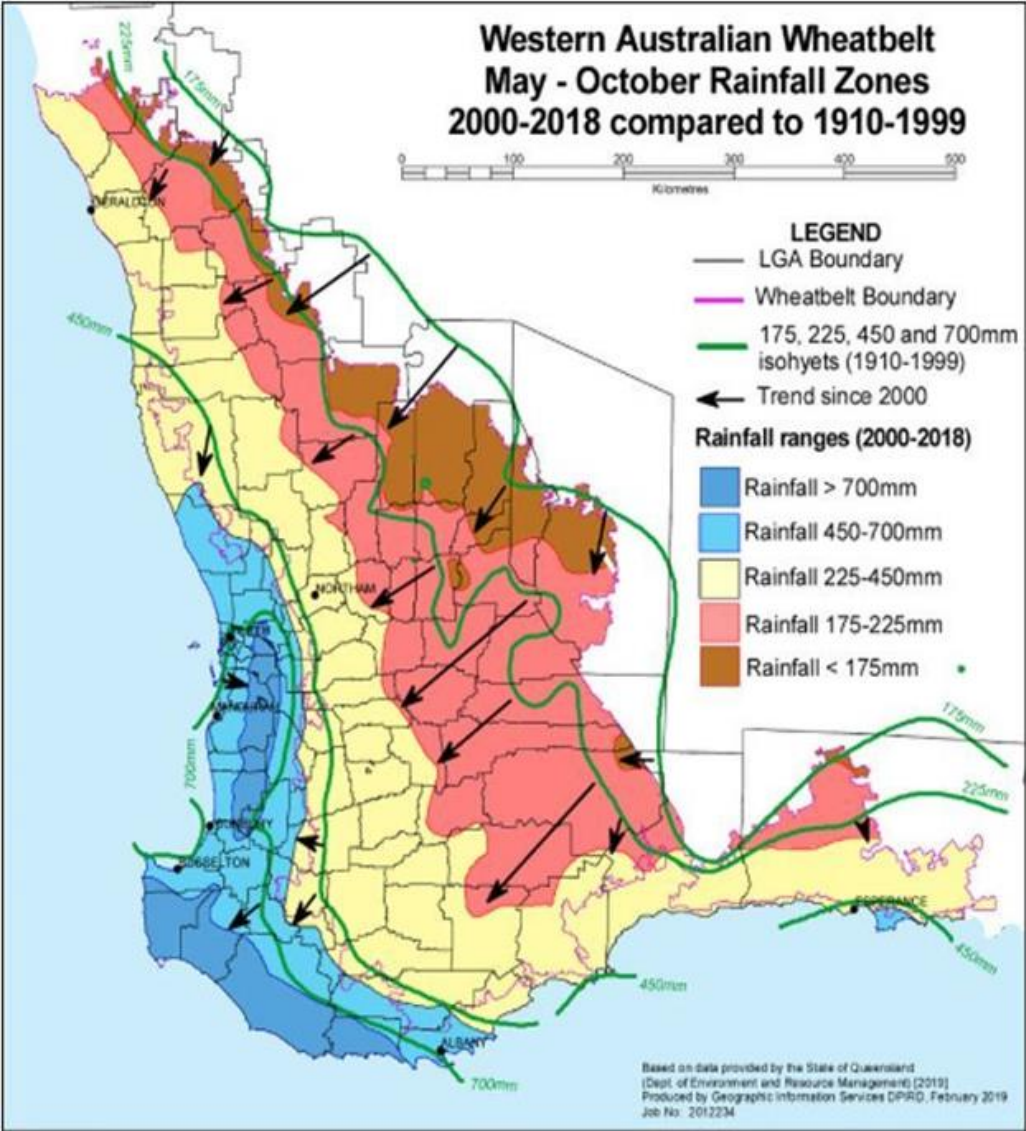
# CLIMATE RESILIENCE FUND Forum - Muresk

