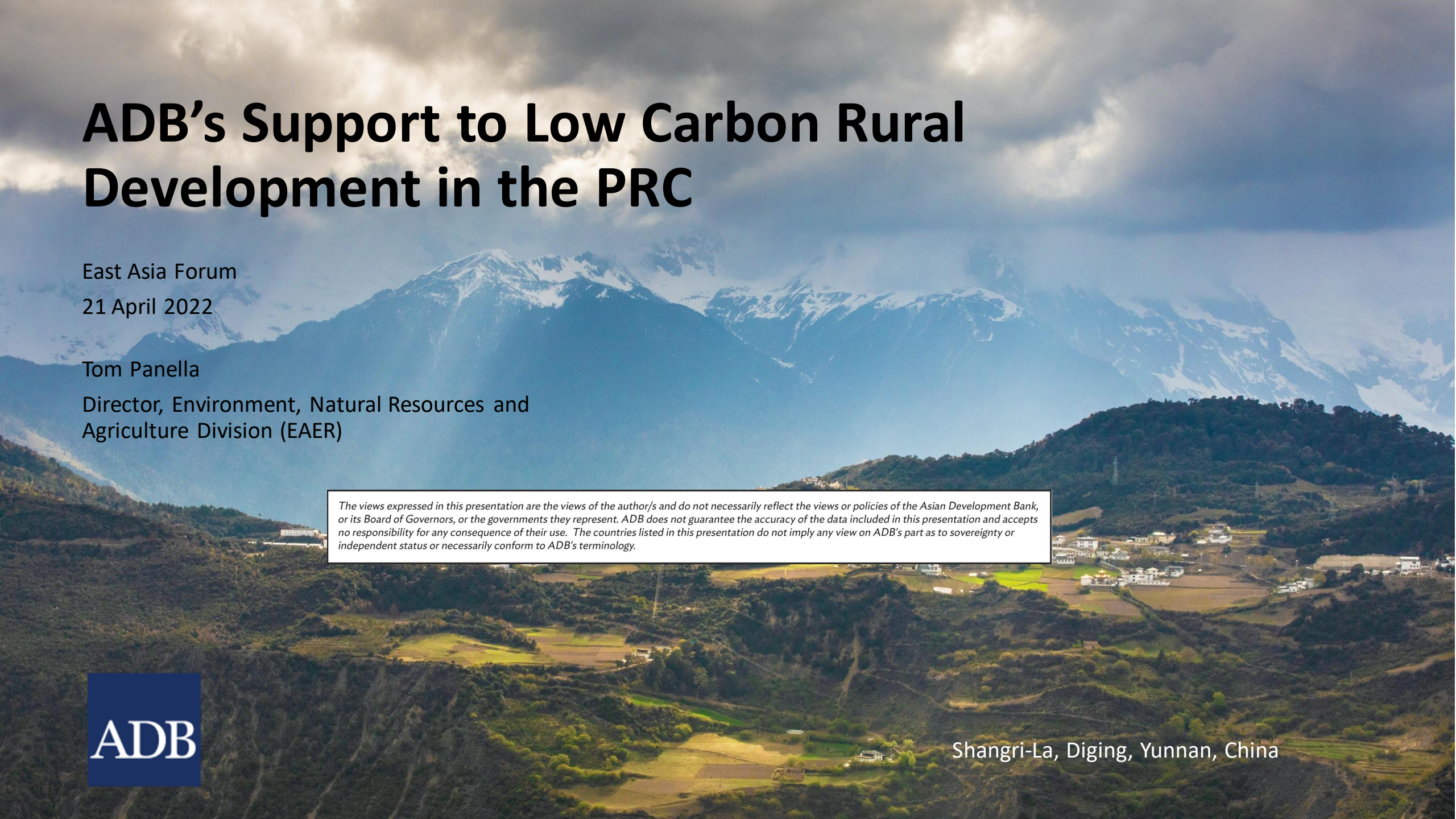
ADB's Support to Low Carbon Rural Development in the PRC

East Asia Forum

21 April 2022

Tom Panella

Director, Environment, Natural Resources and Agriculture Division (EAER)



