

# List of subjects of this survey

Each of the following initiatives was investigated.

## Private sector-led initiatives financially supported by government

- ❖ South East Asia
  - Indonesia
    - Makmur (Let Us Advance People's Business)
  - Vietnam
    - Partnership for Sustainable Agriculture in Vietnam (PSAV)
- ❖ South America
  - Argentina
    - Climate Intelligent and Inclusive Agri-Food Systems (Agro XXI)
  - Brazil
    - Rio de Janeiro Integrated Ecosystem Management in Production Landscapes of the North-Northwestern Fluminense (NNWF)
- ❖ Oceania
  - Australia
    - Regional Land Partnership

## Private sector-led international initiatives

- Agroforestry Hub
- Regenerating Together + PepsiCo Positive
- Centerfield Grower



## Makmur Program Summary

### Overview

- ❖ The Makmur program started in 2021, **to counter the challenges of low agricultural productivity and income faced by Indonesian farmers**
- ❖ The program aims to **help farmers to increase their income and productivity through comprehensive and sustainable technical assistance**
- ❖ The **program funding is on a need basis for various program activities**
  - Farmer co-operatives/ farmers are provided access to capital in form of credit loans by state-owned banks association (Himbara)

### Implementation

- ❖ Makmur program is a **multi-stakeholder initiative, both public and private stakeholders, which provides an ecosystem that integrates farmers with stakeholders related to agricultural cultivation from upstream to downstream**: agro inputs, financial institutions (banks), insurance services, local governments, agricultural technology, and off-takers
- ❖ The **program caters to both on-farm and off-farm assistance required by the farmers**
  - On-farm assistance: Through partner stakeholders provides supply of agri-inputs, farm advisory and support for farm mechanization
  - Off-farm assistance: Through partner stakeholders provides access to capital, guarantees produce off-take, and also provides access to digital farm and supply chain monitoring
- ❖ In 2023 (as of Oct'23), **the program has covered 334,311 ha of land area, covering 89,085 farmers**
  - The program covers majorly crops such as paddy (rice), corn, palm oil, coffee & sugar cane. Also covers horticulture products such as pineapple, mangosteen etc.

### Outcomes

- ❖ The **project has resulted in marked improvement in productivity of crops**. Comparing with the pre-Makmur program farm productivity, there has been significant improvements in post-program productivity in 2023



## PSAV Program Summary

### Overview

- ❖ Partnership for Sustainable Agriculture in Vietnam (PSAV) was established in 2010 under the "New Vision for Agriculture 2020" approach to the 20-20-20 objective, which is 20% increase in productivity, 20% reduction in poverty, and 20% reduction in emissions. In 2020, the operation orientations of PSAV were developed for the 5-year period from 2021 – 2025, with a vision to 2030.
- ❖ PSAV was created under Ministry of Agriculture and Rural Development (MARD) with a goal of advancing sustainable, large-scale, agricultural production with improvements in productivity, quality and competitiveness in efforts to achieve national food security and economic growth

### Implementation

- ❖ PSAV focuses on connecting actors in the agricultural sector to share experiences and work together to develop value chains of key Vietnamese agricultural products in the form of public-private partnership (PPP).
- ❖ The program has Established 8 PPP Task Forces for value chain development of the following key agricultural commodities – Coffee, Tea, Rice, Fruits & Vegetables, Pepper & Spices, Fisheries, Livestock, Agrochemicals
  - As of now, coffee, rice and pepper Task forces are the most active
- ❖ The task forces are operated with the participation of 120 organizations, including government agencies, companies, industry associations, research institutes, international and non-governmental organizations

### Outcomes

- ❖ Coffee Task Force
  - Area of coffee and no. of coffee growers benefited from program's technical assistance activities amounted to 130,000 ha (20% of the country's total coffee area), and ~250,000 people (out of 500,000 coffee farmers).
  - The productivity of pilot models increased by 12% between 2010 and 2014, and the avg. income (in 5 years) of coffee growers increased by about 14%
- ❖ Fruit & Vegetables Task Force (focusing mainly on Potato production model)
  - Compared to 2011, increased productivity 2.2 times, Increased net profit by 6.5 time, increased planted area by 4.5 times
  - Implement a spray irrigation model, saving over 1 million cubic meters of water



