

GETTING AHEAD OF CLIMATE CHANGE FOR BUSINESSES: RISKS, REGULATIONS, AND OPPORTUNITIES

SYNTHESIS FINDINGS FROM EXPERT PANEL
VIETNAM GREEN BIZ
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Climate Change is Already Impacting the Private Sector

Natural disasters related to climate change pose direct risks to supply chains in Vietnam and Southeast Asia, threatening profits and business vitality. In addition, new types of global legal, reputational, insurance, and financial risks associated with climate change will become increasingly important for both small-and-medium sized enterprises and multinational corporations.

In 2011, a devastating flood in Thailand disrupted international supply chains when floodwater inundated seven low-lying industrial estates. As a result:

- Insurance premiums for manufacturers in Thailand tripled in 2012; and
- 45% of factories in Ayutthaya province had not yet restored full operations one year after the flood.

Like Thailand, Vietnam is expanding and putting major investments in high risk floodplains. Vietnam's unique geography makes it significantly more exposed to climate change impacts. Current standards for siting infrastructure and urban development are based on historical experience that does not reflect the changing climate. Under these circumstances, risk management becomes a priority for manufacturers, logistics companies, insurers, investors, and real estate developers.

The Risks

Climate risk, environmental regulation, and adaptation are becoming increasingly important for companies with business interests in Vietnam.

Legal Risks

Force majeure clauses limit contractual obligations in the case of an unforeseeable events, such as natural disasters (“act of God”). However as climate science becomes increasingly sophisticated, companies are being challenged for employing force majeure, since many extreme events are now considered to have been foreseeable. This indicates a rising legal obligation for companies to consult climate change information and mitigate risk in their operations.

Failure to Plan

Small Medium-Sized Enterprises (SMEs), account for 40% of Vietnam’s GDP and 80% of the work force. Though heavily affected by disasters, most Vietnamese SMEs have not put in place disaster risk reduction or response strategies and have limited access to disaster risk reduction consultant advisory services or insurance.

Trans-Pacific Partnership

Local companies will face rising demand from international investors to disclose their disaster risks and risk management practices. The emerging Trans-Pacific Partnership (TPP) will increase foreign investment in Vietnam, expand Vietnamese export markets—and is likely require companies to adhere more strictly to domestic regulations and international agreements on environmental protection for a variety of sectors.

Insurance Risks

Businesses rely on insurance companies to take on these risks—but internationally, insurance companies have reacted to recent disaster events by withdrawing or limiting their coverage, removing access to the standard way this type of risk is managed.

The Future

Business leaders now have the opportunity to lead Vietnam towards a stronger, more resilient economy—moving beyond compliance measures and initiating resilience planning in their companies and sector.

Early Adaptation

Internationally, companies that adapt early to climate change have been shown to have a strong competitive advantage. Individual companies can assess their risks, plan for disasters, and begin to integrate climate change into long-term strategic decision making.

A Need for Adaptive Policy

Business and industry associations have an important role in lobbying governments for adaptive regulation, planning and risk management strategies, such as appropriate flood plain zoning and protection of eco-systems that provide critical services.

Information is Available

Information and resources are available to companies looking to assess their risks, and implement or improve their adaptation strategy. These include international studies on climate impacts, research on effective adaptation and risk management strategies, as well as consulting firms offering adaptation advice and options.

Green Biz Panel



On September 20, 2013 ISET-Vietnam convened an expert panel on the risks climate change poses to the private sector in Vietnam.

This panel presented on their international and national experiences, providing an overview of:

- Financial, legal, and reputational risks associated with climate change;
- Implications of emerging regulations and trade agreements; and
- Opportunities for building green, resilient cities.

PRESENTATIONS

- 5 **Flood Hazards, Urbanization, and Climate Change**
Dr. Michael DiGregorio, Consultant to ISET-Vietnam, Hanoi, Vietnam
- 6 **Climate Change and the Private Sector: Emerging Risks**
Donovan Burton, Climate Change Analyst, Climate Planning, Australia
- 7 **Climate Change and the Private Sector: Strategic Approaches**
Jules Livingstone, General Manager, Complexitas, Australia
- 8 **International Trade Agreements and Environmental Regulations for Vietnam**
Robert Schiffer, Managing Director, Indochina Renewable Resources Management, Vietnam
- 9 **Mitigating and Adapting to Flood Risk: Implications for Small Medium Enterprises**
Luu Duc Cuong, Director of Center for Research and Planning on Urban and Rural Environment, Vietnam National Institute for Urban and Rural Planning
- 10 **Capacity Enhancement of Disaster Risk Management for Vietnamese Enterprises**
Pham Ngoc Thach, Legal Analyst, Vietnam Chamber of Commerce and Industry
- * **Moderated by Sarah Orleans Reed**, Urban Programs Advisor of ISET-Vietnam