Shangri-La, Diging, Yunnan, China

New ADB-PRC Country Partnership Strategy (CPS), 2021-2025

EARD's program focuses on

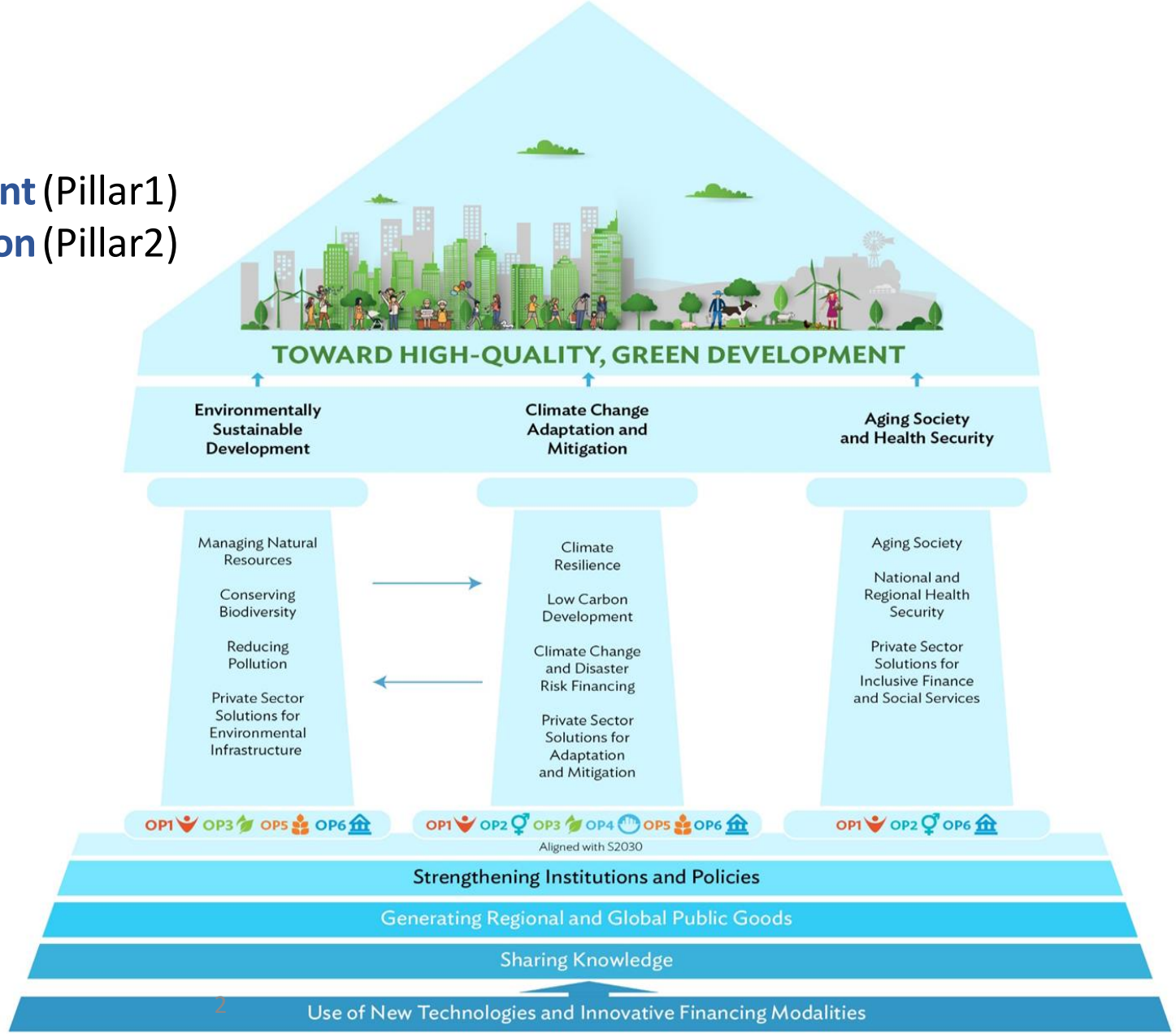
- **Environmentally Sustainable Development** (Pillar1)
- **Climate Change Adaptation and Mitigation** (Pillar2)

ADB will boost its **climate financing goals to $100 billion** for the 2019-30 period

