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Natural Capital Investments and Green Agri-Business Development



Rural Development and Food Security (Agriculture) Thematic Group

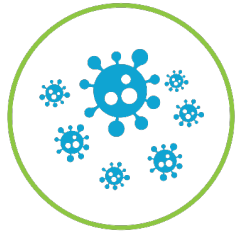
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Sustainable Development and Climate Change Department, Asian Development Bank



ISSUES AND CHALLENGES

COVID-19 pandemic exposed
and magnified the vulnerabilities
of food supply chains



Disruptions Due to COVID-19

- Weak logistics
- Migrant labor shortages
- Factory shutdowns
- Working capital problems
- Wholesale markets closure



Food Supply Chains

Input Supply

Farming

**Processing and
Packaging**

Retail and Marketing

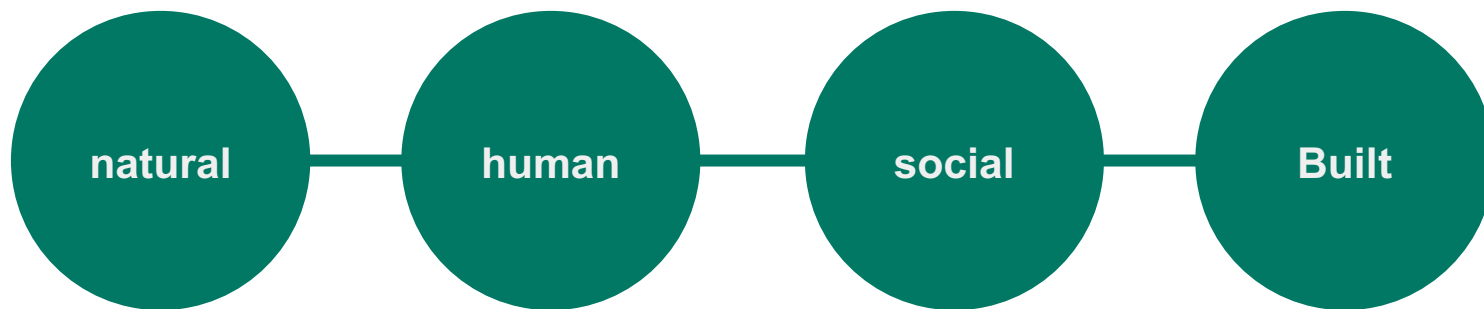
Consumers



Environmental and Health Consequences

- Agriculture uses 70% of water resources, 50% of habitable land, and up to 80% of biodiversity loss
- Growing supply of unhealthy engineered food
- 61% of infectious diseases are zoonotic
- High post-harvest losses
- Increasing non-communicable diseases due to unhealthy diets
- Food supply chains account for 29% of GHG emissions, 44% of methane

SUSTAINABLE, INCLUSIVE AND RESILIENT RECOVERY UNDERPINNED BY QUALITY AND QUANTITY OF FOUR CAPITALS



Recovery packages should be consistent with the Sustainable Development Goals particularly on food security, biodiversity conservation, and climate change.

Investing in and achieving high productivity of these capitals is crucial to enabling economic growth to continue at high rates with lower factor inputs, and to making growth sustainable.



