



# Vulnerability of Agrifood Systems in Asia to Climate Change

- 420 million farmers in Asia and the Pacific
  - 0.5ha average holding
  - 90% of holdings <2ha
- 43% of South Asia's arable land is degraded
- 80% of Asia's freshwater is consumed by irrigation
- Majority of global zoonoses and AMR hotspots are located in Asia
- Smallholder farmers have been amongst the most impacted by the COVID-19 pandemic, highlighting vulnerability



# Climate Change Impacts



## Micro level impacts (smallholders)

- Suboptimal agriclimate and increased pest and disease prevalence
- Increased production costs
- Increased risk of crop failure due to extreme weather events
- Reduced yields, quality and farm profits

## Macro level impacts

- Increased water demand and scarcity
- Increased prevalence of EIDs and the contribution of animal health
- Increased pest and disease prevalence; biosecurity, IPM and the impact on food security
- Nutrition

# PSOD Agribusiness

## Investment

- Long and short-term loans, guarantees, and equity to agribusinesses at market rates
- Blended finance at concessional rates, often to support climate change adaptation and mitigation projects

## Technical Assistance

- Concessional rates (often grant-based)
- Direct support to smallholder farmers, veterinarians or other supply chain participants
- Expert consultants engaged





**Agricultural inputs**



**Aquaculture**



**High-value crops**



**Food brands**



**Cold chain**



**Livestock**



**Agroforestry**



**Modern retail**





## Climate Mitigation

- Renewable energy
- Energy efficiency
- Methane capture
- Forestry and carbon sequestration agriculture
- Shift to lower carbon footprint products
- Seaweed
- Plastics recycling, Bioplastics

## Climate Adaptation

- Greenhouses, Drip irrigation
- Climate-smart agricultural and agroforestry practices for smallholder farmers
- Climate-resilient hybrids
- Emerging infectious diseases prevention
- Aquaculture
- Bio fertilizers



# Case Study: Olam Regional Agricultural Value Chain Development Project

## ADB assistance:

- \$100m loan in dollars and rupiah to fund Olam's expansion plan in Indonesia, Papua New Guinea, Timor-Leste and Viet Nam



## Key features:

- Olam is a leading global agribusiness focusing on niche commodities and businesses, buying from growers and village-level agents at the farm gate, and providing value-added solutions and services

## ADB additionality:

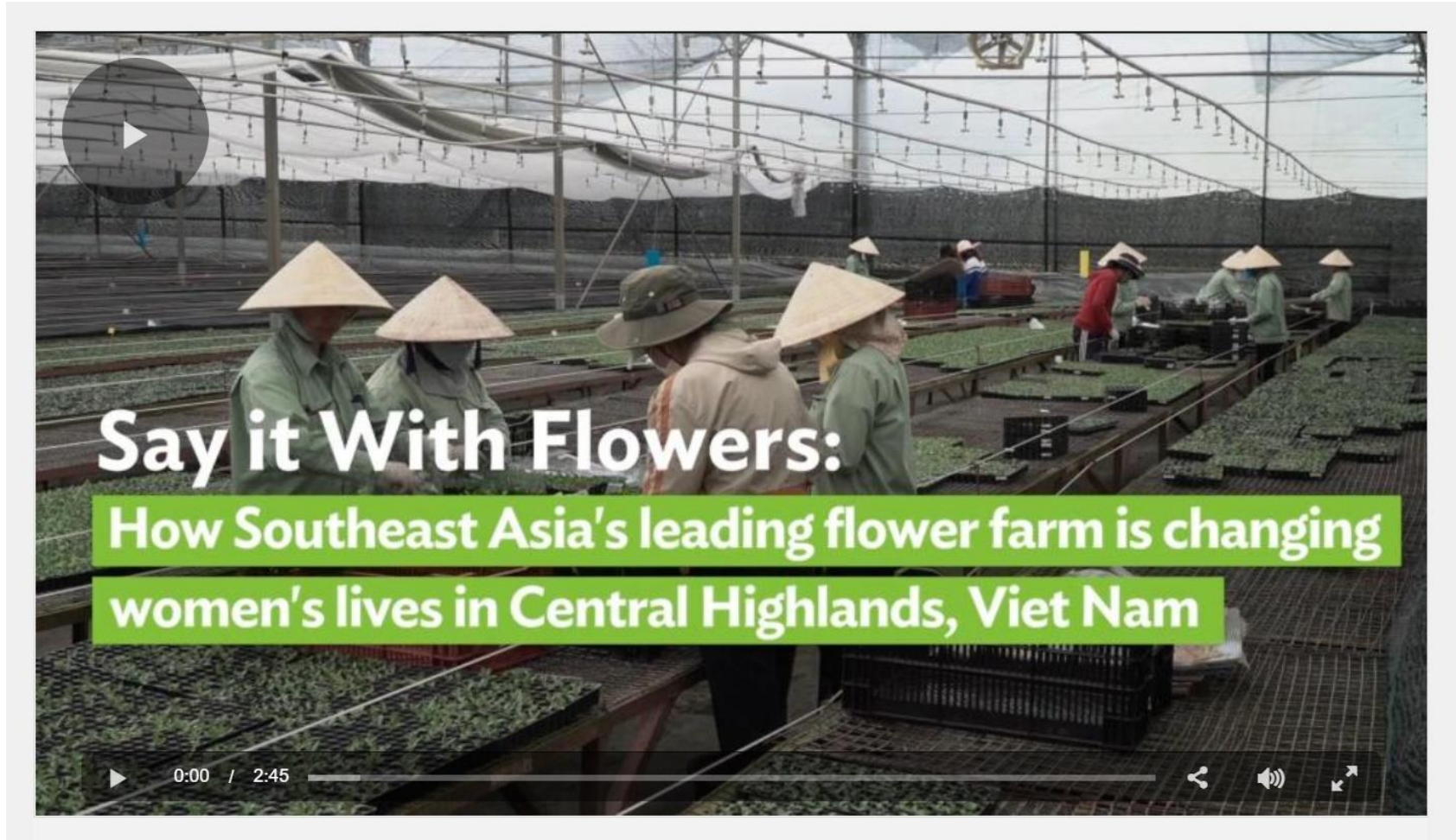
- Providing multi-country, multi-sector, and multi-currency long term debt financing with mobilization of additional \$75m concessional financing
- Enhancing environmental and social standards