Programmatic Approach (YREC and YREB)

Value addition

- Institutional Strengthening
- Innovative Approaches
- Knowledge Management



PRC's Climate Change Goals

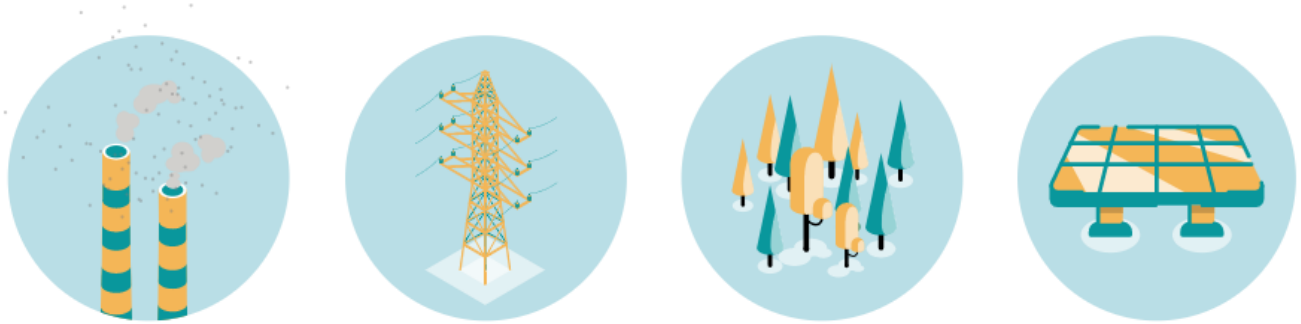
PRC Carbon Neutrality by 2060

By 2025
Lower carbon intensity

By 2030
Peak carbon

By 2060
Carbon neutrality

The Five-Year Plan's climate-related targets for 2025



Reduce carbon intensity by 18% from 2020 levels

Reduce energy intensity by 13.5% from 2020 levels

Increase forest coverage to 24.1%

Increase share of non-fossil sources in the energy mix to around 20%

National Climate Change Adaptation Strategy

- Strengthen economic and social resilience to climate change
- Strategic planning, risk assessment, coastal and marine, climate finance and capacity building
- Promote the use of nature-based solutions for integrated flood risk management
- Strengthen hazard risk monitoring and early warning systems to ensure resilience

No.1 Document in 2022 regarded climate change as a major challenge in rural vitalization in the PRC and suggested policy directions

- Promoting renewable energy
- New agricultural technologies
- Crop and livestock waste management

Opportunities for low carbon rural development in the PRC
Regenerative agriculture and waste management

