BCG IN ACTION: THE NEW SUSTAINABLE GROWTH ENGINE

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Post-COVID-19 Development Strategies

Move Forward, Left No One Behind

Sufficient Economy Philosophy (SEP) for Sustainable Development Goals (SDGs)

Strengthen from Within, Connect to the World

Move Forward, Left No One Behind
**BCG Economy: Thailand’s Economic Model Post-COVID-19**

**Principle:**
Sufficient Economy Philosophy

**Goal:**
Sustainable Development Goals (SDGs)

- Food Security
- Health Security
- Energy Security
- Employment Security
- Sustainable Natural Resource and Environment
BCG Economy: Strengthen from Within

- Food and Agriculture
- Medical and Wellness
- Energy, Material and Biochemical
- Tourism and Creative Economy

Biodiversity  Cultural diversity

- Policy and Management
- Science, Technology and Innovation
- Participation from All Sectors
BCG Economy: Connecting Thailand to the World Community

BCG Economy reaches all levels from community to country and the world.

World Level

Country Level

Communities Level

Food and Agriculture
Medical and Wellness
Energy, Material and Biochemical
Tourism and Creative Economy

BCG Economy Model
BCG Area-Based Development

Northern Area 4.0
- Innovative Rice Product
- Good Agriculture Practice (GAP) for Export
- Wellness Tourism Integrating with Cultural Tourism
- Connecting “Lanna” Cultural to New Product and New Service Development

Southern Area 4.0
- Innovation for Halal Products
- High Valued Tourism in 3 Southern Border Provinces.
- Precision Aquaculture
- Creative Area-Based Development with Southern Charm and Multi-Cultural Basis

Central Area 4.0
- Zero Waste
- Active Ageing
- Enhancing New and Innovative Cultural Tourism

Eastern Area 4.0
- Enhancing Agricultural Productivity (Especially Fruits)
- Enhancing Future Industries
- Creative Tourism Activities

North Eastern Area 4.0
- Protein from Insects
- Opisthorchiasis Prevention Scheme
- Water Management System for Small and Local Reservoirs
- Cultural Tourism Along the MeKhong River Border
Strategic Goals

- Income increases from 3.4 trillion Baht (21% of GDP) to 4.4 trillion Baht (24% of GDP)
- Employment rises from 16.5 million to 20 million
- Growth with size of pie to all instead of share of pie to some
- Growth from people power not from market power (where big fish eats small fish)
Strategic Outcome of BCG Economy Model

- Rank Top 5 Food Security Index within 5 years
- Reduction of Inequality in Accessing to Medicines and Medical Supplies
- Distribution of Income Equality >10 Million People
- Reduction of 2/3 Amount of Current Natural Resources Consumption
- Reducing Pollution and Environmental Impact, i.e., PM$_{2.5}$, Polluted Water, Waste
- Promotion of Sustainable Marine Tourism Reduction of Aquatic and Rare Marine Species
- Restoration of Natural Resources, i.e., Mangrove Forest, Coral Reefs
- Creation of Knowledge-Based Society and Resiliency for Thai People
- Reduction of Risks of Infectious Diseases from Human, Plant and Animal as well as Climate Change
- Rank Top 3 in Asia and Pacific in Tourism with Sustainable Measure and Proper Tourist Site
Thailand’s Challenge

**Food and Agriculture**
- 12 Million People Working in Agricultural Sector
- 90% of Agricultural Land Usage Limited on only 6 Majors Crops: Rice, Sugarcane, Cassava, Rubber, Oil Palm, and Corn
- Challenges:
  - Volatile crop price and low income farmer
  - Deteriorating natural resources
  - Aging Workforce

**Medical and Wellness**
- 100 Billion Baht Imported Value of Medical and Pharmaceutical Products
- 1.4 Trillion Baht Estimated Healthcare Expenditure when Thailand Becomes Super-Aged Society
- Challenges:
  - Aging society
  - Dependent on the import of medical equipment and pharmaceutical products

**Energy, Material and Biochemical**
- 60% of Energy Consumption are Imported
- Only 16.5% of Domestic Energy Production Come from Renewable Energy
- Challenges:
  - Energy security of the country
  - Reduction of the import of energy

**Tourism and Creative Economy**
- 3 Trillion Baht Income from Tourism (Rank 4th in the World)
- 80% of Tourists or 35 Million People Travel to Only 8 Provinces
- Challenges:
  - “Overtourism” number of tourists over the carrying capacity of the location
  - Deteriorating natural resources
Turning Challenges to Opportunities

**Challenges**
- Climate Change and Global Warming
- Economic Crisis
- Pandemic Crisis
- Terrorism
- Pollution and Environment

**Strengths/Weaknesses**
1. High food security and being kitchen of the world, despite being mired in a low valued-added export trap
2. Strong health security but need to import medicine, materials and medical devices
3. Rich in biodiversity and cultural diversity but focusing on quantity rather than quality tourism