## Management Summary

### Overview

- ❖ Due to covid 19 pandemic the **economy of Argentina was in turmoil requiring a revival plan**. Ministry of Agriculture, Livestock and Fisheries (MAGyP), through its Directorate General of Sectorial and Special Programs and Projects (DIPROSE) **started the Agro XXI program in 2022 for 5 years**
- ❖ Key **objectives** behind implementation of the program were **to create jobs and the increase the sales volumes for the produce of agricultural producers, agro-industrial MSMEs, rural producer organizations, agri-food technology MSMEs** and to also **promotes climate-smart practices** in the existing agriculture network

### Implementation

- ❖ The overall program has been broken down into **5 components** (with major funding being allocated to the first two) :
  - **Public Infrastructure for Agro-industrial Development**
  - **Agro-industrial Development & Strengthening Rural Livelihoods**
  - Innovation for Inclusive and Sustainable Agri-food Systems Transformation
  - Project Management and Evaluation
  - Emergency Response Contingent (CCRE)
- ❖ With **activities like consulting for formulation of public infrastructure projects, adoption of climate-smart technologies, small scale water investments** for domestic & productive purposes, Micro & Small **Agro-industrial enterprises investments** etc. the Govt. plans **to achieve improved rural livelihoods and promotion of climate-smart practices**

### Outcomes

- ❖ The program is expected to result in following outcomes :
  - Development/ **Improvement of 350 km of rural road network**
  - **Improvement in 700 km of voltage lines**
  - **Improvement in irrigation/ drainage in 35,000 ha** of land parcels
  - Development of national standards and facilitation of bureaucracy to **mobile broadband** promotion **for digital connectivity of rural areas**
  - Enhancement in **competitiveness of Argentine farmers** in global market



## Rio de Janeiro Integrated Ecosystem Management Project Summary

### Overview

- ❖ Rio de Janeiro was facing major issues related to deforestation, soil erosion and water shortage affecting the lives of more than 30,000 family farms
- ❖ The program was designed to promote integrated ecosystem management approach to guide development of sustainable land practices in regions of Rio de Janeiro by laying organizational, technical & institutional foundation for integrated & sustainable management of natural resources through farmers in environmentally vulnerable region and increased adoption of IEM concepts and practices
- ❖ Program funding is in the form of donations from GEF, Federal & State Govt. along with small contributions from NGOs & Beneficiaries

### Implementation

- ❖ Program was implemented by State Secretariat for Agriculture and Livestock of Rio de Janeiro (SEAPEC) along with support from EMBRAPA (Federal govt. body) with the help of 4 key components targeted at sustainable agricultural practices :
  - Component 1: Planning for Integrated Ecosystem Management (IEM) Actions
  - Component 2 (Major): Incentive System for Integrated Ecosystem Management (IEM)
  - Component 3: Organization and Capacity Building for IEM
  - Component 4: Project Management, M&E
- ❖ Under component 2, project provided support to rotational grazing, poultry introduction & protection of water sources and Implementation & validation of 13 adaptive research units on farmers' land, such as introduction of green fertilizer, seed bank, worm composting

### Outcomes

- ❖ The Program has resulted in the following outcomes :
  - 80% increase in milk production in 90% of subprojects monitored under participatory monitoring activities
  - Avg. per farm annual production of 2,475 tons of organic fertilizer leading to reduced dependence on artificial fertilizers
  - Recuperation of native vegetation and species diversity in the implementation regions
- ❖ The Program has resulted in the following outcomes for future projects/ replication:
  - Establishment of Payment for Environmental Services (PES) mechanism in state for future projects, & govt. scaled up the project utilizing same stakeholder arrangement
  - Sustainability of the project has been boosted by extensive, independent farmers' replication of project-promoted agro-ecological practices designed to conserve their green assets and enhance productivity



## Regional Land Partnership Project Summary

### Overview

- ❖ The Regional Land Partnerships (RLP) program was **designed to improve biodiversity and on-farm soil quality, along with helping farmers adapt to climate change** across multiple regions in Australia with funding of **US\$ 450 Mn** over 5 years **from 2018 to 2023** and with the help of **partnership among governments, industry & communities**
- ❖ The program is a **major part of Phase 2 of National Landcare Program (NLP)** under which **Department of Agriculture, Water and the Environment through Natural Heritage Trust** invested **\$1 billion** for addressing problems such as **vegetation loss, soil degradation, introduced pest weeds & animals, water quality changes & flows and fire regime changes**