**Hon Alannah MacTiernan MLC**

Minister for Regional Development;  
Agriculture and Food; Hydrogen Industry

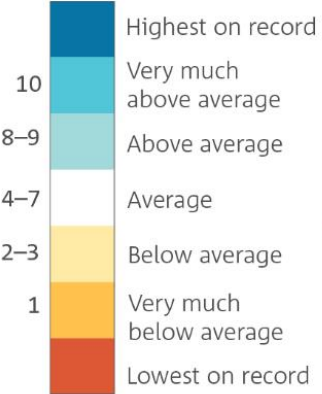
JUNE 9, 2021

# CLIMATE CHANGE

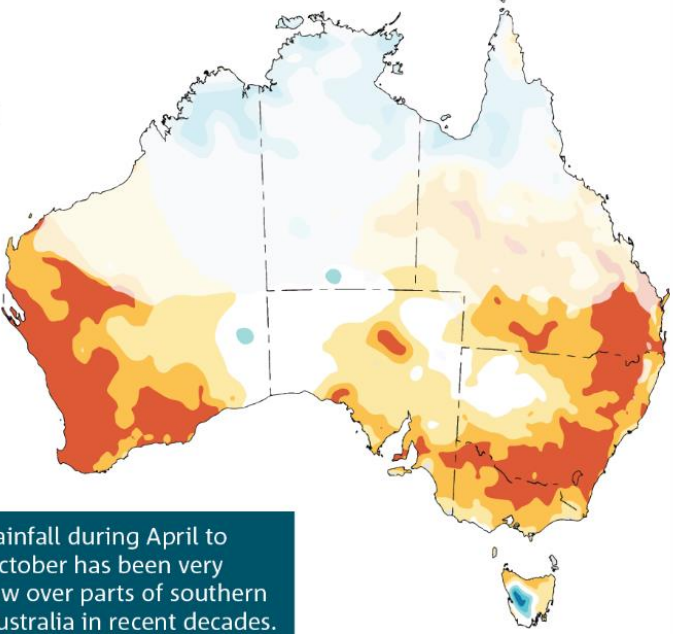


# LAND CLEARING EFFECTS ON CLIMATE

## Rainfall decile ranges

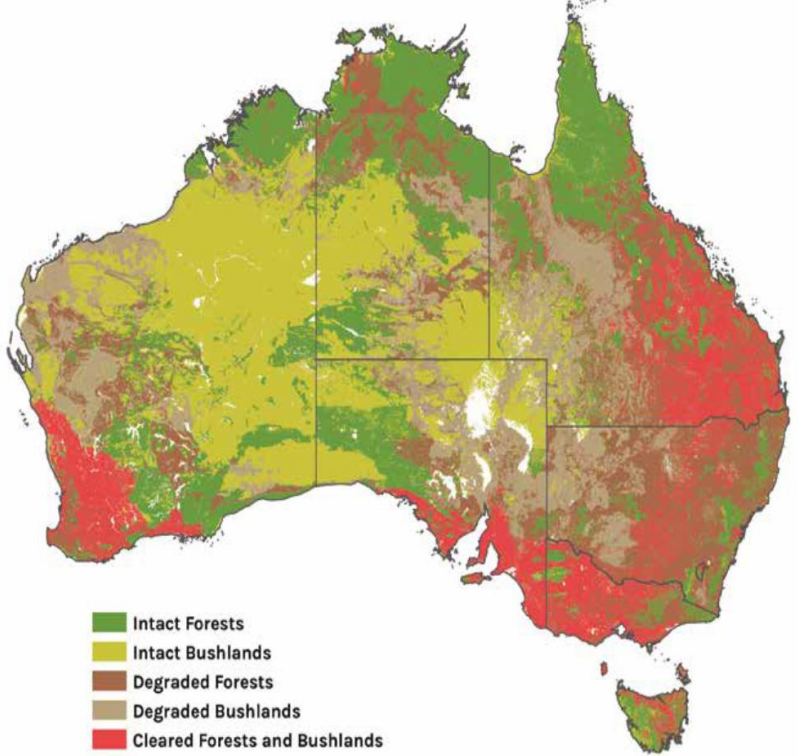


Rainfall during April to October has been very low over parts of southern Australia in recent decades.



April to October rainfall deciles for the last 20 years (2000–19).

A decile map shows where rainfall is above average, average or below average for the recent period, in comparison with the entire rainfall record from 1900. Areas across northern and central Australia that receive less than 40 per cent of their annual rainfall during April to October are faded.

