

# Asia Green IT Forum 2009

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## Green IT in Vietnam : Challenges and Opportunities

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# Overview on Vietnam

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- **Natural area:** 331,212 km<sup>2</sup>
- **Population:** 85.8 millions (2009) of which urban population accounts for 25 millions (29,5%); rural population: 61,5 millions (70.5%).
- **Urban:** 5 centrally governed cities, 88 provincially governed cities and capital towns, and 614 districtgoverned towns



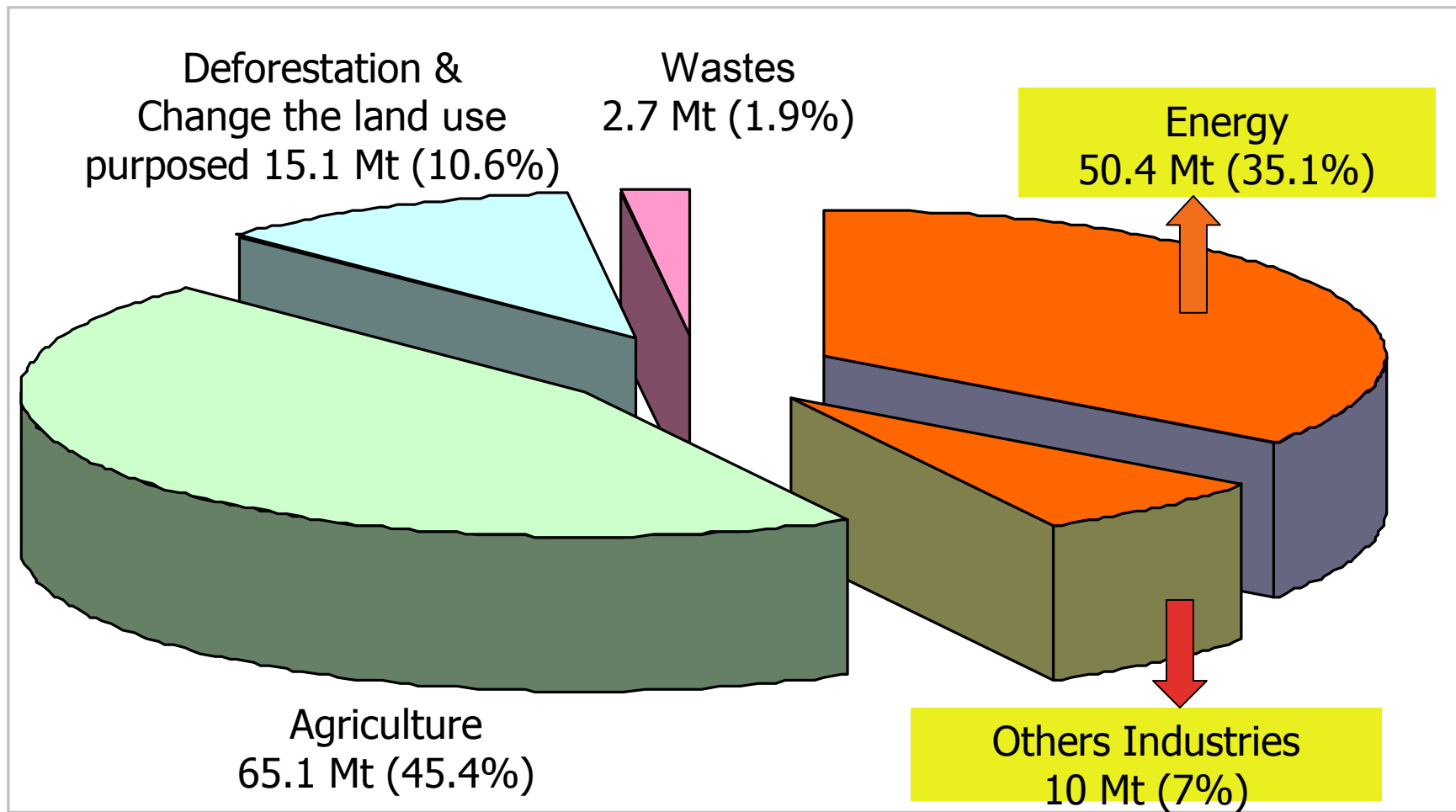
# Climate change and its impacts on Vietnam