### Implementation

- ❖ Program was **implemented by regional level Natural Resource Management (NRMs)** along with support from Local Businesses/ Industry Groups with the help of 6 components out of which 2 targeted at sustainable agricultural practices :
  - **Land Management Practices** to improve and protect the condition of soil, biodiversity and vegetation
  - **Climate and Markets** to increase the capacity of agriculture systems to adapt to significant changes in climate & market demands
- ❖ For implementation purpose **engagement of service providers was done through a services agreement to deliver on-ground regional projects** and core services under RLP that support Australia's national priorities for natural resource management
- ❖ Activities like **social research on soil acidity management practices, building soil carbon in irrigated systems, resilient farms & resilient regional agriculture were planned & executed** to achieve the objectives of the project

### Outcomes

- ❖ The Program has resulted in the following outcomes :
  - **83.36 million ha treated for pest animals**
  - **5,689 ha habitat revegetated and maintained**
  - **1,927 ha riparian and aquatic areas remediated**
  - **2.04 million ha treated by fire management actions**
  - **2,254 family farms implemented IEM/SLM practices on about 31,650 ha of land**
- ❖ **New phase of Natural Heritage Trust's projects** is initiated by name of **"Climate-Smart Agriculture program"** with an **investment of US\$ 302.1 Mn** aiming towards sustainable agriculture projects

## Agroforestry Hub Program Summary

### Overview

- ❖ In Pará, Brazilian Amazon's leading deforestation State, deforestation is mostly driven by cattle ranching. In the absence of good ranching practices, farmers are led to cut down forests to find fresh pastureland for their cattle to make sufficient profit.
- ❖ To help restore the Amazon while providing better livelihoods, The Nature Conservancy (TNC) pioneered an initiative to work with farmers plant sustainable agro-forests of cocoa trees, banana trees and a mix of native hardwood trees

### Implementation

- ❖ The agroforestry hub is a multi-partner initiative of various stakeholders involved in the value chain, led by The Nature Conservancy (TNC), and includes Mondelēz, Olam, local cooperatives & private technical assistance providers.
  - The pilot initiative synergized efforts to catalyze changes and enable Brazil to be a leading sustainable cocoa producer. The activities involve technical assistance for improved productivity and production, with increased returns for producers and sustainable supply for the industry
  - The pilot phase of the initiative involved setting up a technical assistance hub, funded by private capital (Olam & Mondelez), to build largescale technical assistance availability to build smallholders' skills with cocoa agroforestry
  - Olam Cocoa and Mondelēz provided off-take agreements at price premiums to farmers, enabling smallholder farmers to improve livelihood. In return, for Olam Cocoa and Mondelēz International, access to local produce reduced dependency on cocoa imports and they have better access to sustainable and ethical cocoa

### Outcomes

- ❖ The pilot phase won Nature-Based Project of the Year at the Business Green Leaders Awards 2021. More than 250 farmers signed zero-deforestation agreement with around 14,000 hectares of land having been brought under sustainable management
- ❖ Phase 2 has resulted in restoration of degraded lands, improved the productivity of cocoa farmers and increased their income
  - 1,000 ha have been restored in the Amazon rainforest biome in Pará
  - Productivity has risen from 700 kg/ha to 1,000 kg/ha in Pará and from 300 kg/ha to 500 kg/ha in Bahia
  - The income of 250 cocoa smallholders in Pará and 250 smallholders evaluated in Bahia has increased by 25%

# Private sector-led international initiatives | Regenerating Together + PepsiCo Positive | Project Summary

## SAI Platform's Regenerating Together + PepsiCo Positive Agriculture Program Summary

### Overview

- ❖ Regenerative agriculture farming system has the potential to significantly improve resilience of agricultural supply chains. But despite the potential, it has yet to materialize at scale, because of absence of an aligned definition and global framework
  - To overcome this, SAI platform, along with PepsiCo and other members, started Regenerating Together Programme, to develop a global framework for regenerative agriculture
- ❖ With agriculture being core to PepsiCo's business, they have been working to creating a more resilient, sustainable agricultural system
  - To achieve their 2030 sustainability goals, PepsiCo launched pep+, with Positive Agriculture as one of the key pillars, which focuses on spreading the adoption of regenerative farming practices