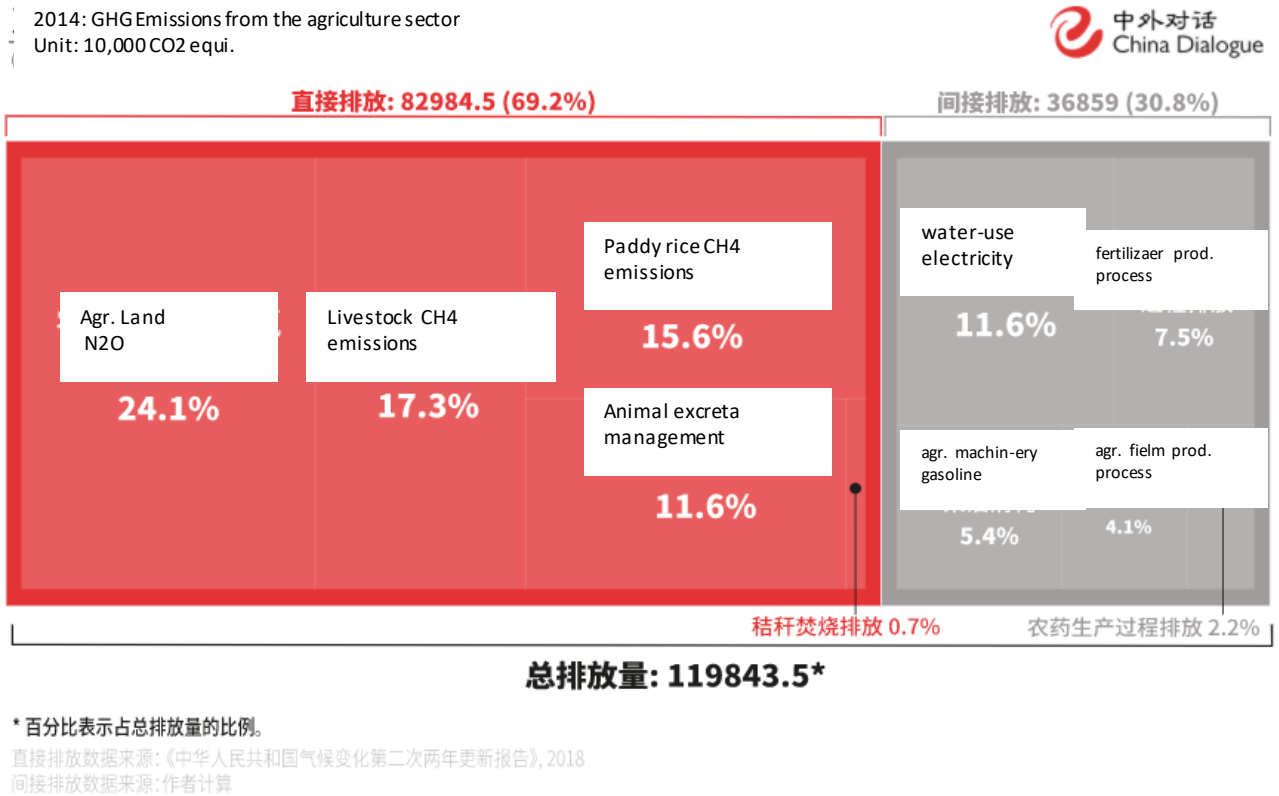
GHG emission from agriculture increased by 18% between 1990 and 2018.

Agriculture accounts for approximately 10% of total emission, mainly from farmland emissions, animal enteric fermentation and rice cultivation.

Major mitigation opportunities

- ❑ carbon soil sequestration
- ❑ reduction of chemical fertilizer
- ❑ bio-mass development such as using crop straw for energy, feed and other value-added products

