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ustainable approach to aggregates SARMa

Programme co-funded by the EUROPEAN UNION

Sustainable Aggregates Recourse Management

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Work Package 2 Leader

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Identity

- South East Europe Programme
- Priority Axis 2: Protection and Improvement of the Environment
- Area of Intervention 2.4: Promote Energy and resources efficiency
- Project duration: May 2009-October 2011

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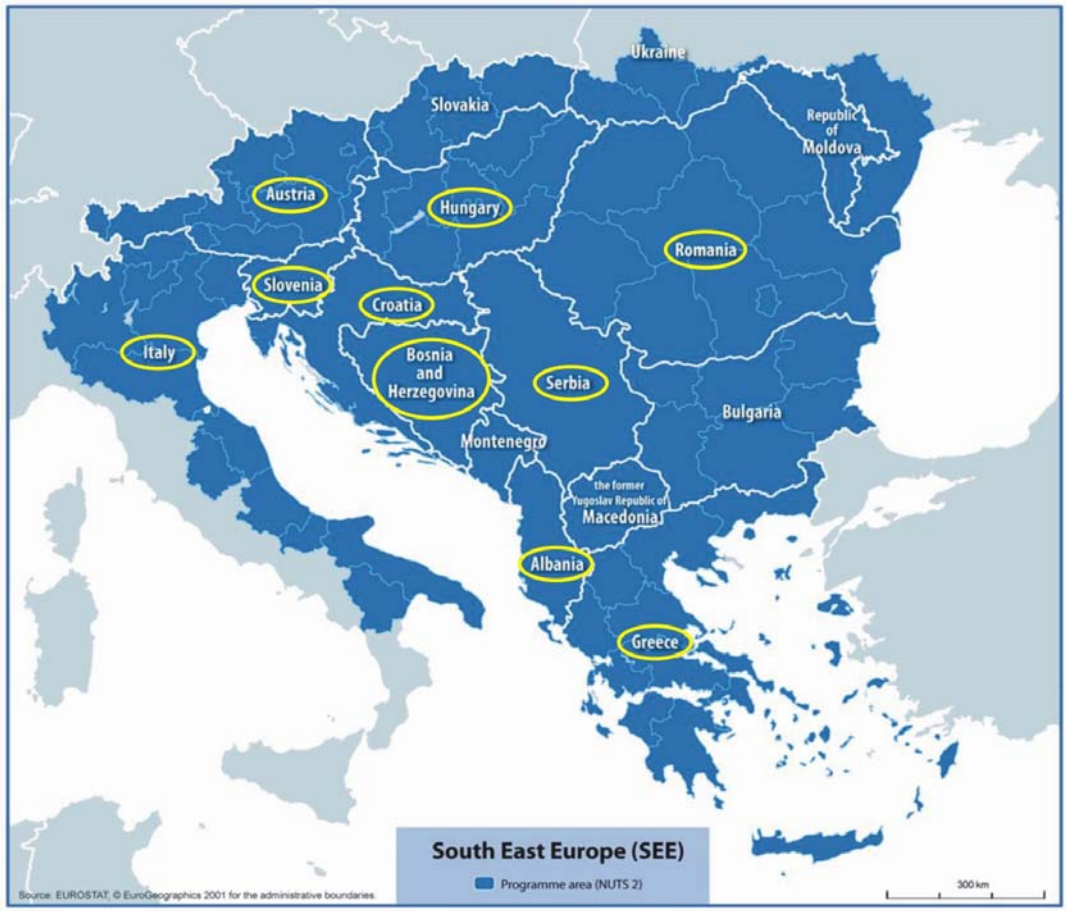
Partnership

- Geographical coverage: 14 partners in 10 SEE countries
- Inclusion of partners from old member states and candidate states (assure knowledge transfer)
- Geological Surveys, universities, institutes, faculties



Partnership

1. ERDF: GeoZS - Geological survey of Slovenia, SI
2. ERDF: MUL - University of Leoben, AT
3. ERDF: PELLA – Prefectural Authority of Pella, GR
4. ERDF: IGME - Institute of Geology and Mineral Exploration, GR
5. ERDF: TUC – Technical University of Crete, GR
6. ERDF: MBFH – Hungarian Office for Mining and Geology, HU
7. ERDF: ER – Emilia-Romagna Region - Environment, Soil and Coast Defense Department, IT
8. ERDF: PARMA – Parma Province - Territorial Planning Service, IT
9. ERDF: IGR – National Institute for Research-Development in domain of Geology, Geophysics, Geochemistry and Remote Sensing, RO
10. ERDF: FGG – University of Bucharest, Faculty of Geology and Geophysics, RO
11. IPA: MGK10 – Herzeg – Bosnia Canton Government – Ministry of Economy, BiH
12. IPA: RGF – University of Belgrade, Faculty of Mining and Geology, SRB
13. 10 % partner: METE – Ministry of Economy, Trade and Energy, AL
14. 10% Partner: MINGORP – Ministry of Economy, Labour and Entrepreneurship, Energy and Mining Directorate, HR

Project Background

- Aggregates (crushed stone, sand and gravel) are crucial for infrastructure, construction, development.
- SEE countries are rich in aggregates.
- Supply is not coordinated within or across SEE.

Challenges:

- illegal and damaging quarries
- un-reclaimed sites
- limited recycling
- community opposition.

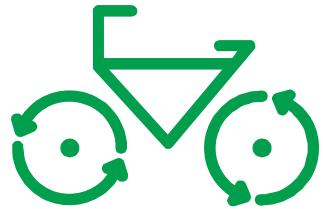
Project Background

Fulfilling demand requires:

- efficient and sustainable supply chain (planning, extraction, transport, use and recycling)
- socio-eco friendly quarrying

to preclude opposition to extraction, supply bottlenecks, and restricted growth.

Main Challenges

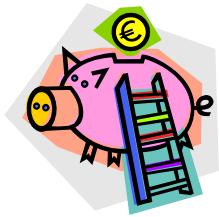


- Shifting to sustainable aggregate resource management (SARM). SARM is an efficient, low socio-environmental impact quarrying and waste management.
- Encouraging sustainable supply mix (SSM) policies. SSM uses multiple sources, including recycled wastes and industrial by-products (slag), that together maximize net benefits of aggregate supply across generations.

Main objectives of the project

- