



How can Australia's  
agriculture sector realise  
opportunity in a low  
emissions future?

Farmers for Climate Action

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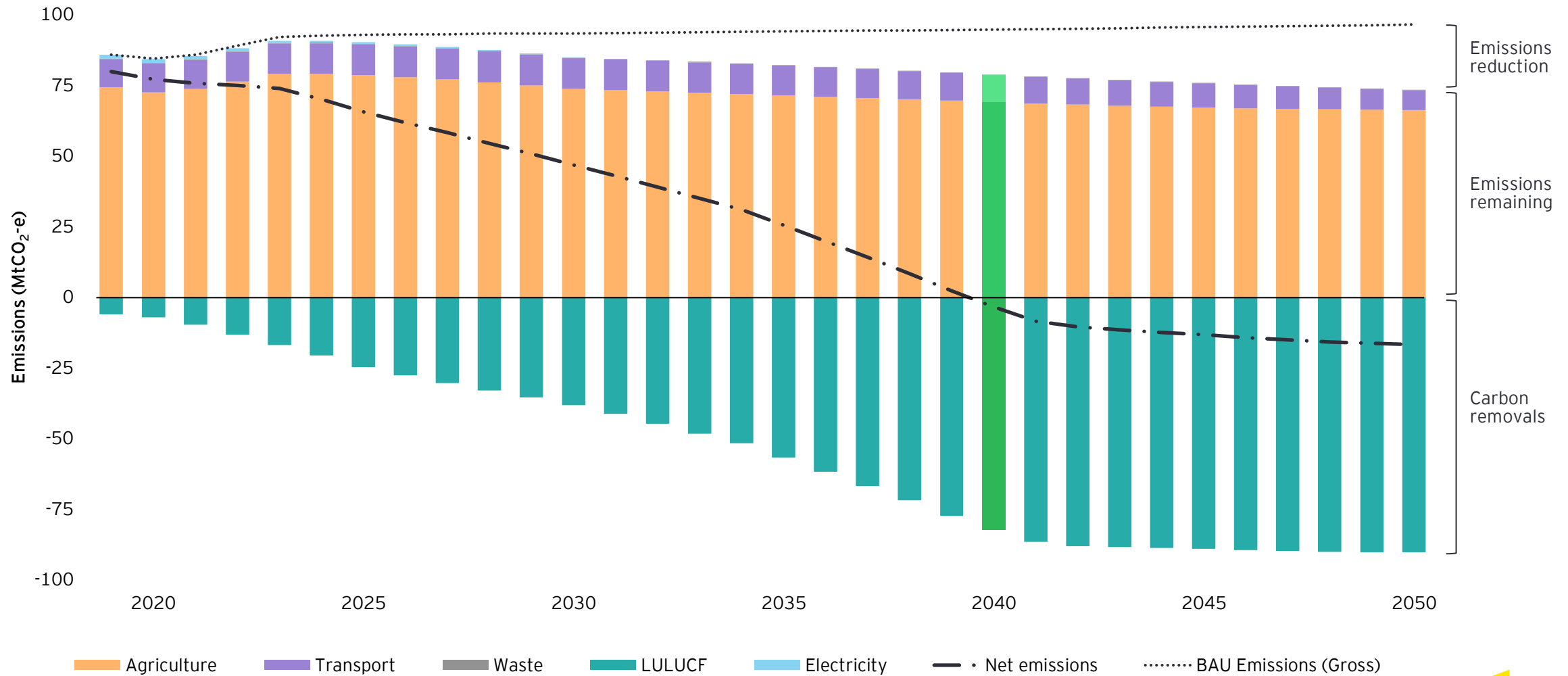
# Introduction and scope

