

**PROJECT INFORMATION DOCUMENT (PID)
IDENTIFICATION/CONCEPT STAGE**

Report No.: PIDC23683

Project Name	Vietnam Climate Innovation Center (VCIC) RETF
Region	EAST ASIA AND PACIFIC
Country	Vietnam
Sector(s)	Irrigation and drainage (25%), SME Finance (25%), Other Renewable Energy (25%), General industry and trade sector (25%)
Theme(s)	Micro, Small and Medium Enterprise support (40%), Export development and competitiveness (10%), Technology diffusion (20%), Climate change (30%)
Lending Instrument	Lending Instrument
Project ID	P155260
Borrower Name	Ministry of Science and Technology (MOST)
Implementing Agency	National Agency for Technology Entrepreneurship and Commercialization (NATEC)
Environment Category	B - Partial Assessment
Date PID Prepared	30-Jun-2015
Estimated Date of Approval	14-Sep-2015
Initiation Note Review Decision	The review did authorize the preparation to continue

I. Introduction and Context

Country Context

Vietnam has a high and increasing exposure to slow onset of climate change impacts associated with rising sea-level, ocean warming and increasing acidification combined with tropical cyclones and rapidly increasing heat extremes. The combined impacts will have adverse effects on several sectors simultaneously, ultimately undermining livelihoods. The main physical impacts in Vietnam from projected climate change include heat extremes, sea-level rise, tropical cyclones, and salt-water intrusion. These impacts are exacerbated by land subsidence caused by human activities and will increase the vulnerability of both rural and urban populations to flooding, saltwater intrusion and coastal erosion.

At the same time, Vietnam is a rapidly growing economy, with high rates of population growth and urbanization. Over the past decade, Vietnam has achieved a growth rate of over 7 percent and its energy demand has been growing concurrently, and will at least triple by 2030, relative to 2010. Much of the future additional energy demand will be met by coal-fired power plants. Growth has gone hand-in-hand with increasing GHG emissions. Relative to 1990, GHG per capita rose from 0.3 to 1.2 tonnes CO₂e by 2007, while emissions intensity was high, at 4.48 tonnes of CO₂e per USD 1m of GDP. It is forecast that total emissions will be 500 million tonnes of CO₂e in 2030.

Finding local solutions to climate change problems and alternative sources of clean energy and

improving energy efficiency will be a decisive factor in ensuring sustainable growth and improving competitiveness as well as contributing to the reduction of greenhouse gas emissions (GHG), increasing resource efficiency and enhancing access of the poor to core services. Water saving technologies, ICT applications, and flood-resistant crops will help to mitigate the climate change impact on the economic sectors.

Vietnam has a dynamic and entrepreneurial labor force, good mechanical and engineering skills and low labor costs. The country has embarked on policies to support entrepreneurship through its national innovation policy development as well as establishment of clusters and incubators. Small- and medium-sized enterprises (SMEs) are increasingly seen as an important source of innovative capacity and green job creation in Vietnam.

Sectoral and Institutional Context

This nascent climate change and innovation policy framework is opening up many opportunities to develop clean technologies that can address the climate change challenges, while at the same time spur innovation, improve competitiveness and resource efficiency of enterprises, and create jobs in Vietnam. There is increasing recognition that, to avoid the middle-income trap, Vietnam needs to focus on developing its capacity to innovate.

The new climate deal in Paris is shaping up to a comprehensive package that will bind middle-income countries like Vietnam to cap the growth of emissions, boost climate resilience and roll-out clean technologies. In parallel, Vietnam's nascent climate change and green growth domestic policy framework indicates that the country is serious about cutting carbon intensity, exploiting energy efficiency opportunities and building in greater climate resilience into development planning.

In the last five years, Vietnam has actively developed the legal and policy framework for environmental protection, energy security, scientific and technological development, climate change and green growth.

Vietnam is currently developing the five-year socio-economic development plan 2016-2020 and striving to fulfill the objectives set out in the Socio-economic Development Strategy 2011-2020 with comprehensive efforts to respond to climate change and to promote green growth.

At the highest level, the National Assembly enacted the Law on Energy Saving and Efficiency (2010), the Law on Science and Technology (2013), the Law on Disaster Prevention (2013), and revised the Law on Environmental Protection (2014) with one additional chapter on climate change response. The Government of Vietnam (GOV) has actively issued a number of policy frameworks (strategies, action plans and national programs) related to climate change, green growth, specifically, the National Climate Change Strategy (NCCS, 2011) and the Vietnam Green Growth Strategy (VGGGS, 2012), and the accompanying National Climate Change Action Plan (NCCAP, by October 2012) and National Green Growth Action Plan (NGGAP, by March 2014). The policy framework aims to reduce the intensity of greenhouse gas emissions by 8-10 per cent up to 2020, relative to 2010, and the energy consumption per unit of GDP by 1-1.5 per cent per annum over the same time period. It aims to reduce annual greenhouse gas emissions by at least 1.5 – 2 per cent by 2050. It also foresees greener production by ensuring that the development of green industry is based on environmentally friendly technologies and equipment. The VGGGS sets out key targets for green production, including that the application of clean technologies will reach 50 per cent of

enterprises. Achieving these green growth targets will help enterprises to become less energy-intensive and, hence, more competitive.

