



6<sup>th</sup> International Conference on Sustainable Solid Waste Management

# S.W.A.N.

## a digital Solid Waste reuse plAtform for BalkaN

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**Project Title :** S.W.A.N. a digital Solid Waste reuse plAtform for BalkaN

**EU programme:** INTERREG BalkanMed 2014-2020

Logo: Balkan-Mediterranean S.W.A.N.

**Total budget:** 968.000,00 € (85% EU & 15% national funded)

**Duration:** 2 years from 15 September 2017



### **PARTNERSHIP:**

#### **Lead Partner-Greece:**

LP1:Association of Municipalities in the Attica Region-Solid Waste Management (EDSNA)

#### Partners-Greece

P2: Greek Ministry of Environment and Energy

P3:University of the Aegean- Research unit-Department of Business

**Administration** 

#### Partners-Albania

P4: Albanian Ministry of Tourism and Environment

P5: ILIRIA-Protection and Social & Environmental Development Association

NGO

### Partner-Bulgaria

P6: Bulgarian Industrial Association - Union of the Bulgarian Business

## **Partner-Cyprus**

P7: Cyprus University of Technology- Department of Environmental Science and Technology



### **VISION**

 Development of an innovative Balkan Med Interactive IT Platform that will create locally and manage transnationally value chains for solid waste, promoting green growth within circular economy towards a society of zero waste

### **OBJECTIVE**

 Organise and interconnect (industrial and commercial) waste producers within a region, a country and/or between Balkan countries to reuse, recycle and recover their waste as raw materials to other industries.

### AIM

- Reduce the environmental polluting load by diverting the volume of solid industrial waste from being landfilled
- Reduce the amount of imports of raw materials
- Cut down the respective national greenhouse gases (GHG)



HOW ? ---- Design and Development of a digital platform that will:

map solid waste sources and potential receivers of waste streams

propose national and transnational viable waste reuse pathways, through matching supply and demand

establish a collaborative network of relevant stakeholders in the region



## Methodology / Work Packages (WP)



WP1-PROJECT MANAGEMENT & COORDINATION.



WP2-PROJECT COMMUNICATION & DISSEMINATION. The SWAN team uses environmentally-friendly tools to reach the public and private sectors, SMEs, and the citizens of the regions participating in the project.

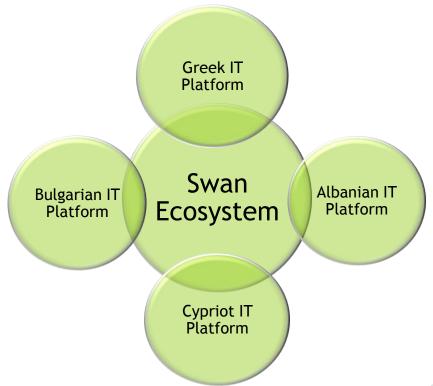
SWAN Communication Plan which structures and organises the communication and dissemination effort of the project has been conducted



## Methodology / Work Packages (WP)

WP3-DIGITAL ECOSYSTEM. Develops the SWAN Digital Ecosystem of four IT platforms on which development of solid waste reuse value chains will be based.

Each IT platform will act as a digital observatory for cataloguing the corresponding partner region's solid waste sources and flows. A common architecture will enable them to exchange information, leading to the creation of the SWAN Balkan Solid Waste Map-a unique dashboard of solid waste flows and stakeholders in the region.





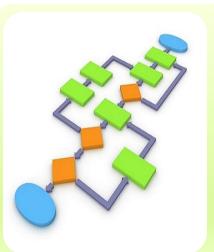
Input data will collected through Questioners and previously published literature sources.

Work Packages (WP)



WP4-SINK/SOURCE MAPPING. Develops the SWAN Balkan Solid Waste Map-a unique dashboard of solid waste flows and stakeholders in the region.

Objective: Map all the existing sources of solid waste including small, medium and large enterprises, with quantitative and qualitative characteristics (including spatial characteristics, categorization-metals/plastics/organic waste/etc., requirements for treatment before reuse) as well as the potential users/sinks of these waste streams.



WP5-SINK/SOURCE MATCHING. Develops the algorithms that process the SWAN Balkan Solid Waste Map and provide different options for solid waste reuse value chains and related business models.

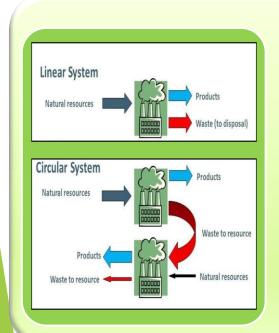
<u>Objective:</u> Develop and implement an algorithm that can match the sources and sinks based on

- geographical (proximity between source and sink),
- technical (suitability of waste type) and
- financial (viable investment for all parties involved) criteria.



These are the direct users of the SWAN Digital Ecosystem, and thus its immediate beneficiaries.

## Methodology / Work Packages (WP)



WP6-INTEGRATION. Ensures knowledge management and synthesis of results for establishing a sustainable and viable infrastructure post-project completion.

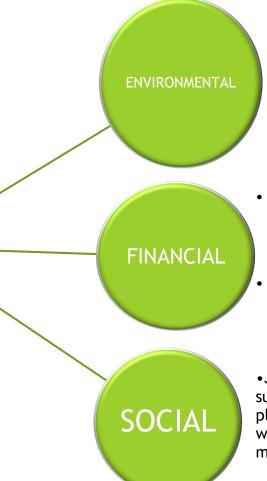
<u>Objective:</u> INDUSTRIAL ECOSYSTEM, i.e. a network of industries in the region that produce and use solid waste. Their collaboration will aim at the development and promotion of local/regional/national and transnational solid waste reuse value chains.

Direct access to the two Ministries of Environment (Gr, Al) will enable the development of a wider network of stakeholders. The LP will contribute a unique waste management facility that may be used as testbed by this ecosystem.



## **Benefits**





- Material opportunities for industries to source suitable substitutes and to achieve positive GHG abatement
  Development of environmental policies and strategies for improved solid waste management.
- Resource policy makers will develop relevant strategies, quality specifications and standards for savings and profit opportunities
- Waste producers and collectors will identify ways to recover value

• Job creation, ranging from IT support for the four IT platforms, to new SMEs that will enter the resulting waste management value chains



# **Expected Results**

- Algorithm will result joint business opportunities
- SWAN Balkan Solid
   Waste Map will link
   national and
   transnational
   stakeholders and
   develop innovative
   approaches towards
   achieving circular
   economy benefits

solid waste supply and demand matching

circular economy

- industrial symbiosis
- waste reuse value chains
- learn & use SWAN Digital
- policy recommendations

**RESEARCH** 

KNOWLEDGE TRANSFER

through workshops, project website, newsletters, press releases, articles and press coverage

PRODUCT DEVELOPMENT

SUSTAINABLE NETWORKS

- Swan Ecosystem Platforms and Databases
- Interested SMEs will be encouraged to introduce innovations (products, processes) in these newly developed value chains.

- SWAN Industrial
  Ecosystem will remain
  free access & active
  after the completion of
  the project to sustain
  the ecosystem links,
- Expansion to all Balkan countries by including additional actors