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# Overview of the pathway



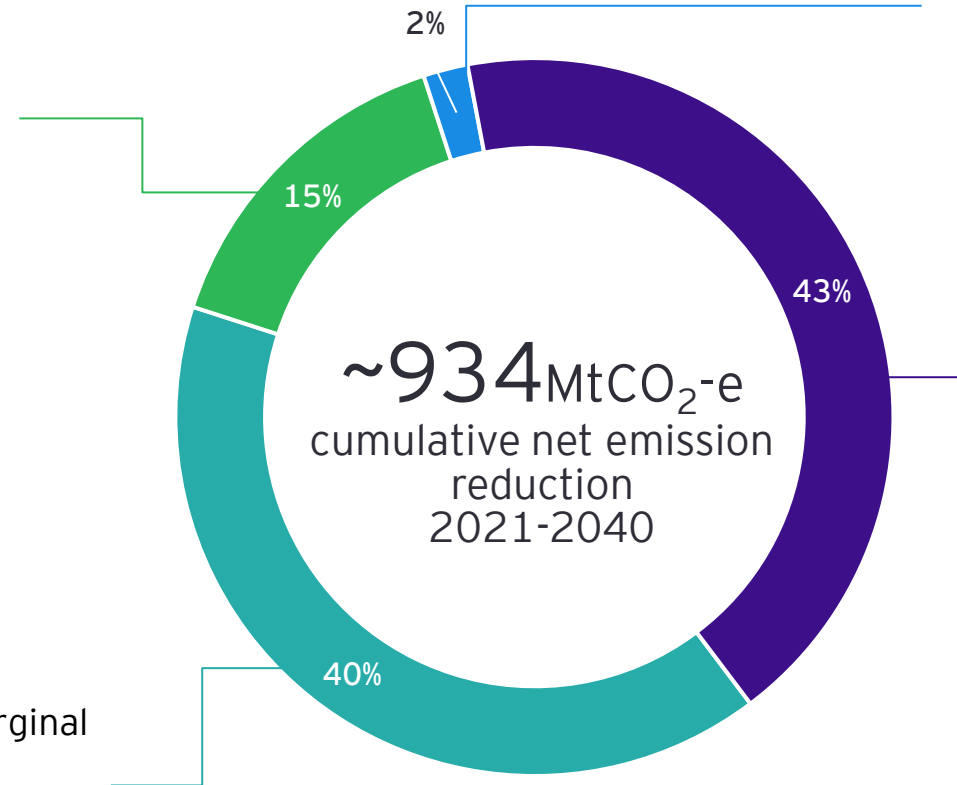
# Emissions reduction from on-farm technologies and practices

## Methane reduction

- ▶ Feed supplements and forages
- ▶ Selective breeding
- ▶ Vaccination
- ▶ Reduced time to market
- ▶ Biogas capture and waste management

## Land use change

- ▶ Reforestation of marginal land
- ▶ Develop integrated shelterbelts



## Transport and electricity

- ▶ Transition to electric vehicles on farm
- ▶ Adoption of renewable energy on farm

## Improved land management

- ▶ Cropland carbon sequestration
- ▶ Degraded farmland restoration
- ▶ Improved pasture management
- ▶ Improved grassland management
- ▶ Savanna burning
- ▶ Stabilised fertilisers

# Initiative 1: Reducing methane production from livestock and waste

Increase proportion of beef cattle in feedlots and reduce time to market

Feed supplements and forages to reduce production of methane in beef cattle, dairy cattle and sheep