Strong, sustainable and inclusive growth in a new era for China

Paper 1: Challenges and ways forward

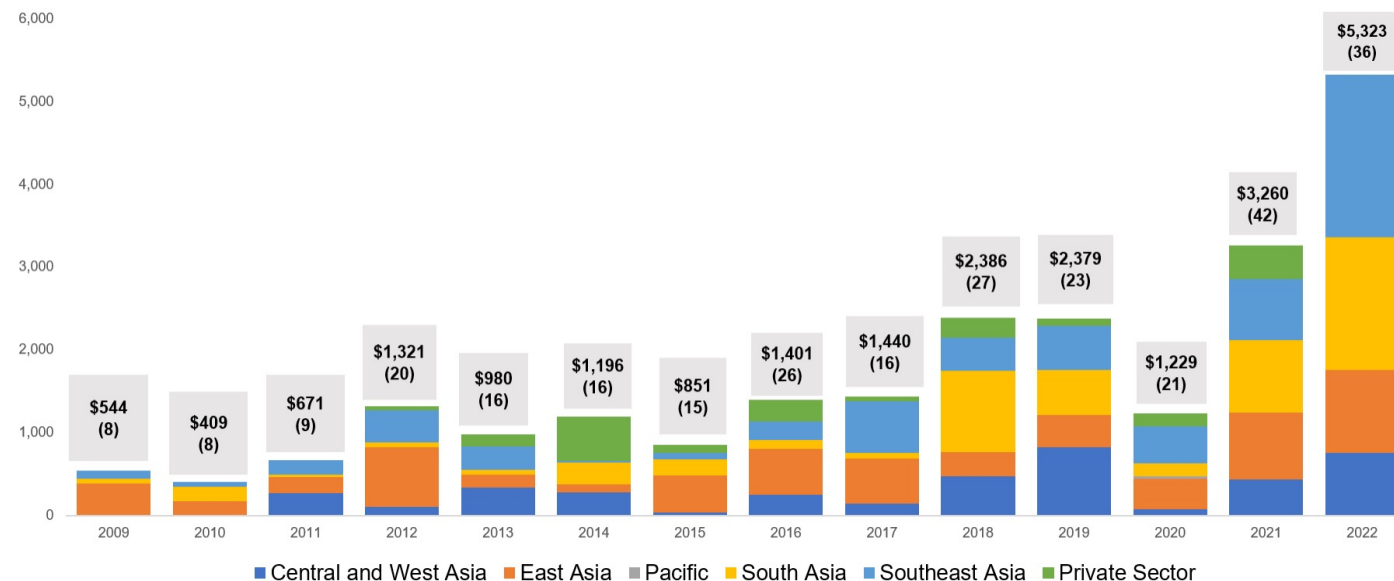
Cameron Hepburn, Nicholas Stern, Chunping Xie and Dimitri Zenghelis