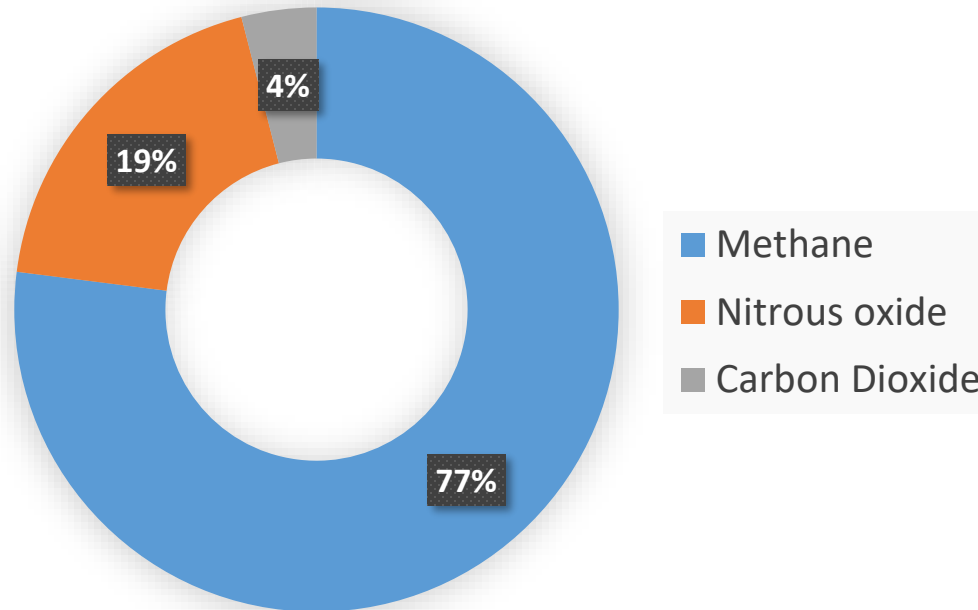


This map shows the conditions of Australia's forests and bushlands compared with pre-European arrival (1750).

*Data from Australia's Vegetation Assets, States and Transitions (VAST) version 216, and Australia's Native Vegetation Information System (NVIS).*