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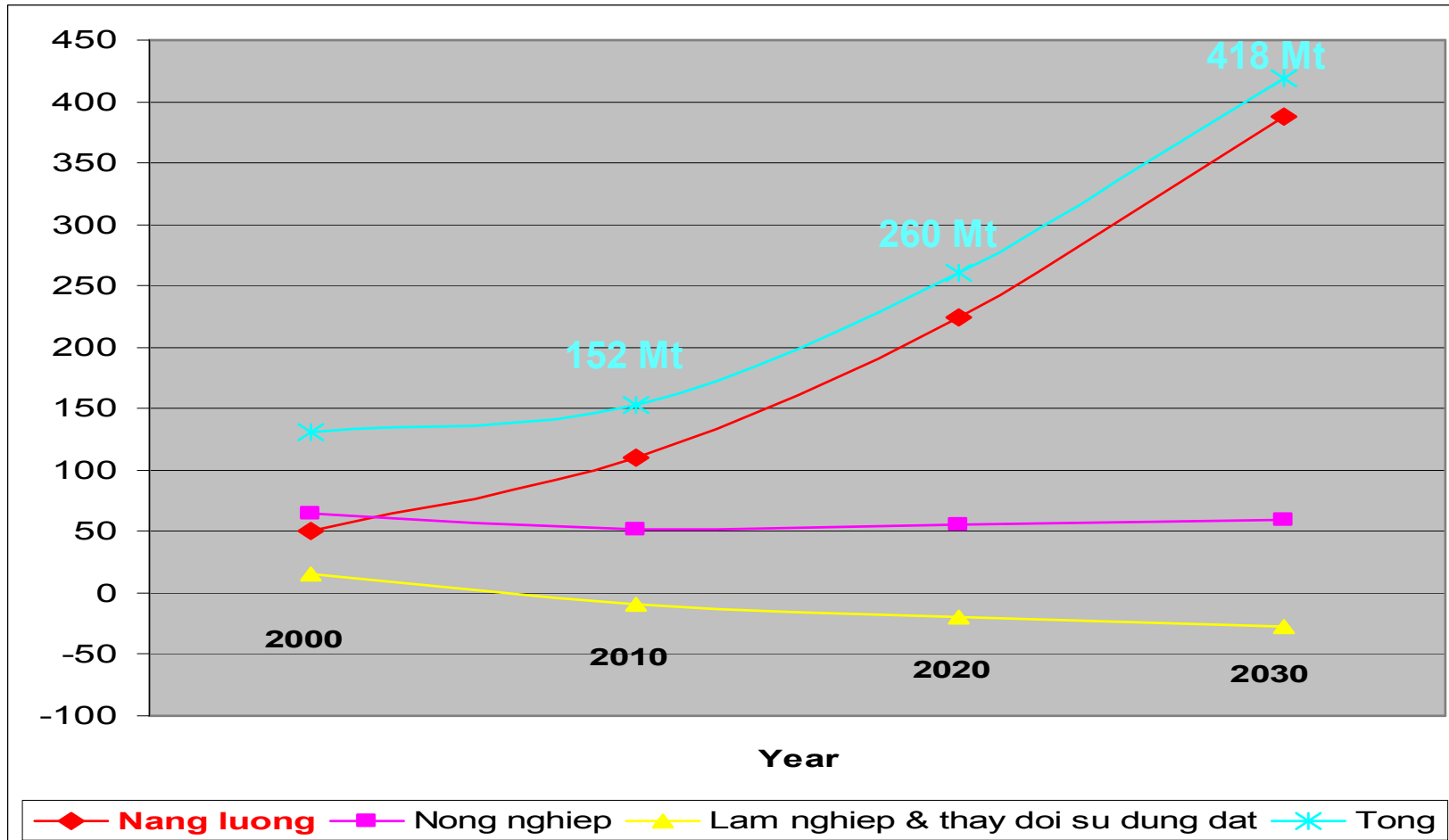
- One among 5 countries in the world that are the most affected from climate change;
- Informal scenario on sea level rise: at the end of the 21st Century sea level increase 75 cm (*In case CO2 emission can't be cut by half, drastic climate change may cause sea level to raise 2 meters > causing 22 million Vietnamese to relocate from Red river delta and Mekong delta*);
- Strongly affected sectors: Agriculture Industry, Transportation



# Glasshouse Gas (GHS) emissions from main sectors



# Prediction of GHGs emission



# Vietnam electrical energy dilemma

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## **In the past 5 years:**

- Electrical production has increased 13% yearly on average
- Electrical demand has increased 15% yearly on average
  - > Resulting in global electricity shortage

## **In the next decade:**

- Electrical demand shall reach 15-20% yearly increase
  - In spite of numerous investment projects, electrical supply will hardly meet demand due to minimum 4 years lead time for building and operating new power plants projects
    - > Electrical efficiency solutions must be found quickly for maintaining development pace of Vietnam
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# Energy Consumption in Vietnam

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## 1. Industry :

- The biggest energy consumer in economy, with 32% of total energy consumption.
- The main industries (steel, chemicals, construction materials, pulp & paper...) uses 15%-50% energy more than needed.