In June 2013, the Party Central Committee issued Resolution No. 24-NQ/TW to "actively respond to climate change, enhance resource management and environmental protection." It was instructed to mobilize resources, strengthen the necessary capacity to implement and promote institutional improvements to overcome the challenges, ensure macroeconomic stability, energy security, limiting GHG emissions and addressing the increasingly polluted environment.

To support enterprises engaged in innovation, science and technology (S&T), the Government has set up a Department of Small and Medium Enterprise Development (in the Ministry of Planning and Investment), the Vietnam Chamber of Commerce and Industry (VCCI) and especially the National Agency for Technology Entrepreneurship and Commercialization (NATEC) under the Ministry of Science and Technology. Founded in 2011, NATEC develops the technology market and supports the formation and development of science and technology businesses in the country.

To support investment in S&T development from incubation to commercialization of products, a number of funds have been established such as the Small and Medium Enterprise Development Fund, the National Foundation for Science and Technology Development, Science and Technology Development Funds of enterprises, and the recent Technology Innovation Fund, which has raised a trillion Dong. These funds are state-owned non-profit financial institutions providing preferential loans, interest support, credit guarantees, capital support to organizations, individuals and businesses to conduct research, transfer, innovation and improving S&T products.

However, support to promote private sector development in innovation is still very limited or almost negligible. The private sector is seen as an increasingly important actor to achieve green growth, able to contribute to implementing energy-efficient, low-carbon solutions for production; reducing, reusing, recycling or treating waste from production; fostering innovation, absorbing, using and deploying clean technologies that respond to local needs; assessing and managing climate change impacts and inherent risks on assets, business and value chains; mobilizing financing for mitigation and for adaptation actions; and applying their expertise, country experience to implement solutions and build capacity. Business is key to mobilizing and deploying technologies and investments through foreign direct investment, trade and commercially-based, global partnerships with supply and value chains.

The VCIC will focus primarily on two priority climate technology sectors: energy efficiency and sustainable agribusiness. Other immediate areas of importance for Vietnam included adaptation technologies, transportation and water management and purification.

Relationship to CAS/CPS/CPF

The CPS is aligned with Vietnam's Socio-Economic Development Strategy (SEDS) 2011-2020, and Socio Economic Development Plan (SEDP) 2011-2015, which give attention to structural reforms, environmental sustainability, social equity, and macroeconomic stability. Increasing competitiveness, sustainability and access to opportunity are key pillars of country partnership strategy of the World Bank in Vietnam, 2012-2016, with cross-cutting themes of governance, gender, and resilience.

The current project will contribute to achieving the first two pillars of the CPS, namely, strengthening competitiveness, and increasing the sustainability of its development. It will also improve climate resilience, as a cross-cutting issue. Related to improved competitiveness, the VCIC will help to address the low value added of GDP and the weak innovation capacity and the related low skills base of the Vietnamese labor force. In respect of sustainability, it will help to address the management of water and land resources; the conservation of forests and biodiversity; pollution control; mitigation and adaptation measures in light of Vietnam's high vulnerability to climate change; and disaster risk management in light of the country's increasing exposure to risks posed by extreme weather events.

Under the competitiveness pillar, it will help to achieve Outcome 1.3: Increased Capacity for Innovation and Value Addition, and should contribute to higher value chains, rural SMEs, and jobs creation. For the pillar on sustainability, it will contribute to achieving Outcome 2.1: Improved Natural Resource Management (“Green”), especially increased water productivity, Outcome 2.2: Strengthened Environmental Protection and Management (“Clean”) Pollution reduction, through climate change mitigation, and Outcome 2.3: Enhanced Preparedness for Natural Hazards and Climate Change (“Resilient”), in particular, climate change adaptation.

The VCIC project is complementary to a number of other sector projects and the team will explore and promote linkages with water, environment and agriculture team and continue to explore collaboration potential with the planned Mekong Delta Climate Resilience Project and other projects.

II. Project Development Objective(s)

Proposed Development Objective(s)

The development objective of the project is to support entrepreneurs and small and medium enterprises involved in developing local solutions to climate change and increase business activity in the climate technology sector through the establishment of a locally-based climate innovation center.