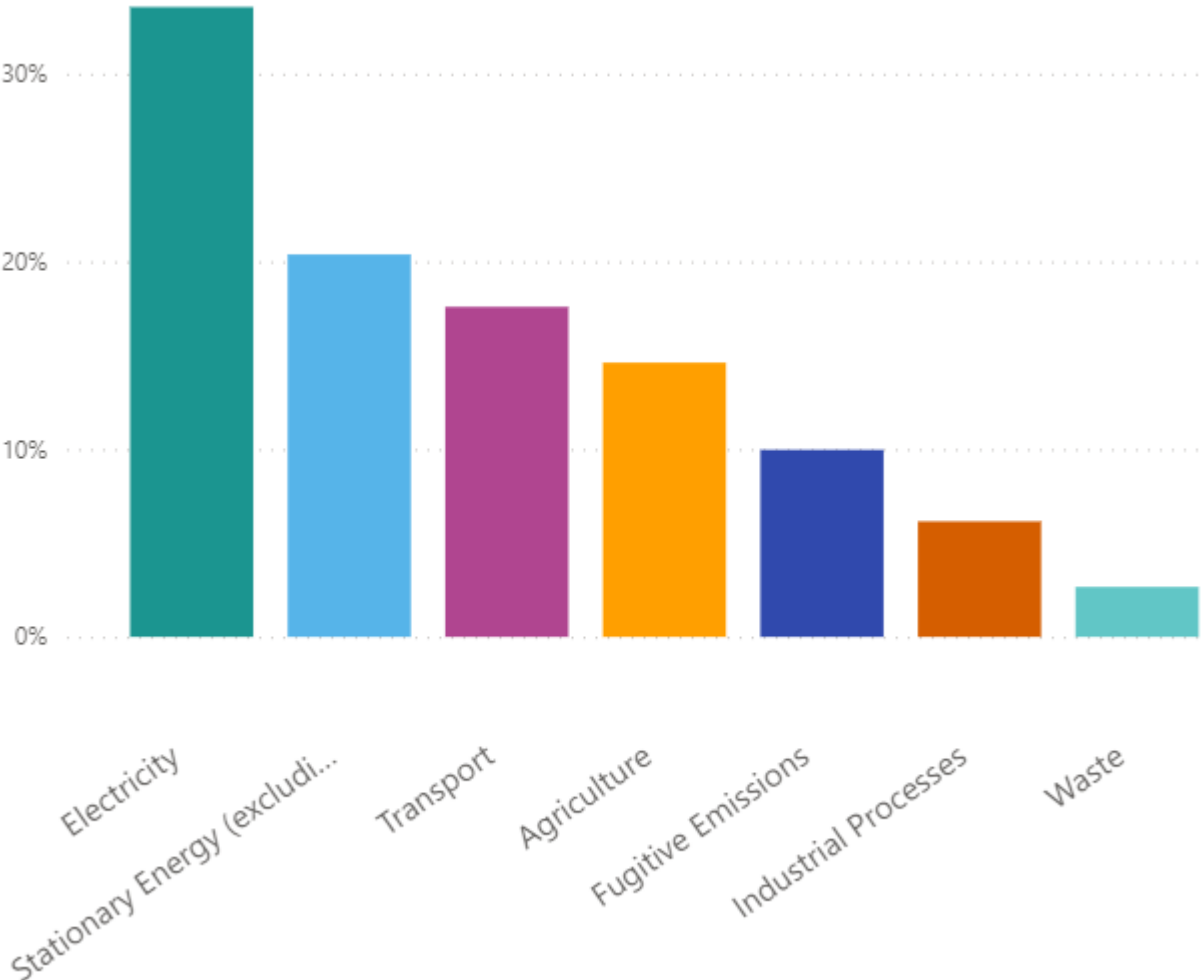
# GREENHOUSE GAS

## Agricultural Emissions by Type



! Avoiding the release of 1 tonne of nitrous oxide would be eligible to create nearly 300 carbon dioxide equivalent offset units !

# AUSTRALIA GREENHOUSE GAS INVENTORY

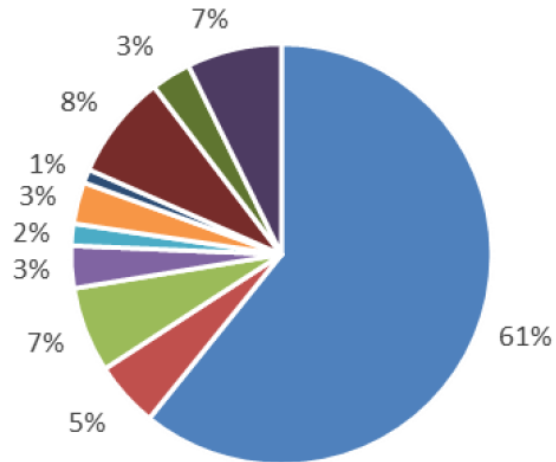


This graph shows annual emissions by sector from 1990 to 2020. Source: [www.industry.gov.au/](http://www.industry.gov.au/)



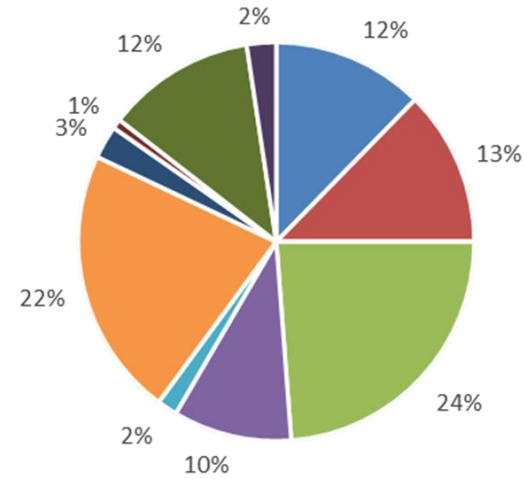
# FULL CARBON FOOTPRINT

## LIVESTOCK ENTERPRISE EMISSIONS



- Flock Enteric Methane
- Purchased Livestock
- Supplementary Feed (Purchased)
- Electricity
- Herbicide & Insecticide
- Flock Manure
- Crop nitrous oxide
- Diesel
- Fertiliser
- Other Services

## CROPPING ENTERPRISE EMISSIONS



- N2O Field Emissions
- Super Potash
- Machinery Embedded Emissions
- Electricity
- Other Fertiliser (K-Till Extra)
- Potassium Sulphate
- Freight
- Urea
- Herbicides + Pesticides
- Diesel

# MARKETS AND INVESTMENT

## Showcasing the State's Environment, Social and Governance Credentials

WATC, in partnership with the Departments of the Premier and Cabinet, Water and Environmental Regulation, and Treasury, have recently launched an inter-government initiative to prepare a 'marketable output' to investors in WA Government bonds that articulates the State Government's environment, social and governance (ESG) credentials. A working group with representatives from a broad range of State Government agencies has been formed to bring together details of relevant policy initiatives and infrastructure development that demonstrate the State's commitment to achieving positive ESG outcomes – expressed succinctly within the United Nations Sustainable Development Goals (SDG) framework.