PRESENTATION 1

FLOOD HAZARDS, URBANIZATION, AND CLIMATE CHANGE

MICHAEL DIGREGARIO, ISET-VIETNAM CONSULTANT



Watch Mike's Presentation
tinyurl.com/GreenBizMike

In 2011, Thailand experienced five storms in the period of late summer to early autumn. Water released from dams in the north cascaded into the Chao Praya River. Floodwater poured over dikes near Ayutthaya, 80 kilometers north of Bangkok, then spread into low-lying areas in the province and into Pathum Thani, before discharging into the Gulf of Thailand. Seven industrial estates are located in the low-lying areas. Moody's Investors Service estimated that the 2011 floods led to USD 6.5 billion in damages to industry, accounting for 2% of Thai GDP.

Before the flood, urban planners had urged the government to use the low-lying areas of Ayutthaya and Pathum Thani as a floodway and locate industry on higher ground to the west of Bangkok. Despite the potential risk, this area east of Bangkok became an industrial development corridor. Following the flood, the Thai government and investors have attempted to restore investor confidence by constructing 80 km of flood protection dikes around industrial zones. Cities and towns along the river followed suit by raising their own dikes,

leaving farmers and others living outside protected areas to face increased risks.

Vietnamese cities have been expanding in a pattern similar to that of Thai cities. New urban developments in Da Nang and Quy Nhon, for example, are being constructed in low-lying areas despite long histories of recurrent floods.

PRESENTATION 2

CLIMATE CHANGE AND THE PRIVATE SECTOR: STRATEGIC APPROACHES

JULES LIVINGSTONE, COMPLEXITAS SSA



Watch Jules' Presentation
tinyurl.com/GreenBizJules

Despite the number of high profile disasters across the world that are impacting corporations—their supply chains, investors and insurers—businesses have been slow to adapt to climate change. Reasons for this include:

- Businesses have primarily understood climate change in terms of mitigation.
- Disaster risk reduction is often seen in terms of disaster risk response
- Conventional risk management practice

requires a level of risk to be quantified.

- Within most corporations, it is unclear who is responsible for addressing climate change risks and adaptation.

Rather than addressing climate change risk separately, there is a need to embed it as a part of an organization's risk management strategy. This in turn enables top level management to take climate change into consideration during strategic decision-making processes and to perceive climate change as a long-term risk. Incorporating

climate change into a risk management strategy may provide opportunities for organizations to increase their resilience, business continuity and recovery, rather than merely avoiding the impacts.

While Corporate Social Responsibility strategies can provide important insights for adaptation, it is important for organizations to distinguish their climate change adaptation strategies from existing CSR, compliance and reputational risks.

Adaptation needs to go beyond compliance with existing planning, design and development regulations rather than taking signals from governments that may not have policies in place that respond appropriately to climate change risks.

Organizations need to separately define an adaptation strategy. Private sector organizations also need work in collaboration with governments to ensure regulations—such as flood plain zoning—are more stringent and thereby, decrease the risks imposed by climate change.

PRESENTATION 3

CLIMATE CHANGE AND THE PRIVATE SECTOR: EMERGING RISKS

DONOVAN BURTON, CLIMATE PLANNING



Watch Donovan's Presentation
tinyurl.com/GreenBizDonovan

In January 2013, The World Economic Forum identified failure to address climate change adaptation as one of the top ten threats to the global economy. Recent research reveals this as a major problem among both corporations and the insurance sector.

Results from the NCCARF funded Climate Change Adaptation in the Boardroom, a study that engaged 100 private and publicly listed companies in Australia, had disconcerting findings about the extent to which companies are recognizing risks associated

with climate change. The study found that very few corporations understand adaptation, often confusing adaptation and mitigation, and viewing climate change as part of a “green agenda” rather than a fundamental risk management issue. Ironically, natural resource companies, who are also the world’s largest greenhouse gas emitters, seemed to have some of the most advanced climate adaptation strategies.

According to the Global Investor Coalition on Climate Change, 80% of institutional investors recognize material risk to

portfolios from climate change—but only about 25% are taking direct action to address this risk.