Policy insight

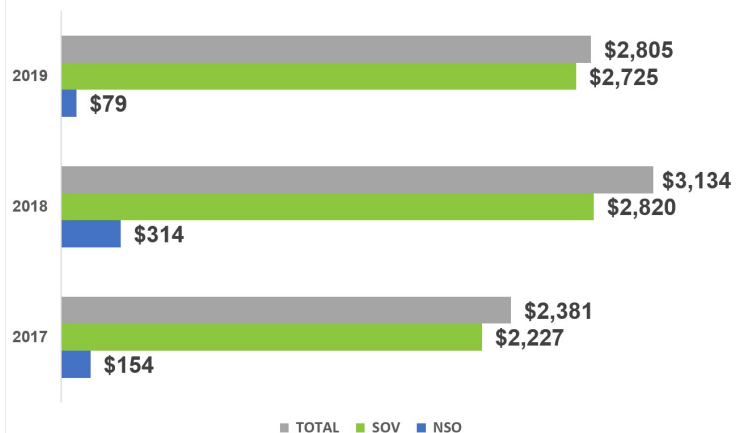
April 2020



ADB'S INVESTMENTS IN ANR SECTOR, FOOD SECURITY AND CLIMATE CHANGE IN DIFFERENT YEARS



2017-2019 Food Security Investments (\$ million) from Committed Projects



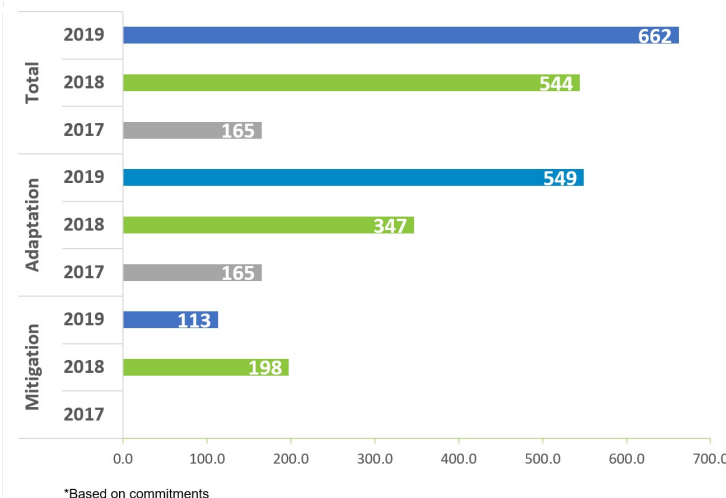
Food security investments

determined based on commitments:

- Agriculture, natural resources and rural development investments (including relevant subprojects of multisector investments)
- Investments that support food system development (i.e., transport, trade, agribusiness financing, water, energy, data/technology infrastructure, and vocational training of agricultural experts) and agribusiness development opportunities and related jobs
- Clean water, sanitation and primary health investments to collectively address malnutrition (i.e., utilization aspect of food security)

\$2 billion yearly target

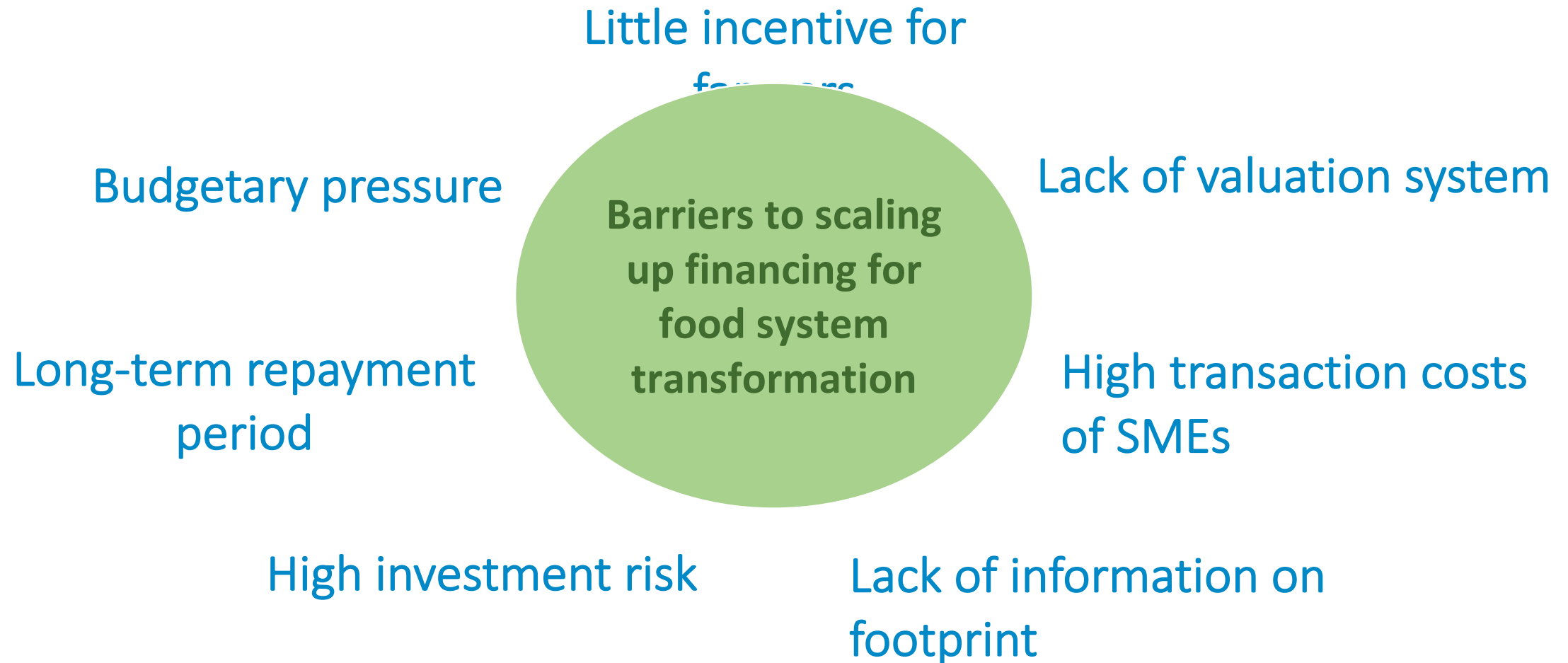
2017-2019 Climate Finance Investments (\$ million)