The initiative is a precursor to WATC coordinating participation across government to establish a Sustainability Bond Framework, which would provide the State Government with the ability to consider financing eligible projects with clear environmental and/or social outcome objectives through the issuance of "Sustainability Bonds" – in accordance with internationally established protocols. Whilst the development of a Sustainability Bond Framework has already been approved by the Treasurer as part of WATC's strategic development plan, it was considered important to first clearly demonstrate to investors in WA Government debt, with reference to an established international framework such as the United Nations SDG, that achieving positive ESG outcomes is at the forefront of the WA Government's policy agenda, budgetary process and interaction with business.

Taking this course of action also reflects a need to improve the State Government's visibility in the ESG space, in acknowledgement that Western Australia is

currently better known internationally as a jurisdiction with vast natural resources, rather than for having a proactive policy on ESG related issues. This was highlighted to a global audience in November 2019, when the Swedish central bank divested all of its WATC bond holdings citing environment concerns – an action that has since been regularly referenced by market commentators.

The working group had its foundation meeting on 23 December 2020, and has since been collating material on relevant 'Projects' the State is undertaking that are expected to make a materially positive contribution to the State's overall ESG credentials. 'Project' is a broad heading to describe a relevant activity such as special infrastructure development or infrastructure program partnership with or incentivising industry (including relevant approvals or regulations), and targeted expenditure - provided this can be linked to a relevant United Nations SDG indicator and an overarching Government Policy.

WATC is also engaging with investor representatives to get a feel for the type of information and level of detail investors in WA Government bonds might expect such an ESG credentials output.

For further information on this initiative, please contact Richard McKenzie, Head of Strategy, on 08 9447 1111 or [mckenzie@watc.wa.gov.au](mailto:mckenzie@watc.wa.gov.au)

**Richard McKenzie**  
HEAD OF STRATEGY



FT CHANNELS > FT FOOD REVOLUTION > FOOD PROVES HARD FOR ESG INV.

**Food proves hard for ESG investors to digest**

Environment Article

## Climate and Environment ExxonMobil rebel shareholders win board seats



## Shell Ordered by Dutch Court to Cut Carbon Emissions 45%



## Green Chevron Investors Back Climate Proposal in Rebuke to Management



# CHANGING CLIMATE CHANGES FINANCE

## What are climate risks?

Climate change financial risks are material, foreseeable and actionable

### Physical risk

Changing climate conditions  
Extreme weather events



**Direct damage to assets or property**

- Lower asset values
- Increased insurance claims
- Supply chain disruption

### Transition risk

Policy changes  
Technological innovation  
Social adaptation



**Disruption from adjustment to low-carbon economy**

- Impacts on pricing and demand
- Stranded assets
- Defaults on loans

### Liability risk

Stakeholder litigation and regulatory enforcement



**Not considering or responding to the impacts of climate change**

- Business disruption resulting from litigation
- Penalties resulting from litigation



# RESPONDING TO CLIMATE FOR AGRICULTURE



- \$15 million Climate Resilience Fund and;
- \$15 million Carbon Farming and Land Restoration Fund.



The Climate Resilience Fund will also enable WA to develop and implement its own tailored solutions to climate and agricultural issues specific to the local conditions and practices.



It will focus on farm business resilience, drought research and adoption, rangelands restoration and on-farm desalination, delivering on-the-ground support for farmers and pastoralists across the State.