GHG emissions from agriculture sector

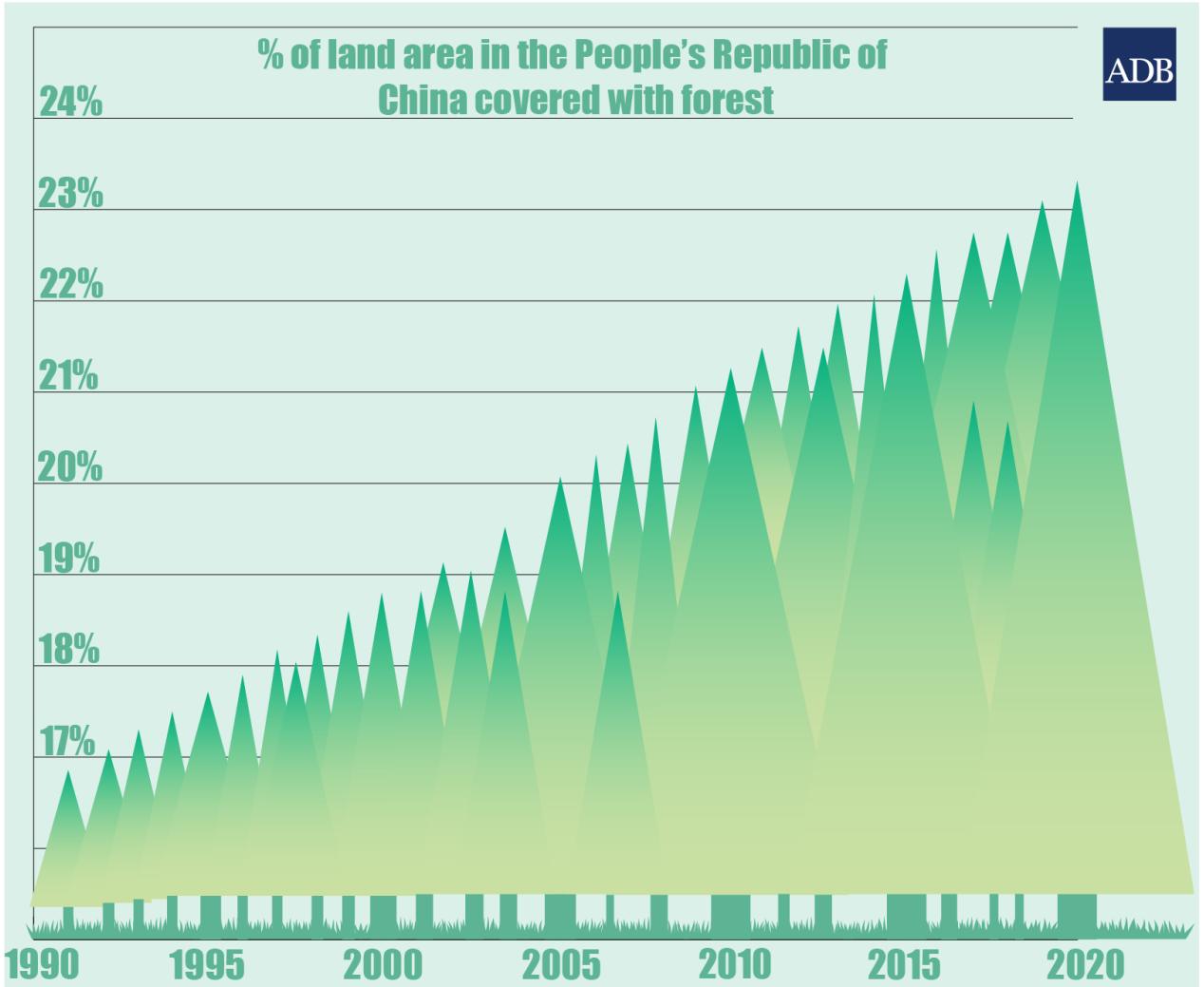


Opportunities for low carbon rural development in the PRC
Forestry and ecosystem management

Total forest area in the PRC increased to 220 million hectares, the forest stock is 17.56 billion M^3 with the **total carbon storage is 9.2 billion tons.**

National forests contribute to **carbon sequestration of 434 million tons/year**; roughly 80% of the PRC's total sequestration

Grassland vegetation and wetland protection are also important source of **carbon storage and adaptation**



ADB

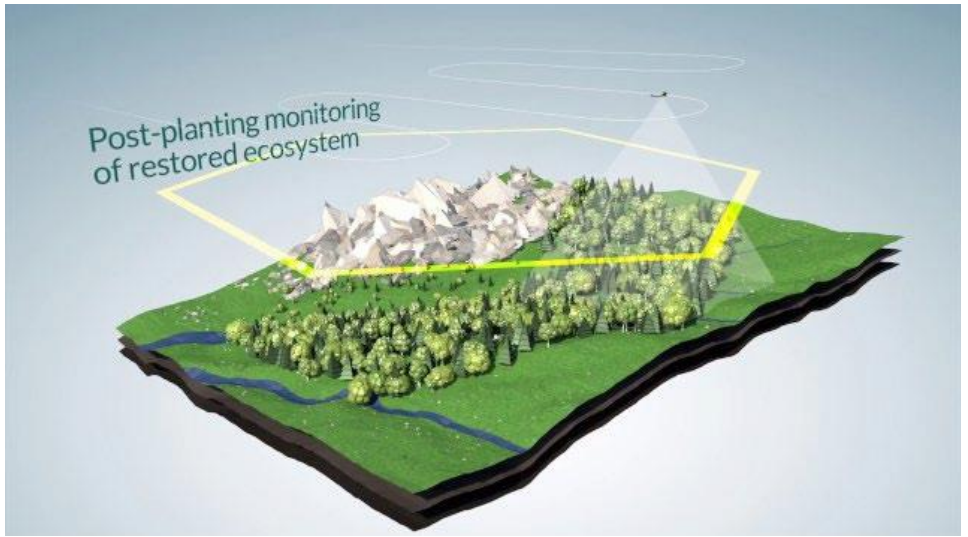
Mapping of ADB's Support to Low Carbon Rural Development

EAER is integrated climate actions in its operations that accounts $308 million climate financing ($148 million in mitigation, and $160.6 million in adaptation) since 2018.