### Implementation

- ❖ SAI Platform collaborated with farmers, industry experts, civil societies, NGOs, academics, and some of the world's largest food and agriculture brands, to develop a global framework for regenerative agriculture that has the potential to bring about long-term, systemic change with a positive impact on the environment
- ❖ In order to spread the adoption of regenerative farming practices, PepsiCo Positive Agriculture, supported farmers along their transition journey for directly sourced crops, as well as provided guidelines to suppliers to implement regenerative agriculture practices in their value chain
- ❖ PepsiCo also partnered with various stakeholders along the value chain to realize their regenerative agriculture goals
  - Long term partnerships with private company, Archer Daniels Midland & farmer facing organization, Practical Farmers of Iowa (PFI)
  - Technological collaborations with startups N-Drip (Irrigation related) & Agroscout (AI-based crop disease monitoring)

### Outcomes

- ❖ In Sep'23, SAI Platform launched the 'Regenerating Together' global framework for regenerative agriculture
- ❖ PepsiCo Positive activities have resulted in improving productivity, sustainable sourcing, reducing water usage and improving livelihoods
  - 89 regenerative demonstration farms in the program, engaged more than 3,000 farmers in regenerative agriculture practices, covering more than 900,000 acres. Some of the sub-projects such as Potato irrigation project in India has resulted 13% increase in yield and in 50% reduction in water usage
  - In partnership with N-Drip, deployed drip irrigation technology in multiple countries including India, Thailand, Mexico & Greece
  - The program has resulted in an approximately 450,000 metric ton net reduction in on-farm greenhouse gas emissions, including soil carbon sequestration



## Centerfield Grower Program Summary

### Overview

- ❖ In 2011, Bunge launched Centerfield to help U.S. farmers identify hybrids that would enhance corn quality and establish traceability from farm to fork. Several years later, the program got expanded into a sustainable agriculture initiative
- ❖ The program started with corn, and has since expanded to other crops such as high oleic soy and canola, non-GMO soy, and rice
- ❖ The information helps farmers connect their farms to food companies and calculate farm-level emissions, leading to more efficient land use. For the food industry, Centerfield offers insight into farm operations, supply chain traceability and an opportunity to be more engaged with growers

### Implementation

- ❖ Centerfield program is implemented by the merchandising managers of Bunge who meet with participating growers to collect data such as rainfall and irrigation, fertilizer trips, soil texture, land use and tillage practices across North American regions
- ❖ Centerfield implementation is through its subprojects in USA & Canada in partnership with other food & beverage companies, non-profit organizations and environment organizations/ programs:
  - **PCM<sup>1</sup> Innovation Project:** Partnered with Illinois Corn, PepsiCo and others to reduce GHG emissions, improve soil carbon, increase biodiversity, decrease water & nutrient runoff, & improve farm profitability in corn & vegetable oil supply chains in East-Central Illinois
  - **Agricultural Conservation Management Project:** Worked with Kellogg's in Nebraska, Kansas, Illinois & Indiana, to track continuous improvement & best agriculture practices within corn supply chain
  - **Mississippi Wheat Project:** Mondelez and Bunge are partnered to support the wheat supply chain in the Mississippi River Basin by enabling supply chain transparency and worked for reducing greenhouse gas emissions, improve water quality etc.
- ❖ In 2019, Bunge integrated its centerfield program with Field to Market's Fieldprint® Platform, one of the industry's most widely recognized sustainability assessment tool for commodity crop production

### Outcomes

- ❖ Improved soil health of about 500,000 acres of farms with the help of cover crops, ideal tillage practices and precision nutrient management
- ❖ Promotion of farm level data collection platform (CenterfieldTM) and integration with Field to Market's Fieldprint® sustainability metrics Platform across North American farms
- ❖ Data analytics driven insights on financial implications of agronomic practices, improving farm profitability & sustainability

Note: <sup>1</sup>PCM is Precision Conservation Management