**Thailand’s Growth Opportunities**
1. Global trend of development is to be balance and sustainable
2. Consumers focus on quality, hygienic safety and international standard
3. New lifestyle leads to market opportunity for health products and services

**Thailand’s positioning in the world forum**
1. Hygienic Kitchen of the World
2. High Value-Added Products from Innovation and Creativity
3. Healthy People (Prediction/Preventive/Precision)
4. Happy Destination
5. Harmonious and Sustainable Society

**Prominent Threats**
- Climate Change and Global Warming
- Economic Crisis
- Pandemic Crisis
- Terrorism
- Pollution and Environment

**Future Opportunities**
- New lifestyle leads to market opportunity for health products and services
BCG DRIVERS: 4 Drivers

4 Sector Development
- Food and Agriculture
- Medical and Wellness
- Energy, Material and Biochemical
- Tourism and Creative Economy

Area-Based Development
- Northern Economic Corridor (NEC)
- North Eastern Economic Corridor (NEEC)
- Eastern Economic Corridor (EEC)
- Southern Economic Corridor (SEC)

Talent & Entrepreneur Development
- BCG Startups
- Innovative Driven Enterprises (IDEs)
- Smart Farmers
- High-Value Service Providers
- Deep Technology Developers
- Creative Entrepreneurs

Frontier Research and Knowledge Development
- Complex Microbiota
- Terahertz
- OMICs
- Decarbonization
- Bioprocess Engineering
- HPC & AI
- Gene Editing & Synthetic Biology
- Advance Digital Platform
BCG ENABLERS: 4 Enablers

**Regulatory Framework**
- Regulatory Sandbox
- Product Life-Cycle
  - Biodiversity Act
  - Bayh-Dole Act

**Capacity Building**
- BCG Career Path
- BCG Skill-Set
- BCG Curriculum
- Non-Degree Programs
- Digital/Deep Technology Innovation

**Facility and Infrastructure**
- National Biobank
- National Quality Infrastructure (NQI)
- High Performance Computing for AI & Big Data
- Countrywide-High Speed Internet Network

**Global Network**
- BCG Global Forum
- International Organizations
- Global Universities
- Global Research Institutes
- Global Digital & Tech Companies
7 Adjustment Scheme

**From**
- Government-Led
- Government Spending
- Annual Budget Allocation
- Project-Based Research Funding
- Old Economy
- Internal Determinants of Economic Growth
- Working in Silo

**To**
- Private Sector-Led
- Government Investing
- Budget Allocation for Ongoing Investment
- Block Grants (Research, Development, Production and Innovation)
- New Economic Engine
- External Determinants of Economic Growth
- Working In Synergy to Go Forward Together
Value Creation in 4 BCG Sectors

- **Innovation**
  - High-Valued Food/Ingredients
    - Bioprocess
    - Biorefinery
    - High-Valued Functional Food
      - Seed/Precision Farming
  - Precision Medicine
    - Omics
    - Biosimilar, Herbal and Medical Products
      - Bioactive Compound
  - High-Valued Substance
    - Bio-Materials
    - Bio-Energy
      - Biomass/Agro-Based Materials
  - High-Valued Tourism
    - Geographical Identification
      - Digital Tourism Management System

- **Productivity**
  - Food and Agriculture
  - Medical and Wellness
  - Energy, Material and Biochemical
  - Tourism and Creative Economy

BCG Digital Platform
BCG Economy Model in Food and Agriculture Sector

Satellite Imaging to Manage and Monitor Agricultural Crop

New Economic Crop and Livestock

Decision Making System Based on Market and Area

Precision-Agriculture

New Plant Breeding Techniques (Draught Resistance, Flood Resistance, Insect Resistance)

Smart Farmer

Closed System Smart Greenhouse

Marine and Aquaculture

Small Agricultural Machinery

Premium Agricultural Products
BCG Economy Model in Medical and Wellness Sector

Thailand Medical Hub

- Gene Therapy
- Vaccine and Biosimilar
- Medical Equipment
- Clinical Research
- Tel-Medicine
- Herb Extraction for Medicine and Cosmetic Products

Genomic Data for Personalized Treatment
BCG Economy Model in Medical and Wellness Sector

Agricultural Product and Waste
- Economic Crop
- Agricultural Waste
- Agricultural and Industrial Waste

Investment Promotion
- Biomass Power Plant
- Biorefinery Pilot Plant

Industrial Development
- Ethanol/Bio-Diesel
- Bio-Plastics/Bio-Chemicals
- Hydrogen-Based Fuel
BCG Economy Model in Tourism and Creative Economy Sector

- Tourism in Secondary Cities and Communities
- High Quality Tourism
- Wellness Tourism
- Standard for Tourism Sites (Convenience/Clean/Safe)
- Sustainable Tourism Standard System
- National Guideline for Tourism
- Creative Cities and Creative Products