



ETRA 20th Conference, 22 March 2013

Project title: WoodRub-Utilization of recovered wood and rubber for alternative composite products

Funding programme: LIFE+09/ENV

Duration: 36 months (start date: 1.9.2010)

Participants:

- AIDIMA - ES
- AUTH-LFU - GR
- BRUNEL - UK
- COSMOB - IT
- ACCIONA - ES
- SONAE R&D - DE
- KERIDIS - GR
- MARCHE MULTISERVIZI - IT
- ENJILY - UK

Coordinator: AIDIMA (Wood, Furniture and Packaging Technology Institute), Valencia, Spain

Project presentation

by

Kostis Keridis – KERIDIS

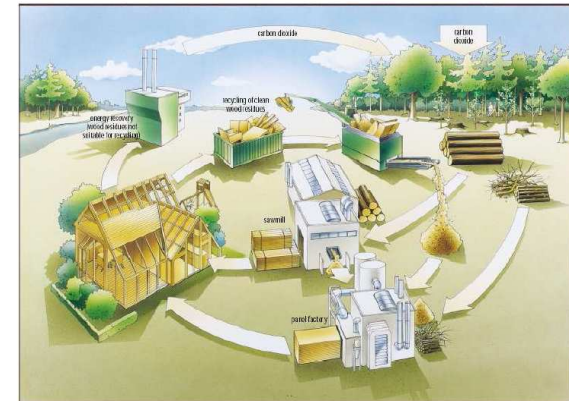
Stergios Adamopoulos – AUTH-LFU





Objective

- ➔ **The development, testing and demonstration of innovative environmental friendly products made from recycled wood and recycled rubber from tyres**



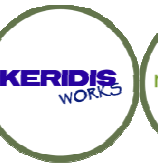
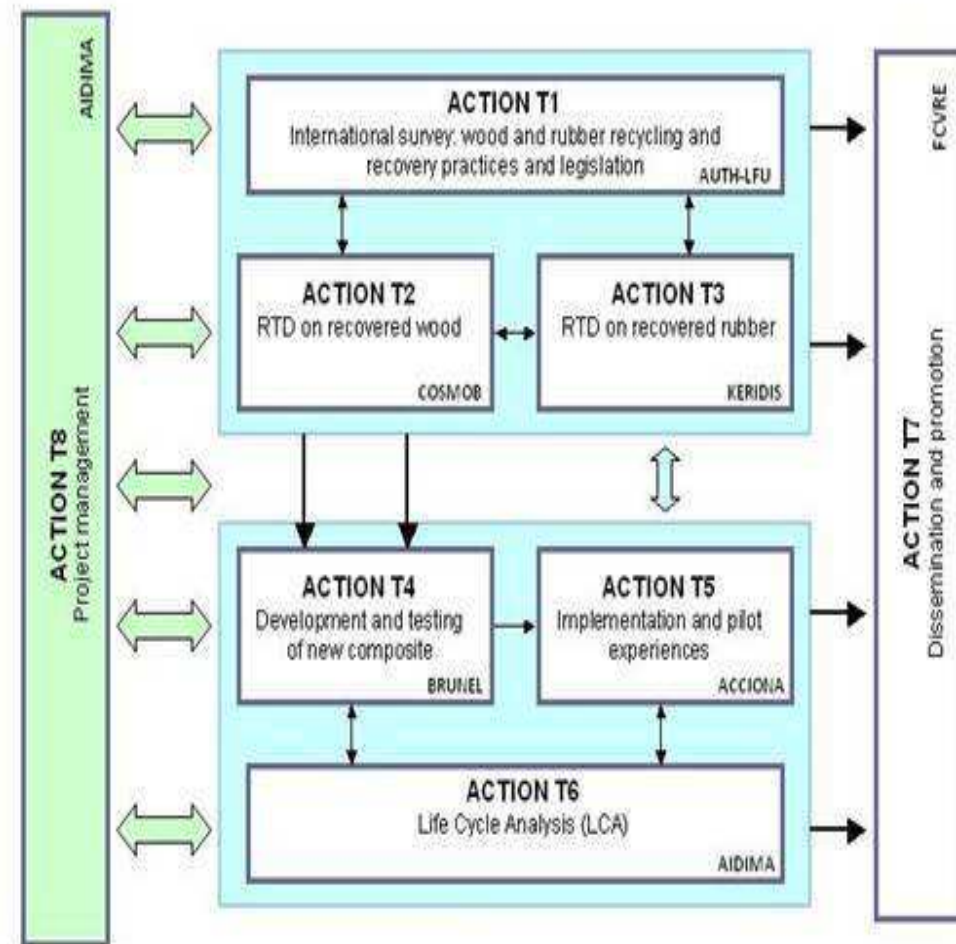
As **secondary objectives** the project intends to:

- provide wood waste managers and rubber waste managers a **novel end of life route for their products** and public and private construction entities a **new environmental friendly product**
- provide a **solution for the decrease** of the unutilized amounts of wood and rubber **waste**
- **increase the carbon storage** in buildings by replacing other building materials which are less environmentally friendly with these innovating products and towards carbon storage and emission, both in production processes and raw material use



