

# IP and Climate Change Management in Thailand

- Ms. Sumalee Ya-Amphan, Deputy Director of the Patent Office  
Department of Intellectual Property
- Mrs. Worrawan Prachakseam, Senior Environmental specialist  
Department of Environmental Quality Promotion.
- Mrs. Chawisa Chawakul, Managing Director and Patent Owner,  
Chawisa Zone Company Limited.

## Thailand's Strategic Plan on Climate Change (2008 – 2012)

**Strategy 1 : Build capacity to adapt and reduce vulnerabilities to climate change impact**

**Strategy 2 : Promote GHG mitigation activities based on sustainable development**

**Strategy 3 : Support R&D to better understand climate change, its impacts and adaptation and mitigation options**

**Strategy 4 : Create awareness and participation of problem solving on climate change**

**Strategy 5 : Build capacity of relevant personnel and institutions and establish a framework of coordination and integration**

**Strategy 6 : Support international cooperation to achieve the common goal of climate change mitigation and sustainable development**

## The example activities for climate change adaptation in Thailand :

### ■ Water Resource Management and the Agricultural Sector:

1) The Royal Projects on the development of water resources for agricultural activities, and the drainage of water in low-lying areas in order to expand agricultural areas; topsoil preservation by the vetiver grass.

2) Ministry of Agriculture;

- to promote market access for agricultural products;
- to enhance the capacity of local agricultural communities;
- to research on drought-resistant plant and animal species;
- to improve and build the irrigation system;

## The example activities (con't)

3) Ministry of Natural Resources and Environment;

- on integrated water resource planning for surface and ground water;
- water resources management at river basin level by the TAOs and local communities;
- capacity building for water resource use and conservation in agricultural sector.

## ■ **Natural Disaster Management :**

- 1) The Royal Projects on floods mitigation, decrease of drought (Royal Artificial Rain Projects); topsoil protection by vetiver grass; water resources management by dams and reservoirs construction.
- 2) The establishment of the National Committee on Water Policy for flood mitigation and the relief of drought crisis.
- 3) The establishment of the Information Center on Environmental Disasters under the Ministry of Natural Resources and Environment.
- 4) The establishment of the National Disaster Relief Center under the Ministry of Information, Communication and Technology.

## • **Management of carbon sources**

**Ministry of Energy** has taken the priority in the greenhouse gas mitigation include ;

1. Establish market mechanisms to promote the use of alternative energies from biogas, biomass, solar energy, etc in electricity generation.
2. Provide the supply of renewable and alternative energies like biodiesel, gasohol and improve infrastructure to support the use of those energies in the transport sectors.
3. Undertake the Clean Development Mechanism (CDM) to promote greenhouse gas mitigation in various sectors (by Ministry of Natural Resources and Environment).

- **Management of carbon sources (con't)**

4. Incorporate Climate Change Adaptation into Bangkok's Strategic Plan and promote energy efficiency use in the urban residential and commercial sectors.
5. Develop legal instruments to promote for energy-efficient machine in the industrial sector;
6. Campaign to decrease the slash and burn practice in the agricultural sector
7. Promote 5Rs principle (Reduce/Reuse/Recycle/Refill/Repair) ,and sanitary landfills to replace open garbage dump.

- **Promotion of carbon sinks**

1. Ministry of Natural Resources and Environment (MoNRE) has undertaken the projects on afforestation and reforestation,
2. Bangkok Metropolitan has put the increment of urban green space in its Strategic Plan on Climate Change (TSPCC).

- **Clean Development Mechanism (CDM) Projects**

1. Biomass Power Projects.
2. Biogas Projects

# THE **D**EPARTMENT OF **I**NTELLECTUAL **P**ROPERTY MINISTRY OF COMMERCE , THAILAND

## FUNCTIONS AND RESPONSIBILITY

- PERFORMING WORK IN CONNECTION WITH
  - THE PROTECTION OF INTELLECTUAL PROPERTY.
  - THE PROTECTION OF INTELLECTUAL PROPERTY RIGHTS.
  - THE SUPPRESSION OF INTELLECTUAL PROPERTY INFRINGEMENTS, THE PROMOTION OF THE USE OF RIGHTS IN A FAIR MANNER AND THE DEVELOPMENT OF TRADE DISCIPLINES.
- REGISTRATION FOR THE PROTECTION OF INTELLECTUAL PROPERTY RIGHTS UNDER INTERNATIONAL AGREEMENT OR CO-OPERATION SCHEMES TO WHICH THAILAND HAS BECOME A PARTY.
- PROMOTING
  - THE PROTECTION OF INTELLECTUAL PROPERTY RIGHTS BOTH DOMESTICALLY AND OVERSEAS. ACTIVITIES LEADING TO THE CREATION, MANAGEMENT AND COMMERCIAL EXPLOITATION OF INTELLECTUAL PROPERTY.
- CONDUCTING REFORM AND REVISION OF LEGISLATION RELATED TO THE PROTECTION OF INTELLECTUAL PROPERTY TO ACHIEVE EFFICIENCY AND TO BE WELL SUITED TO CHANGING CIRCUMSTANCES BOTH IN THAILAND AND IN FOREIGN COUNTRIES.
- HANDLING THE SETTLEMENT OF INTELLECTUAL PROPERTY DISPUTES BY WAY OF MEDIATION AND ARBITRATION.