Most businesses rely on insurance to take on these risks. However, it is becoming apparent that some insurers are not considering climate change adequately. For example, in the US, a study by the National Association of Insurance Commissioners found that only 13 % of insurers surveyed consider climate adaptation in their portfolio of risks and capital investments. Some insurers are feeling pressure from an increase

in extreme weather events, combined with intensification of development in exposed areas. In countries such as the US and Australia, insurance companies have reacted by withdrawing insurance in some locations and increasingly limiting what they will cover.

PRESENTATION 4

INTERNATIONAL TRADE AGREEMENTS AND ENVIRONMENTAL REGULATIONS FOR VIETNAM

ROBERT SCHIFFER



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Watch Robert's Presentation
tinyurl.com/GreenBizRobert

Vietnam's economy has grown over the last two decades thanks to the opening of trade barriers, allowing the country to foster technologies and industry for agriculture, fisheries, mining, and coffee among others. Bilateral trade agreements were instrumental in this, eventually leading to Vietnam's entrance into the World Trade Organization. New trade agreements will occur in the near future. In contrast to earlier agreements, future trade agreements will have stricter environmental obligations.

The Trans-Pacific Partnership (TPP), which is currently under negotiation, will represent 40% of world's GDP in free trade agreements between Malaysia, Australia, New Zealand, Brunei, Singapore, Peru, Canada, Mexico, and Japan. For Vietnam, this will have significant implications for garments and footwear exports, as a result of a reduction of tariff barriers, especially as factories increasingly relocate to Vietnam. Exports of agricultural products from Vietnam are expected to double.

The Environmental Chapter of TPP, currently under negotiation, includes obligations to abide by domestic environmental laws and multi-national environmental agreements (i.e. related to conservation, illegal logging, wildlife, agricultural trade, agricultural subsidies, and illegal over-fishing). A third clause would allow member states to challenge adherence to laws through dispute settlement mechanisms. This would be the first multi-lateral agreement with these types of binding environmental commitments for Vietnam. This third clause is

the most controversial element of the chapter, and due to opposition from industry is likely to be narrowed through ongoing negotiations.

The final contents of TPP's Environmental Chapter has significant implications for environmental protection, which in turn is likely to enhance climate change adaptation (especially as related to eco-system services).

PRESENTATION 5

MITIGATING AND ADAPTING TO FLOOD RISK: IMPLICATIONS FOR SMALL AND MEDIUM ENTERPRISES

LUU DUC CUONG



Watch Cuong's Presentation
tinyurl.com/GreenBizCuong

© Justin Standing

Flooding is the most significant climate change hazard for Vietnam, with an increase in extreme rainfall contributing to extreme floods. The underlying causes of severe flooding are also related to urbanization patterns in flood plains and upstream land use changes, with urbanization outpacing the development of drainage systems and waste management. Within urban areas, poor waste management, overloaded drainage systems and concrete and impermeable surfaces contribute to increased

run-off and loss of drainage, thereby increasing flood risk. Early adaptation has a number of benefits for small and medium-sized enterprises (SMEs), such as mitigating the magnitude of risks and avoiding disruption, reducing operating costs through long-term site planning, and improving a company's image as an environmentally responsible enterprise. For SMEs, flooding presents a variety of supply chain risks related to an entity's location of operations and types of properties, transportation routes,

products, and manufacturing process. SMEs can mitigate risks by:

- designing defensive technical measures and ground level;
- providing sufficient on-site drainage and temporary water storage;
- developing permeable areas and green buffers;
- avoiding activities in locations which have been designated as drainage bodies (i.e. in-filling former lakes or flood

plains) or raising ground levels above surrounding areas; and

- treating waste water and managing solid waste.

PRESENTATION 6

CAPACITY ENHANCEMENT OF DISASTER RISK MANAGEMENT FOR VIETNAMESE ENTERPRISES

PHAM NGOC THACH



Watch Thach's Presentation
tinyurl.com/GreenBizThach

Vietnam is home to over 500,000 enterprises, accounting for 80% of the labor force and 40% of GDP. According to a report conducted by the Vietnam Chamber of Commerce and Industry and The Asia Foundation:

- 85% of enterprises are hit by seasonal storms, 45% by floods, and 12% by cyclones and high tide.
- Asset loss: Approximately 50% of enterprises have experienced losses to physical structures equipment, and/or products.
- Although 95% of enterprises are concerned about disaster risk management, only 54% have developed disaster preparedness and response plans, but among these many have insufficient capacities to implement.
- 47% of enterprises do not have a plan for protecting equipment and data. 43% do not have a plan for emergency duty assignment for staff, and 55% lack a production recovery plan.