Anti-methane vaccine for dairy, beef cattle and sheep

Biogas capture from dairy cattle, feedlot cattle and pig effluent

Selective breeding for methane reduction in sheep, beef cattle and dairy cattle

## Initiative 2: Transitioning to renewable on-farm electricity consumption and electric vehicles

### Transition to EVs (Tractors, heavy vehicles, light vehicles)



### Adoption of renewable energy on farms

# Initiative 3: Land use change

## Reforestation of marginal land

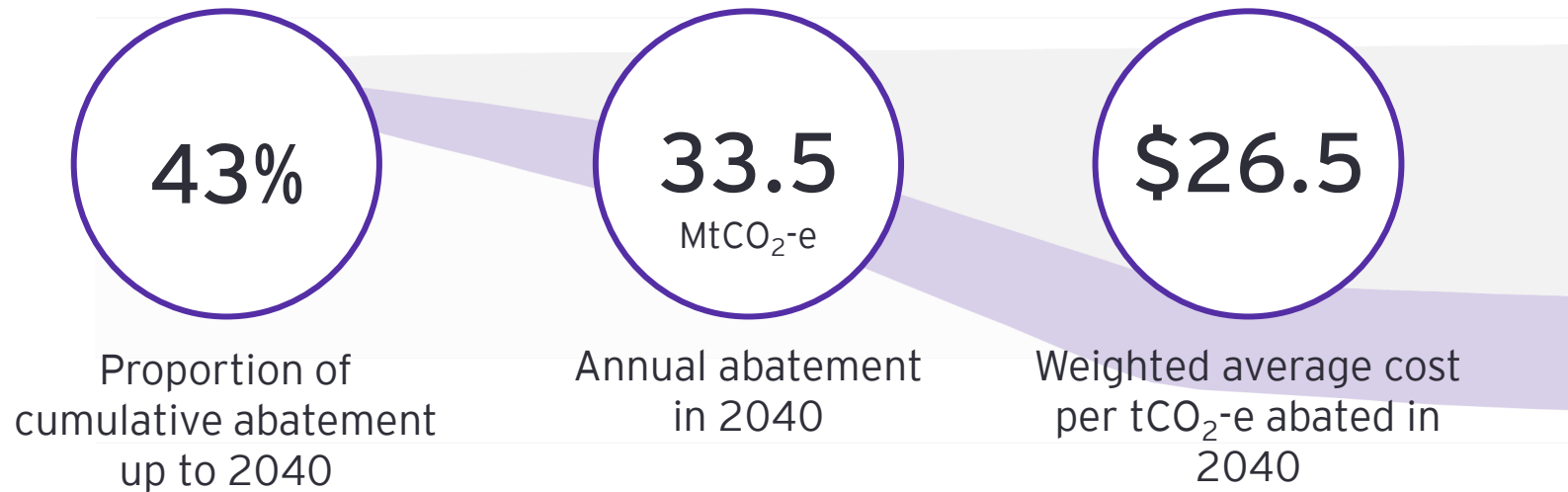


## Develop integrated shelterbelts

# Initiative 4: Improved land management

Cropland carbon sequestration

Improved pastures and grassland management



Degraded farmland restoration

Savanna fire management



# Opportunities for the sector

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## Income diversification

The value of Australia's scarce natural resources and high-quality biodiverse land is increasingly recognised as the world's economic system values and brings natural capital onto balance sheets. This will present opportunities for Australian farmers to diversify the incomes they derive from their land through the generation of **Australian Carbon Credit Units (ACCUs) and similar assets**. Other opportunities include using land assets to generate **renewable energy** through wind, solar and hydro electricity.

Not only does this provide the opportunity for farmers to remain resilient in times of drought, it helps with the overall fight against climate change by incentivising improvements in the quality and abundance of natural resources and the availability of renewable energy across the country.

## Productivity and market access

A shift to low emissions agriculture will be reliant on next-generation land management practices and will result in healthier ecosystems. Importantly, these practices will sustain high quality and increased agriculture production and **build long-term value across the agricultural supply chain**.

Many of the actions modelled in this report either directly or indirectly enhance quality and quantity of produce with associated financial returns, biodiversity outcomes and grow employment across our regions.

The production and labelling of low emissions meat and grain production will **guarantee access to increasingly demanding international markets and help to differentiate Australian produce**.

## Long-term regional resilience

As Australia transitions to a low carbon future, **emerging risks and opportunities will impact sectors to differing extents**. Regional communities are commonly reliant on agriculture as a sector and will be disproportionately vulnerable to the changes that occur as a result of future market forces and international regulatory frameworks.

Investing in our remote and rural communities will improve employment outcomes and allow our farms to be handed to the next generation in better shape than they were found.

The carbon abatement actions that have been modelled in this report and in the **Maranoa Case Study** demonstrate that setting a pathway towards a low emissions future presents opportunities that will drive prosperity in our regional areas.

# Next steps

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## Coordinate efforts

Strong leadership, cohesion and coordination across the agriculture sector is crucial for capitalising low emissions opportunities

This includes:

- Guidance to ensure robust standards and practices are transparent and fair
- Establishing partnerships across the sector to accelerate knowledge sharing and outcomes
- Cohesion across different industry bodies, geographies and commodities to align on shared goals
- Identifying synergies and co-benefits that exist across the sector
- Investing in infrastructure that is core to successful implementation of low emission actions and technologies, such as nation-wide spatial data and the development of next-generation food supplement delivery processes
- Sharing of cross sectoral knowledge to generate system wide benefits.

## Expand the market

Use the economic system to incentivise and reward actions that reduce emissions while creating jobs and economic growth

This includes:

- Continuing to develop Emission Reduction Fund (ERF) methodologies by ensuring affordable implementation and ease of measurement
- Enable 'method stacking' of ERF methods on the same farm to deliver synergies in carbon project development and provide an additional revenue stream to farmers
- Establishing a platform to ensure ease of transaction and transparent carbon pricing that can be readily linked to international markets
- Ensure the market rewards good management (both historical and future) to provide an incentive for landowners to embark on these changes
- Encourage a differentiated market and provide a premium for projects that achieve additional biodiversity or social co-benefits.

## Invest in innovation

Foster innovation through targeted investment to accelerate the uptake of low emission technologies and practices

This includes:

- Investing in research and development to advance emerging solutions and to foster novel climate-sensitive solutions
- Working with industry to identify and support leading technologies and practices implemented globally and at home
- Providing financial incentives for farmers and communities investing in leading technologies or efficient farm practices
- Building capability and skills to assist with on-farm adoption, extension and capacity building
- Providing landholders and businesses the right information at the right time about technologies and practices that will deliver the dual benefits of increased productivity and emissions reduction.

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