## 2. Building & Lighting :

- The average building uses at least 25% energy more than needed.
- Electricity consumption for lighting is 25.3% (MOIT)



# Challenges for Change (i)

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- Old technologies and energy management in almost plants, especially in SMEs and craft villages;
  - Lack of knowledge and information;
  - High natural resource consumption, in particular energy consumption (low energy efficiency) with high GHG emissions
  - Both producers and consumers not fervent for environmental friendly products or services yet.
- Unsustainable in production and consumption

Have to change

What  
would be  
changed  
and How?

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## Challenges for Change (ii)

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- IT devices will continue to increase : the rapid nationwide spread of IT devices may lift the current level more than ten times by 2020 to account for 12 percent of national power consumption;
- Loss of electrical energy transportation 10-12% in cities and 15-20% in countrysides;
- Main energy resources (coal, oil, natural gas) are limited;
- E-waste increase rapidly. No organized collection system prevails, operations are mostly illegal and processes are highly polluting.

Given this trend, saving energy in IT devices and using IT devices to save energy in society will be critical.

Have to change

What would be changed and How?

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# Green Industry and Green IT

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- **Green Industry** is a broad concept, new innovation of UNIDO, Ministry of Natural Resource and Environment.
  - **Green IT** is new concept in Vietnam, first time in July, 2008 at the 5th AEF in Ho Chi Minh City by JEITA and HKEIA.
  - New approach for **Sustainable Industrial Development**
  - **Based on:**
    - Improvement of resources efficiency
    - Environmental friendly production and products.
  - Move toward sustainable goals, a **Low Carbon Economy**
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# Opportunities

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New Business  
Green Business

Eco-products  
Organic products

Eco services  
Eco-tourism

New market  
Green market

Market for Eco-products  
and services

New Job  
Green Job

New jobs in plants,  
businesses and services

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# New Requirements

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- Information, Knowledge, Capacity building, Action!
- Changes in behavior, habits: producers and goods, consumers
- Increase resource efficiency, energy efficiency
- Promote renewable energy development
- Improve efficiency in cleaner production applications
- Promote advanced, low carbon technology application



How to do it  
well?

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# Government Initiatives for Green IT (i)

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- In June 2009 , at the Electrical Energy Efficiency (EEE) Workshop in Ho Chi Minh City, H.E. Mr. Hoang Trung Hai, Vice Prime Minister of Socialist Republic of Vietnam proposed the energy efficiency in national economy, especially in Building & Industry segments.
  - Create policies, incentives for Green IT initiatives:
    - + Encourage production and consumption of eco-products;
    - + Promote application and transfer of environmentally sound technologies, low GHG emissions, low carbon.
  - Initiated by Innovative new technologies will be needed to achieve reduction energy consumption. In 2007 Ministry of Industry and Trade (MOIT) established the Energy Conservation & Efficiency Office (EECO).
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## Government Initiatives for Green IT (ii)

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- Efficiently implement all related national programs: Energy Conservation and Efficiency (EECP); Mitigation and Adaptation of climate change; Cleaner production strategy;
  - Enforcement; Enhance Environmental Management network; Capacity building for central and local authorities and also enterprises
  - Facilitate international cooperation, bilateral and multilateral cooperation in all levels: government, enterprises, institutes, services providers...
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# Industries

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- Comply with Environmental Regulations;
- Continuously apply Cleaner Manufacturing, Energy Efficiency & Conservation measures;
- Use environmentally friendly technologies;
- Improve knowledge and capacity in the context of new requirements.



# Electronics and IT

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- Reducing the power consumptions:
    - Energy-saving in IT devices through the development of innovative IT technologies
    - Energy-saving by IT use in housing, distribution and other sectors through precise energy management based on information from sensors and other IT measuring devices.
  - Environmental friendly and recycle devices manufacturing;
  - Electronics Waste Treatment;
  - International Cooperation with Asian Associations and others.
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**Thank you for your attention!**

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