Climate Adaptation—Investments to induce changes in agricultural management practices to lower adverse climate change impacts, e.g., improving livestock breeds; diversifying crops; growing climate-resilient crop varieties; improving irrigation efficiency, i.e., laser land leveling, fertigation, alternate wetting and drying; adjusted planting; and zero tillage, etc.

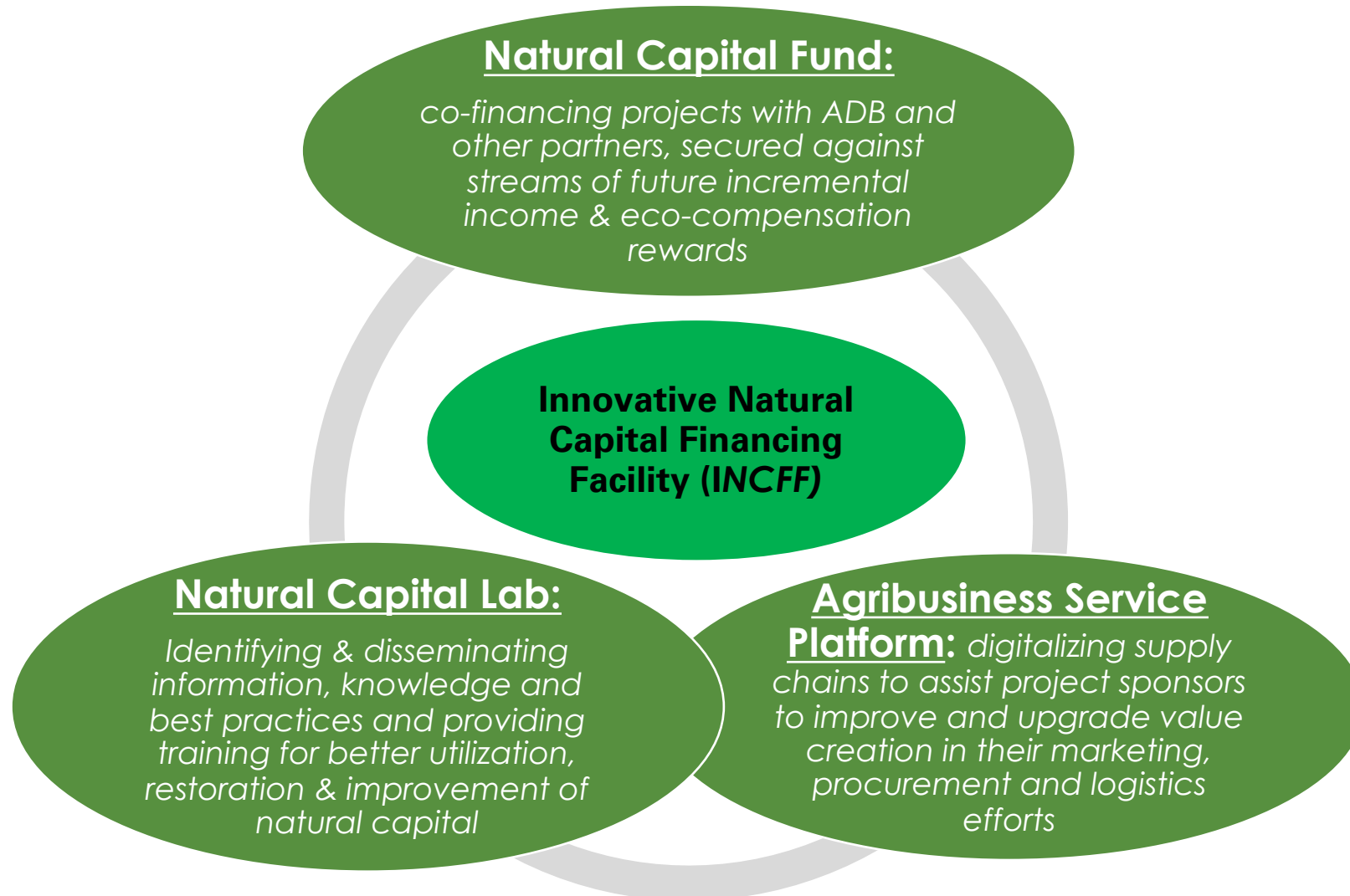
Climate Mitigation—investments that result in reduced GHG emissions, e.g., reducing energy use in production, processing, and distribution of food; improving existing carbon pools such as rangeland/pastureland management; generating energy from agricultural waste; rehabilitating degraded lands; afforestation and reforestation; safely disposing animal waste, etc.