	Ecosystems management	Regenerative agriculture	Organic Waste Management	Renewable energy
Investment	• Afforestation • National park conservation • Construction/restoration of vegetated wetlands • Application of bio-engineering and nature-based solutions in soil and water conservation	• Farmland adopting conservation tillage and reduced use of chemical fertilizer • Grassland monitoring and conservation • Improving livestock grazing practice	• Comprehensive use of crop straw • Solid organic waste collection and treatment facilities • Food waste recycling facilities • Effective management of livestock manure	• Use of renewable energy sources in water treatment and other facilities • Biogas energy production from livestock waste
Institutional and policy support	• Piloting forestry carbon credit system	• Certification system of organic products • Payments for green agricultural production	• Public and private partnership in solid waste management	• Carbon market to strengthen the profitability of renewable energy production

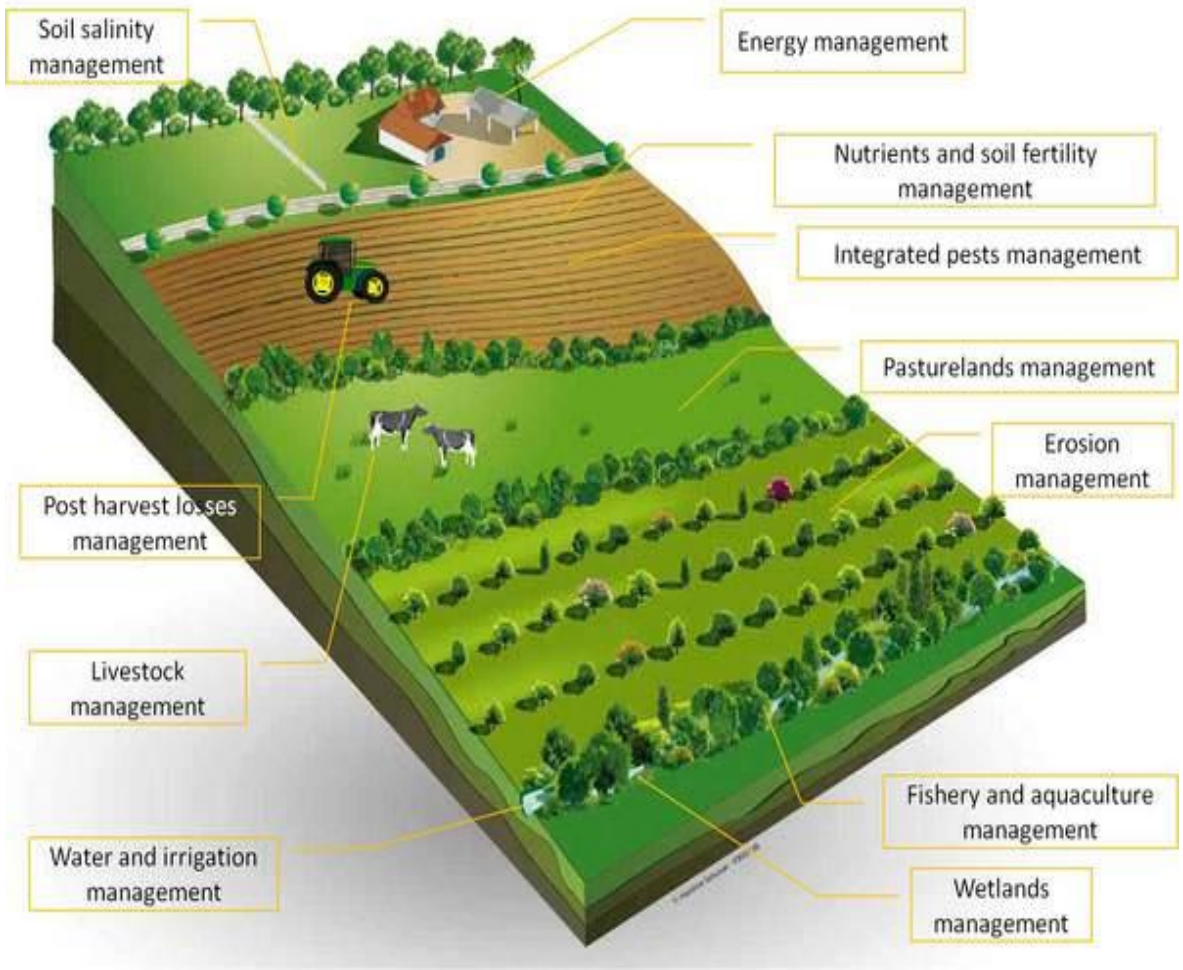
ADB Project highlight: Silk Road Ecological Protection and Rehabilitation Project (2022)