MRS. PAJCHIMA TANASANTI , DIRECTOR - GENERAL OF  
THE DEPARTMENT OF INTELLECTUAL PROPERTY ,  
STATED THAT:

INTELLECTUAL PROPERTY IS AN “ ESSENTIAL INGREDIENT ”  
PERMEATING ALL ACTIVITIES, AS INTELLECTUAL PROPERTY  
SERVES AS A MARKETING TOOL. EVERYONE NEEDS TO  
PROTECT ONE·OWN RIGHTS AND BE AWARE OF THE NEED TO  
RESPECT OTHERS· INTELLECTUAL PROPERTY RIGHTS. ANY  
USE OF COUNTERFEIT OR PIRATED PRODUCTS MUST BE  
DISCONTINUED .

## ENVIRONMENTALLY SOUND TECHNOLOGY UNDERTAKEN BY THE DIP

- ❖ TO ENCOURAGE THE PUBLIC TO BE AWARE OF THE IMPACT OF GLOBAL WARMING AND THE DECLINE OF THE ECOSYSTEM ON THEIR DAILY LIFE. FOR THIS REASON, THE PUBLIC NEEDS TO BE CONCERNED AND USE THEIR NATURAL RESOURCES WISELY. THIS IS THE IDEA BEHIND THE INVENTION/INNOVATION OF ESTs.
- ❖ TO ENCOURAGE THE PATENT OWNER TO MAXIMIZE THE BENEFIT PROVIDED FROM INTELLECTUAL PROPERTY. DIP ORGANISED

**THE IP DAY EVENT,  
IP CHAMPION 2011 ,  
IP FAIR 2011**

**AS A TOOL FOR COMMERCIAL USE AND TECHNOLOGY TRANSFER.  
AND PRESIDED OVER THE CREATIVE CITY PROJECT.**

**AN EXAMPLE OF ESTs IS :**

**OZONE TREATMENT WHICH WAS GRANTED  
UNDER THAI PATENT ACT THAT PATENT OWNER  
HAS EXERCISED HER INTELLECTUAL  
PROPERTY RIGHT UNDER TRADE NAME**

**OZO-MAC®.**

**OZO-MAC®.**

## The principle of EST's.

- Any new or existing technology must strive to be environmentally-friendly.

### Thailand & Climate change (global warming)

- The health issues resulting from air and waterborne viruses, bacteria and fungi.
- **Impacted**
  - **People's health.**
  - **Agricultural areas.**
  - **Industries, especially Food Industry and Health Products.**

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## How do we supply an effective disinfection technique ?

### Important questions

- Meets the criteria of an EST?
- Do we spend the time and money to develop a new technology or treatment method?
- Can we afford to do that with the accelerating global warming problem?

### Thai EST disinfection techniques.

Ozone may be one technique that combines the following characteristics:

- (1) An effective disinfecting agent.
- (2) Cost effective.
- (3) Short treatment time.
- (4) Easy and safe to transport.
- (5) Eliminates supply problems.

### But most importantly

(6) Has no lasting effect on the environment. Ozone has a short biological half-life and degrades into simple oxygen – essential for all life.

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Thailand is a good candidate for ozone treatment technology.

- This very practical technology is presently being used and has been for a decade or more.
- Ozo-Mac® is a totally Thai owned family company that developed and patented the ozone technology in 1998.

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## Service Center for Crisis by OZONE Shock Treatment Fumigation

- Fire restoration. (Smoke & Fungi)
- Flood restoration.
- Urgent fumigation for disinfection of contaminated area.

As a **Technology Pack** has been established in Thailand by a Patent holder who got the ozone performance research approved from the Graduate School of Engineering, Chulalongkorn University. The research site was the Thai Red Cross Association, Blood Bank for successful use.

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## Thai Navy ,Lieutenant Commander Chalot Chawakul, a Mechanical, Electrical and Industrial Engineer.

**OZO-MAC** Ozone generator designer.  
He was a consultant in Engineering to  
Blood Bank, The Thai Red Cross  
Association. (1995 – 2005)



### **The heart of helping people leads us here...**

- Ozo - Mac® prides itself in providing an EST service that addresses not only a problem for industry but also the private citizens of Thailand.
- Helping people is at the heart and was the original reason for developing the patented technology and the company.

**No matter what the time or day**, the 24-hour/ 7 day-a-week OZO - CLEEN® service is at the heart of the company culture for Ozo-Mac®, along with their desire to do whatever they can to help people.

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- The response to the situation was immediate.
- The ozone treatment administered cured the problem, protecting cleaners, workers, factory staff and the general public.

(A Flood- affected factory at Bang - pa-in Industrial Estate / during power shut down - Nov.2011 and continues annually.)



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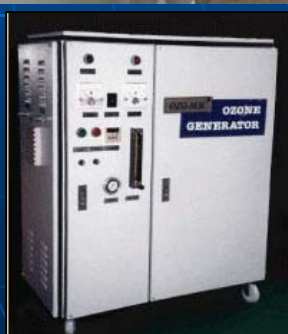
- Accomplished quickly and efficiently preventing any major disruptions at **Suwannabhumi International Airport** after the first year of operation. ( Oct. 2009 )
- The same type of **service** was provided to the national airport (**Don Muang Airport**) after the recent flood disaster experienced in Thailand. ( Dec. 2011 )



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# OZONE APPLICATION

## Hospital – Operating/Clean rooms



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- The protective way to reduce global warming by plant modification for easy, economical and Valued - Engineering.
- This illustrates but hardly describes the long list of satisfied clients who trust in the technology and services of **Ozo-Mac®** for **both air and water treatment to make green world so real** .

### **OZO-MAC®**

Is the only one with **20-year** patent rights in Thailand.  
The product is superior to the competition. Not only robust, practically maintenance-free, but also operates economically.