Vietnam has a lack of companies or firms providing disaster risk management, and there are limitations in terms of the number and capacity of natural disaster insurance agents.

Disaster risk management policy is not integrated into one legal document, which creates challenges for organizations to seek comprehensive guidance. Regulations and relevant resources available for DRM are primarily focused on responding to and addressing the consequences of disasters rather than on prevention and risk mitigation. Disaster risk

management policy is also often devised for the household level, and less attention is paid to enterprises. A lack of precautionary measures and sanctions can lead to a low effectiveness level, particularly in relation to the business community and their practices.

Da Nang, Danapha Pharmaceutical firm was seriously damaged during Typhoon Xangsane. The enterprise's warehouse roofs were blown away, and parts of the building collapsed. As a result, raw materials, packaging materials, and products—all stored here—were damaged or destroyed.

Questions and Answers with Panelists

Moderated by Sarah Orleans Reed,
Urban Programs Advisor of ISET-Vietnam

QUESTION 1

What are some of the non-financial risks associated with climate change that companies might not foresee?

DONOVAN BURTON

There are two indirect impacts that have relevance for Vietnam:

1. Legal challenges associated with supply chain contracts, including force majeure clauses. Force majeure is a common clause that frees

contracted parties from liability in the event of an “act of God” or another unforeseeable event. As climate science becomes increasingly sophisticated, however, companies are being challenged legally for employing force majeure, since many extreme natural disasters are now considered to have been foreseeable. There is likely to be reduced opportunities to use force majeure as an escape clause for being ill-prepared.

2. There is a large percentage of SMEs in Vietnam who do not have a disaster management

plan and have no way of responding or managing the impacts of climate change. If SMEs in Vietnam want to be a part of global supply chain, they will need to realize that international investors will see poor contingency planning as a risk. The floods in Thailand and the poor management that ensued illustrate this. In the context of emerging free trade opportunities, SMEs are likely to be asked by large organizations about how they disclose and manage their risks. Foreseeing this future obligation and responding to it is likely to place SMEs that respond early at strong competitive advantage.

ROBERT SCHIFFER

An example of a company operating in Vietnam includes Nike, which has prioritized energy efficiency and elimination of hazardous chemicals.

As green labeling also becomes a higher priority for western consumers, it will be more important for suppliers in

Vietnam to be considering these types of issues.

QUESTION 2

What are practices in terms of multi-national companies in Vietnam, and what are good practices in terms of climate adaptation elsewhere?

JULES LIVINGSTONE

There are no companies who would receive “gold stars” for their work on adaptation. Those companies that are adapting do so either because they have previously been affected by an weather event or because they already have a strong culture of risk assessment and response. The companies who are implementing adaptation strategies have a competitive advantage that they do not want to share, so there’s no culture of exchanging practices or sharing

information about adaptation. A lack of regulation for adaptation and adaptation standards and benchmarks compounds the lack of information about adaptation measures and makes it difficult for investors to assess the exposure of potential and existing investments.

Information is available to assist in undertaking risk assessments, beginning with specific impacts - sea level rise maps, urban planning information, and coastal planning. The challenge is not mitigating any of these particular risks, but rather assessing and considering this risk in the entire supply chain. It's not enough to build a levee around your factory, for instance, if all of your workers, warehouses, and transportation systems are outside.

There exists a huge potential for the private sector to lobby government and set new standards. There is also need for compliance, which helps

organizations to meet stringent environmental standards.

QUESTION 3

What is Vietnam already doing in terms of regulating land use planning? what does it need to do? what are the extra steps that need to happen?

LUU DUC CUONG

While there are relevant urban planning regulations in place regarding flood standards, they have not changed significantly or quickly. Vietnam is undertaking two major assessment related to adaptation: a review of all construction standards considering climate impacts Vietnam association of built environment, and a review of construction planning standards considering impact of climate change. These will have

| Types of urban area / Function Areas | Special | Category I | Category II | Category III | Category IV | Category V |
|--------------------------------------|---|------------|-------------|--------------|-------------|------------|
| Central area | 100 | 100 | 50 | 40 | 20 | 10 |
| Industrial area | 100 | 100 | 50 | 40 | 20 | 10 |
| Residential area | 100 | 100 | 50 | 40 | 20 | 10 |
| Green area | 20 | 10 | 10 | 10 | 10 | 2 |
| Rural residential area | Civil area > H _{max yearly average} Public area > H _{max + 0,3m} | | | | | |

significant recommendations in terms of adding regulations for construction and urban planning codes, which enterprises will need to follow.