# CARBON FARMING AND LAND RESTORATION FUND

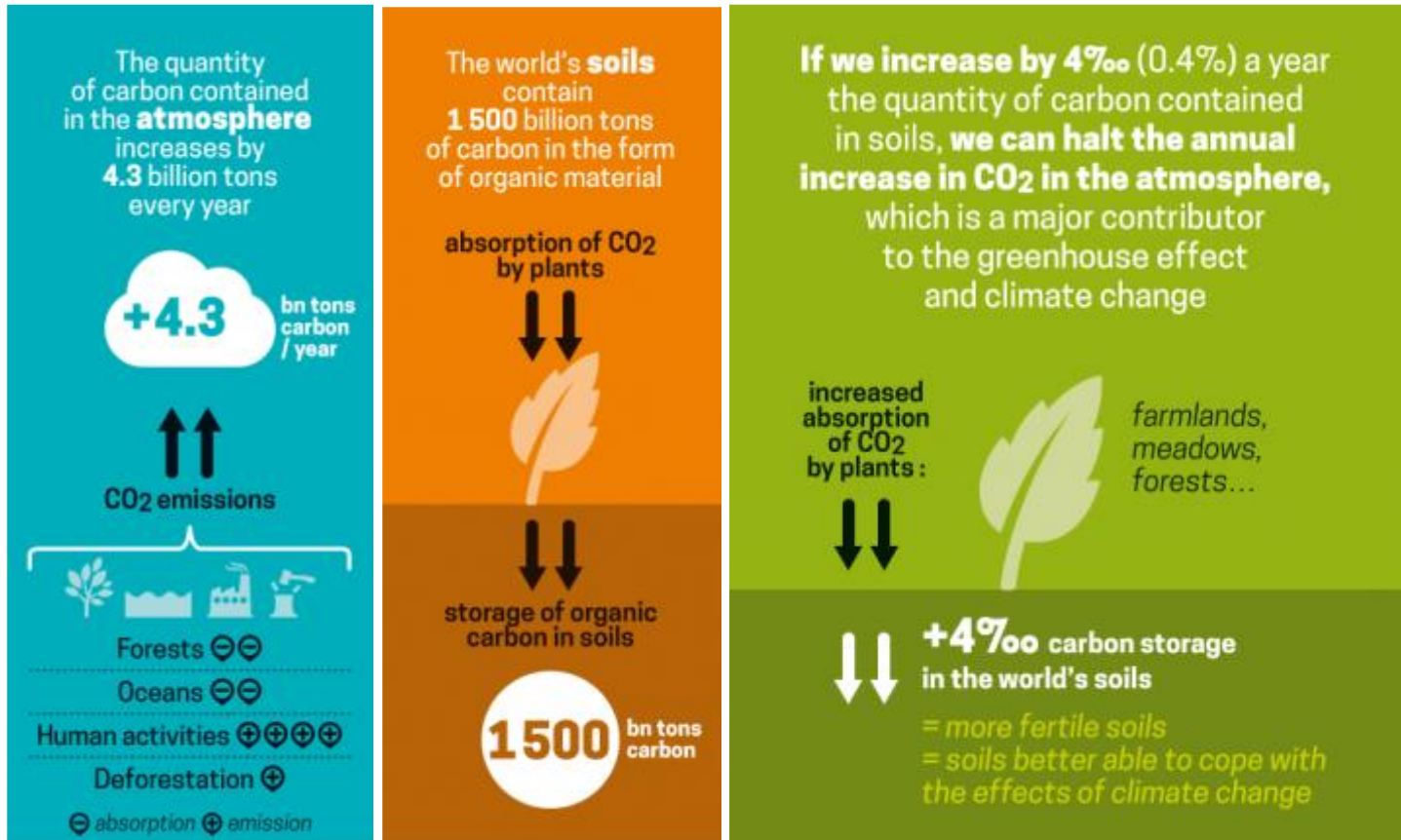


**The \$15 million Carbon Farming and Land Restoration Fund program will incentivise all methods of carbon sequestration in agriculture**



**Special allocations for soil carbon projects in lower rainfall areas**

# Soil Carbon – 4 per 1000 Paris Climate Initiative



## HOW CAN SOILS STORE MORE CARBON?

The more soil is covered, the richer it will be in organic material and therefore in carbon. Until now, the combat against global warming has largely focused on the protection and restoration of forests. In addition to forests, we must encourage more plant cover in all its forms.

  
Never leave soil bare and work it less, for example by using no-till methods

  
Introduce more intermediate crops, more row intercropping and more grass strips

  
Add to the hedges at field boundaries and develop agroforestry

  
Optimize pasture management – with longer grazing periods, for example

  
Restore land in poor condition e.g. the world's arid and semi-arid regions

# CLIMATE RESILIENCE FUND

## TODAY'S TASK

HOW CAN WE BEST INVEST THE CLIMATE  
RESILIENCE FUND?

ALL IDEAS ON THE TABLE

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