

**IRES**  
**Royal Institute of Strategic Studies**

**Strategic Option of Green Economy:  
Opportunities and challenges facing Morocco.**

**Greenberry**

**Rabat, on March 21<sup>st</sup>, 2011.**

- 
- Controlled life
  - Plastic Technology
  - Environmental Symphony
  - Greenberry
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Globalized context...

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Closer to home..

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It also gives this.....

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Or this

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Stop

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A brief sectoral analysis...

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**The sector of plastic sacks and bags production**

- Regarding the sector of plastic sacks and bags production, we must remember the following:
- The number of formal companies listed in this sector is approximately 150 units (excluding informal)
- The number of direct permanent employees is 4500 people. (The estimated number of indirectly employed people is 2500.)
- The revenue generated is 4.4 billion MAD.

Source: Ministry of Industry (2010 Survey)

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The sector of plastic sacks and bags production

- Distribution of production according to the bags types
  - Rubbish bags 4044 T (2%)

- Nursery bags 3033 T (2%)
- Industry bags 82 410 T (45%)
- Commercial bags 94023 T (51%)

Source: Ministry of Industry (2010 Survey)

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**Solutions do exist; commitments are already made, as follows:**

The 3 “R”

- Reduce.
- Recycle.
- Reuse.

Up to this day, this approach does not address the problem of environmental pollution by plastics.

However, complementary solutions do exist ...

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**Plastics “with controlled life term”  
A major innovation**

The benefits of plastic usage are many

- ✓ Light
- ✓ Flexible
- ✓ Solid
- ✓ Waterproof
- ✓ Printable
- ✓ Recyclable
- ✓ Reusable
- ✓ A product made from a derived material

But ... Plastics have a long life, a very long life.

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**400 years**

Plastic can take up to 400 years to wear out.

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- ✓ A solution with high added value
  - ✓ Eco-compatible plastic d2w ®

- ✓ Complete wearing out between 6 months and 5 years after pre-determined lifetime of the product \*
- ✓ In case of abandonment, wearing out may take few months only depending on exposure conditions.

\* Depending on the formulation and exposure conditions

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### **Responsible plastic usage**

Our 3 Rs

- REDUCE: Reduce the impact of plastic on the environment
  - Reuse: d2w ® products can be reused during the programmed life period
  - RECYCLING: d2w ® products can be recycled during the programmed life period.
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### **Eco-compatible plastic**

#### **In brief**

D2w plastic degrade, then biodegrade into water, CO<sub>2</sub> and biomass.

The process develops in oxygen or in soil, during the day and night, and in sun or shade, according to the programmable time scale.

At the end:

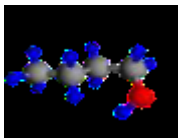
Water  
CO<sub>2</sub>  
Biomass  
No HEAVY metals

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### **Eco-compatible plastic**

#### ***The process***

- ✓ The sun, the heat, the presence of oxygen will oxidize the material.
- ✓ Finally, a reduced molecular chain consisting of low molecular compounds accessible to microorganisms.



Carbon  
Hydrogen  
Oxygen  
Micro-organisms

(Stenotrophomonas sp., Pseudomonas sp. Rhodococcus sp. Acinetobacter sp. Etc.)

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## **d2w ® is a displayed brand!**

The advantages of packaging using d2w ® technology are numerous:

- ✓ It wears out in a predetermined lifetime;
- ✓ It is also more resistant than traditional plastic;
- ✓ It uses the same production machines, without modification, for a minor additional cost;
- ✓ It is certified for all food contact;
- ✓ It can be recycled or made from recycled material;
- ✓ It can be composted if the formulation is adapted;
- ✓ It simply will not fragment, but biodegrades into CO<sub>2</sub>, water and biomass until it reaches a bio-assimilation without any toxic effect on the environment.

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**January 2010**

d2w ® is available to Label Vie - Carrefour supermarket

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## **Joint communication campaign**

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### **Moroccan Legislative context**

#### ***September 2009:***

A ministerial decree prohibits the use of black colored materials in plastic bags. Tracing the origin and identity of the manufacturer becomes mandatory.

#### ***July 2010:***

Law 22-10 aims at eradicating the Moroccan landscape visual pollution by substituting plastic bags made from conventional polyethylene to degradable or biodegradable plastic bags

#### ***March 2011:***

Implementing decrees passed by the Governmental Council.

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## **What can we learn from all this ...?**

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### **Green marketing** **Green=black**

- Challenges
  - Most companies were not based on an environmental creed
  - Be "Green" becomes an essential attitude

- Any action must be made for the benefit of the client, but we should not forget the benefits of shareholders.

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### **Real green marketing**

**Green=Gold**

- Opportunities
  - Stimulates innovation
  - Develops leadership
  - Attract new customers
  - Build loyalty for the brand

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### **Sustainable development as a strategy**

“In a stable economy, sustainable development is a strategy to be adopted for developing a competitive advantage.

In an economy in recession, sustainable development provides us a transformation strategy.

In a collapsing economy, sustainable development allows us to survive.”

**Hunter Lovins, 2009**

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**Comments or questions?**