FOOD SYSTEM TRANSFORMATION REQUIRES PUBLIC AND PRIVATE FINANCE, BUT BARRIERS EXIST

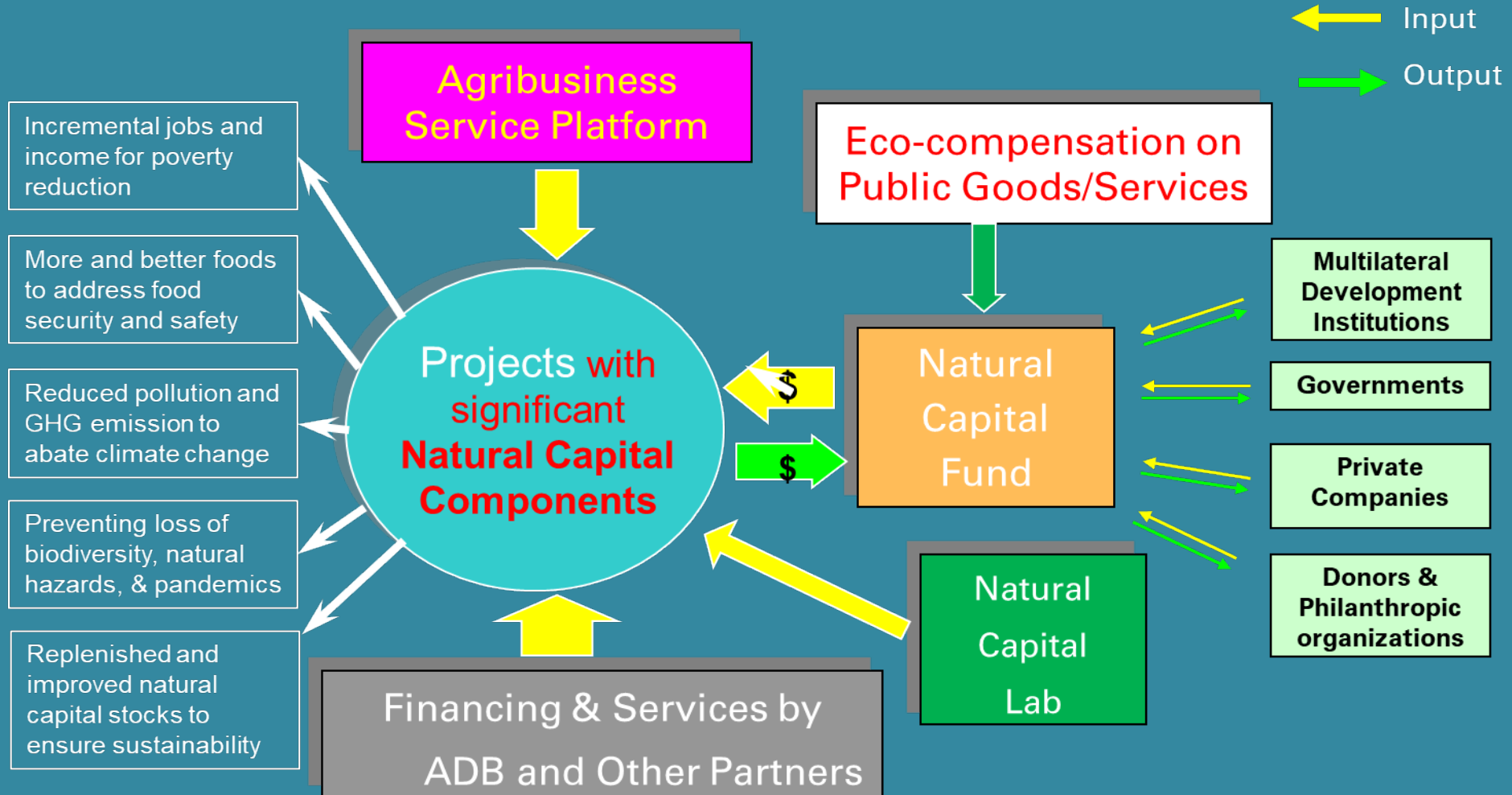


Innovative Natural Capital Financing Facility (INCFF)

Three Pillars to Support Projects with significant “Natural Capital Components”:
which are underpinned by, and will augment, ADB’s core project financing services



INCFE Supplements Sponsor Financing



- Existing 2016-2020 ADB portfolio over US\$ 10 billion
- Future pipeline 2021-24 over US\$ 15 billion