## Climate change features:

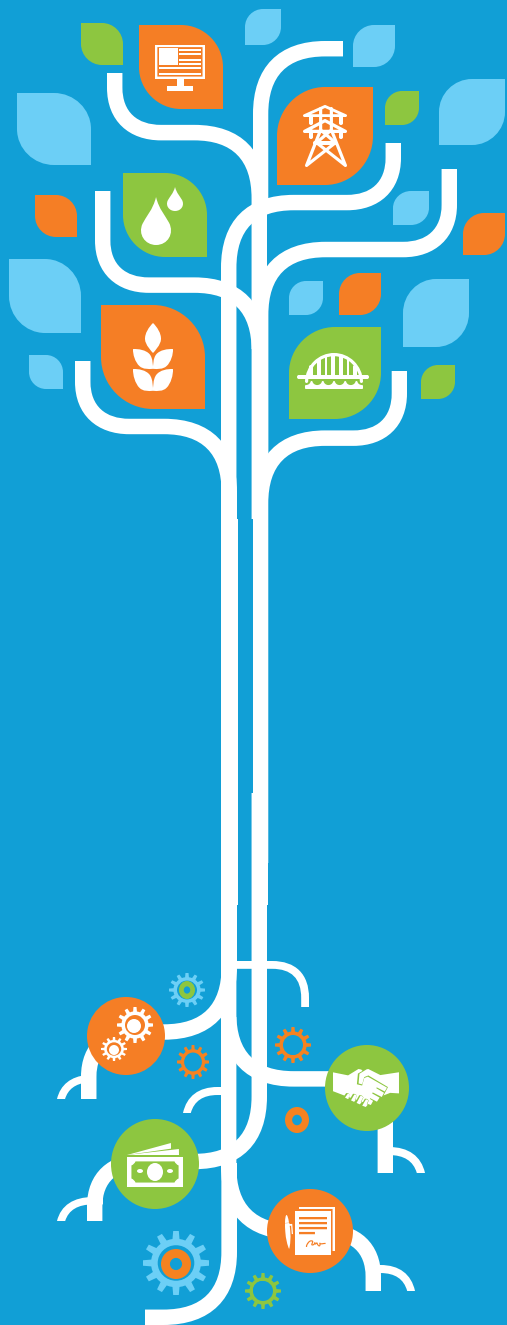
- Support for 110,000 climate-resilient agroforestry farmers
- \$3m TA to improve climate resilience of 30,000 smallholder farmers



# Case Study: Dalat Hasfarm, Viet Nam







# THANK YOU!

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