Commonly used flood frequency in Vietnam is 10 and 20 years for smaller cities (of which there are 70), whereas there are more stringent standards for larger cities. Even the most stringent standard of 100-year floods however does not account for climate change. Standards should assume that flood frequency will be doubled by 2050; thus, considering

200 year flood might be more appropriate.

QUESTION 4

What are the approaches of the Government to support Disaster Risk Reduction (DRR) and climate change adaptation? What approaches have been implemented?

PHAM NGOC THACH

The government's approach to adaptation includes a policy on adaptation with integration into other programs/projects that are implemented in cities and provinces. Those plans are well consulted at the national level; however, there still exist gaps between plans and reality at the local level.

QUESTION 5

What's the perspective of Vietnamese firms regarding natural disaster insurance factors? Why do the majority of Vietnamese firms not take this issue into account?

PHAM NGOC THACH

Research shows that enterprises consider governments as playing the key role in disaster risk reduction support and

planning processes. However, most enterprises have not taken into account the natural disaster insurance factors. They find that insurance approval procedures are complicated and time consuming. Many firms are unable to access bank loans due to their situation following a disaster, and banks estimate value of firms' assets as being very low.

QUESTION 6

What kinds of responsibility should the law prescribe on the part of private sector in order to cope with (or assist them to cope with) climate change risk for sustainable development purposes (from international experience perspective)

MARK BAKER-JONES

Special Counsel, Environment and Planning, DLA Piper, and Guest Respondent

Adaptation strategies need to target change at all levels, from the actions of individuals to the broad regime changes of those that manage systems. Consequently, legal frameworks are necessary to support and promote the adaptive capacity of organizations acting within those systems.

A legal framework can incorporate a broad range of mechanisms for dealing with risk. The mechanisms can take the form of regulatory controls and constraints. For example, legislation that regulates corporate governance can require corporations to report on their sustainability. In Australia, there is currently a proposal to amend the Australian Securities Exchange Corporate Governance Principles and Recommendations to require listed entities to disclose whether, and if so how, they have regard to economic,

environmental and social responsibilities. Land use and planning legislation in Australia also imposes a requirement to take into account climate change (eg, the *Sustainable Planning Act 2009* (Qld)). This is affected through a balancing exercise that government decision makers must go through when assessing the ecological sustainability of development, requiring consideration of the cultural, economic, physical and social wellbeing of people and communities.

However, the establishment of legal frameworks are only part of the process. Prescribing responsibility through legislation and regulation alone will not enable management of climate legal risk. There are multiple layers of organizational interest and whereas an appropriate legal framework will need to provide adaptation principles and goals, ultimately it is through the implementation process that adaptation occurs. This can only be achieved if decision makers

at all levels understand how their decisions affect or are affected by climate change. It is with the decision maker, we found, that knowledge and understanding of climate legal risk is most needed and most crucial.

See more from Mark on climate change and legal risk at <http://www.dlapiper.com/australia/people/detail.aspx?attorney=7822>



The Institute for Social and Environmental Transition-International

About ISET-International

ISET-International has an Operational Registration Certificate in Vietnam and currently leads two programs funded by the Rockefeller Foundation and USAID in the five Vietnamese cities of Lao Cai, Hue, Da Nang, Quy Nhon, and Can Tho.

ISET-Vietnam collaborates with national-level partners in the National Institute for Science and Technology Policy and Strategic Studies (NISTPASS) and Challenge to Change (CtC) to engage the five cities in planning for climate change. Diverse stakeholders in each city engage with each other and with technical experts through “shared learning dialogues,” allowing them to mutually

identify and assess the vulnerability of sectors, geographies, and groups. Inputs from national climate and sea level rise scenarios, vulnerability assessments, pilot projects, and in-depth sector studies have assisted these discussions towards progress. These plans have been produced in conjunction with Vietnam’s National Target Program on Climate Change.

ISET-Vietnam’s Core Activities

1. Provide technical support to:
 - a. Conduct urban climate vulnerability assessment
 - B. Develop urban climate resilience plan
 - C. Develop city climate resilience intervention projects
 - D. Implement city resilience projects

2. Provide training on:
 - A. Urban vulnerability assessment
 - b. Economics analysis
 - c. Scenario planning
 - d. Shared learning and dialogues
3. Conduct research and develop methods on:
 - a. Urban climate resilience
 - b. Cost benefit analysis
 - c. Water resource planning
 - d. Disaster risk reduction in urban context
4. Evidence based advocacy on:
 - a. Urban planning
 - b. Resilience planning
 - c. Disaster risk management

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