AGRIBUSINESS SERVICE PLATFORM

- Branding and certification services
- On-line and off-line marketing services
- Legal and contracting services
- Accounting and taxation services
- Financial leasing brokerage services
- Cold-chain logistics services
- Group insurance brokerage services
- Human resource management services
- Input procurement assistance

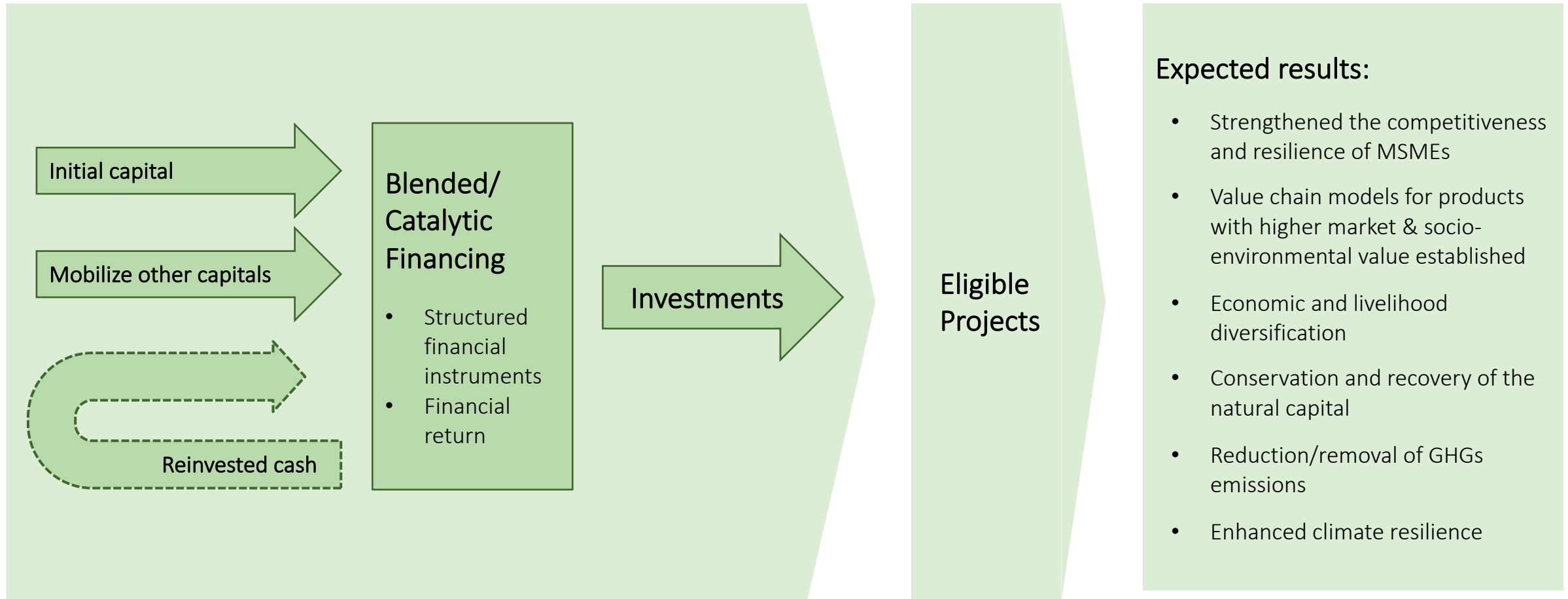
Adopting market-oriented approach and full-cost accounting principles