- **Project rehabilitates degraded forests and wetlands, and enhances its ecosystem**
- **Sites**: Qinghai, Gansu and Shaanxi Provinces
- **Cost**: The total project is estimated to cost $325 million with $200 million ADB financing.
- **Climate change mitigation activities ($ 129 million, Estimated GHG Emission Reduction of 325k tCO2e/year)**
  - Afforestation and reforestation of 37000 ha of forestland
  - Restoring vegetation in 340 ha of wetlands and related catchments
- **Innovative feature of climate change mitigation**
  - Adopting the close-to-nature forestry management to protect and rehabilitate forests and wetlands to support ecotourism development
  - Use of high-level technology including drones and real-time web-based tools for forest mapping, site surveys, and remote sensing



ADB Project highlight: Green Farmland Demonstration and High-quality Agricultural Development Project in Yellow River Basin (2022)

- **Project promotes sustainable and resilient agricultural and food systems in Yellow River Basin**
- **Sites**: Seven provinces (Qinghai, Gansu, Shaanxi, Shanxi, Henan, and Shandong) and Ningxia AR
- **Cost**: The total project is estimated to cost $435 million with $200 million ADB financing.
- **Climate change mitigation activities (Estimated cost $ 67 million, Estimated GHG Emission Reduction of 204k tCO2e/year)**
  - Reduction of chemical fertilizer in 40,000 ha of farmland
  - Comprehensive use of crop residue and livestock manure
- **Innovative feature of climate change mitigation**
  - Monitoring, evaluation and policy target setting for climate resilient agriculture at the county level
  - Introduction of innovative finance and policy mechanism to bridge the incentive gap at the farm level



ADB Project highlight: Jiangxi Ganzhou Rural Vitalization and Comprehensive Environment Improvement Project (2021)

- **Project advance rural vitalization and ecological protection**
- **Sites**: Ganzhou Municipality in Jiangxi Province
- **Cost**: The total project is estimated to cost $454 million with $200 million ADB financing.
- **Climate change mitigation activities ($ 54 million, Estimated GHG Emission Reduction of 101k tCO2e/year)**
  - Afforestation/reforestation of 4769 ha and vegetation plantation for 55 ha
  - A pilot forestry carbon credit program for about 3500 ha forests
  - FIL for rural environmental protection and climate resilience
- **Innovative feature of climate change mitigation**
  - Sustainable forest carbon sink program to improve forest management & control greenhouse gas emissions
  - Green finance mechanism to support access to credit to local SMEs and agricultural cooperative

Green financing for sustainable agriculture

Water and soil consveration

Conclusions and Next Steps

Conclusions

- The PRC's and ABD's climate change goals are ambitious and well-aligned with developing climate-resilient rural economies in ADB member countries
- Agriculture and rural economies account for a significant part of GHG emission, but the sector can also contribute to climate mitigation
- Low carbon rural development contributes to climate change adaptation and mitigation as well as the PRC's rural vitalization agenda

Next steps

- Mainstreaming climate change in all the ADB's lending and non-lending operations
- Scaling up ADB's support to National Program on Carbon Neutrality and Climate Change Adaptation in PRC
  - Programmatic approach to Yellow River Ecological Corridor (YREC)
  - Developing integrated solutions (e.g., bio-circular economy model, and renewable energy and carbon sink model)
  - Green financing and partnership with private sector
  - Policy and institutional reform such as expansion of carbon credit system
- Facilitating South-south knowledge sharing on the model of low carbon rural development and ecosystem-based adaptation

Thank You!

East Asia Forum

21 April 2022

Tom Panella

Director, Environment, Natural Resources and Agriculture Division (EAER)

ADB