Innovations

1. Combines waste wood and rubber for construction products
2. Innovative cost-effective processing of recovered wood (mechanical)
3. New innovative added value products for civil and residential construction
4. Advantages and utilities of environmentally friendly wood-rubber composites
5. Real-life utilization of wood-rubber materials for construction applications





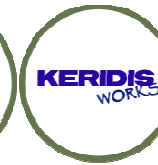
Key outputs compared to traditional practices

1. Residential construction products

- Wood-Rubber construction panels (wall, roof and floor with better dimensional stability and durability)
- Wood-Rubber insulating panels (thermal and acoustic)
- Wood-Rubber bricks (wall constructive material improving elasticity and behavior towards earthquakes and explosives)
- Innovative panels for civil construction (light weight, improved insulation)
- Wood-Rubber safety side barriers for highways (in the form of beams from alternate solid wood and rubber layers)
- Mixed bitumen (asphalt) products

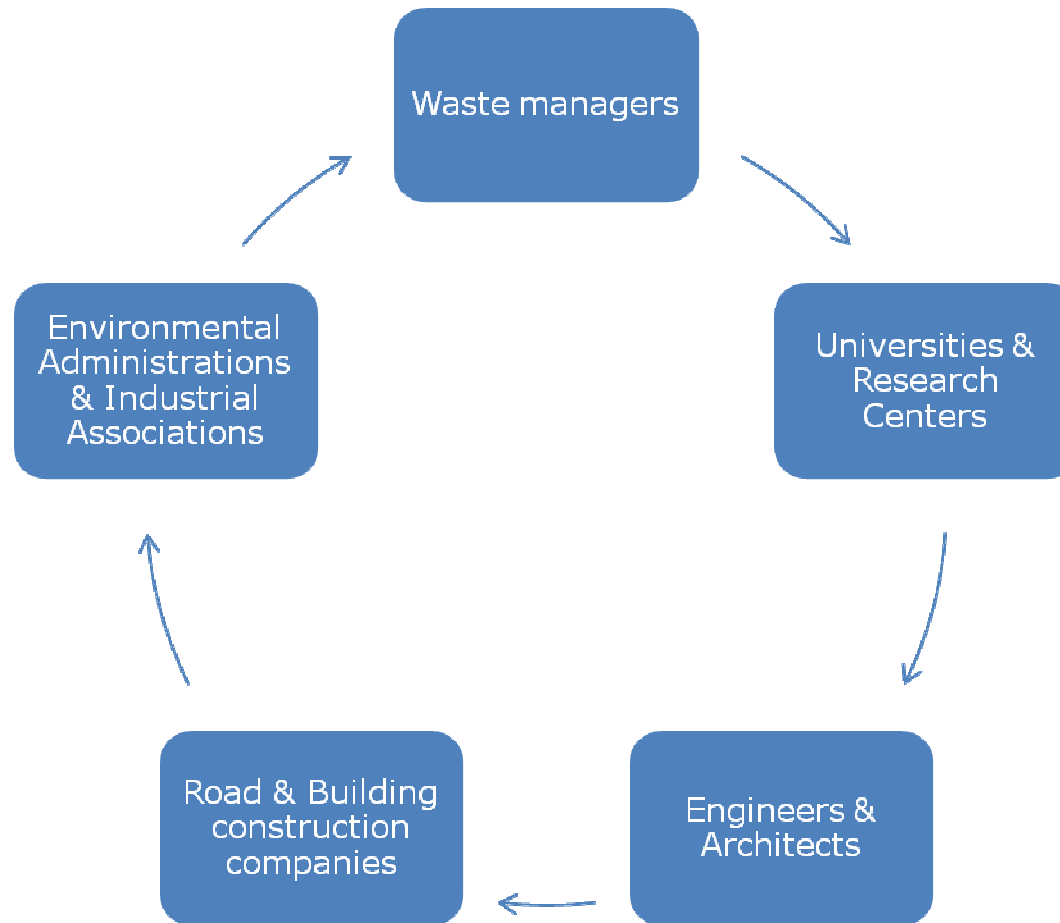
2. Civil construction products

- Innovative panels for civil construction (light weight, improved insulation)
- Wood-Rubber safety side barriers for highways (in the form of beams from alternate solid wood and rubber layers)
- Mixed bitumen (asphalt) products



Market goals

1. Open new markets for waste managers and panel industries
2. Increment competitiveness of the wood and rubber based sectors
3. Gain new knowledge on innovative composites



Environmental benefits

1. Sustainable raw material management – increase resource efficiency
2. Utilize chemically contaminated waste wood from households (furniture, doors, windows, floors, etc.)
3. Enhance rubber recycling and utilization of recovered rubber from tyres
4. Widen and increase the uses of recovered rubber in combination with recovered wood
5. Increase the carbon storage in buildings and replace other building materials which are less environmentally friendly