Mobilizing participation of NGOs, volunteers and young entrepreneurs

Digitalizing the value chains, based on big-data, artificial intelligence and cloud computing

Benefiting from the economy of scale: Serving N+1 client at marginal costs

ADB SOLUTION TO CATALYZE CAPITAL FOR INVESTMENTS – A Project Example in PRC



KEY FEATURES

**Scale up across
*Asia-Pacific Region***

ADB

Feature 1
**Eco-
compensation to
capture
ecosystem
services**

Feature 2
**Digital
technologies to
enhance
traceability of
eco-products**

Feature 3
**E-commerce
platform to
register and
support the
possible
trading**

CONSTRUCTING A DIGITAL PLATFORM FOR AGRIBUSINESS SERVICES

-- Mongolia Green Regional Development Investment Program

Partnering with

- Government Agencies
- Academic Institutions
- NGOs and Voluntary Groups
- Agriculture Extension Service Stations
- Providers of Professional Services
- Microfinancing Networks
- Association of Agricultural and Consumer Cooperatives

Information Services

- Market demand/supply/competition
- Price fluctuations and trends
- Weather forecasting
- Early warning for natural and market risks
- Peer exchange forum
- Expert advices
- ...

Technology Services

- New-tech demonstration
- Innovation incubation and acceleration
- Smart production and post-harvest management
- Standardization/Certification/Packaging
- Virtual workshop
- Online training and learning
- ...

Transaction Services

- Legal right clarification and protection
- Forward contracting
- Input procurement
- Equipment buying/leasing
- Output marketing/sales
- Logistics/distribution arrangements
- ...

Financial Services

- Revenue/payment facilitation
- Warehouse receipt/account receivable financing
- Credit enhancement on collaterals
- Financial leasing
- Guarantees/Insurance on marketable risks
- Tax and subsidy handling
- ...

- **Demand driven:** Severing practical needs of smallholders; aggregating their purchase/market powers
- **Accumulative:** Growing dynamically over time to accumulate expertise and experiences; facilitating cross-fertilization
- **Interactive:** Combining digital interface with on-ground face-to-face interactions
- **User friendly:** Accessible with cellphones in local languages

Remote Sensing
& Tracking

InterNet of
Things

Big Data

Blockchains

Cloud
Computing

Artificial
Intelligence

Virtual Reality

Machine
Learning



Thank you!