Key Results

The project will provide targeted support, mentoring, training and funding facilitation to up to 48 clean technology ventures in Vietnam over 3 years. Through modeling the VCIC’s deal flow using benchmarks from company data in the region, it is projected that after 3 years, up to 48 VCIC-assisted companies could generate approximately 250 jobs directly and indirectly.

III. Preliminary Description

Concept Description

The proposed project will finance the establishment of a Climate Innovation Center (CIC) in Vietnam through a three year \$3.8 million RETF grant. The VCIC will be part of the global network of 7 Climate Innovation Centers (CICs) being launched by the infoDev Climate Technology Program. The project has three components and main activities, as below:

Component I: Establishment of VCIC and its operations. Activities under this component include:

1. Development of VCIC and its operations:
 - o Developing and coordinating VCIC operation planning to implement components 2 and 3 and promote cooperation with private sector on climate change innovation (PPP model);
 - o Providing finance for lease of space and purchase equipment of VCIC, costs of printing and

publishing documents;

- o Preparing conditions for establishment and operation of Climate incubation and innovation fund in the future
 - o Promoting cooperation between VCIC and funds of Ministry of Science and Technology;
2. Establishment of Project Management Unit and its operations, including activities such as:
- o Setting up a Project Management Unit team and managing the project in accordance with current regulations, after VCIC is put into operation; focusing on supervision monitoring and coordination between VCIC with organizations under the Ministry of Science and Technology;
3. Support policy development in cleantech innovation, including activities such as:
- o Encouraging dialogue between government and private sector to study, pilot, and develop a policy framework to support private investment and develop climate associations;
 - o Collecting feedback and lessons learnt from the deployment and implementation of the VCIC to propose policies in supporting development of climate innovation.

Component II. Services to cleantech entrepreneurs including Grants to enterprises

Activities will include:

1. Pre-incubation of climate innovation technologies and enterprises, including activities such as:
- o Searching, selecting and supporting incubation for organizations and individuals with novel ideas around climate innovation, through grant competitions ;
 - o Connecting and guiding organizations and individuals with novel ideas around climate change to participate in global grant competitions, find opportunities, and access investors around the world;
 - o Organizing workshops and fora to introduce and connect organizations and individuals with feasible, innovative ideas around climate technologies, with investors and government authorities to solicit funding for incubation.
2. Incubation of climate innovation technologies and enterprises, including activities such as:
- o Organizing training courses and providing professional services for start-up businesses at early stage to develop and realize ideas, as well as create products with high potential for commercialization
 - o Connecting entrepreneurs with experts and research facilities in order to research and develop new products;
3. Commercialization support, including activities such as:
- o Performing market surveys, analysis reports, and other analyses related to opportunities in climate innovation technology;
 - o Connecting enterprises with the market, based on the understanding of location, channels, and competitors; find the best way to help enterprises connect to the global market;
 - o Supporting enterprises to develop their brand name and participate in technological exchange;
 - o Supporting the product promotion of the VCIC enterprises through VCIC's website and other social PR activities.
 - o Connecting startup businesses with angel investors and business consultants at national, regional and global level;
 - o Training business start-ups in accordance with the financial investment of VCIC business planning, financial management, business strategy, etc.;
 - o Organizing and promoting investment between VCIC companies and financial experts, the

- State Development Bank, and Vietnamese diaspora to enhance capacity.
- o Providing one-on-one coaching, training and consultancy services.
4. Grants to the enterprises, including activities such as:
- o Providing grants for selected proposals and activities.

Component III. E-portal, online services and database on cleantech

Activities will include:

- o Creating a database on technology, enterprises, and experts working in the field of climate change in Vietnam;
- o Developing an e-portal, with all this information gathered and centralized;
- o Disseminating, exploring and efficiently using the database on technology to support the activities on climate innovation.

IV. Safeguard Policies that Might Apply

Safeguard Policies Triggered by the Project	Yes	No	TBD
Environmental Assessment OP/BP 4.01	x		
Natural Habitats OP/BP 4.04		x	
Forests OP/BP 4.36		x	
Pest Management OP 4.09	x		
Physical Cultural Resources OP/BP 4.11		x	
Indigenous Peoples OP/BP 4.10		x	
Involuntary Resettlement OP/BP 4.12		x	
Safety of Dams OP/BP 4.37		x	
Projects on International Waterways OP/BP 7.50		x	
Projects in Disputed Areas OP/BP 7.60		x	

V. Financing (in USD Million)

Total Project Cost:	5.18	Total Bank Financing:	0
Financing Gap:	1		
Financing Source			Amount
Borrowing Agency			0.38
InfoDev			3.8

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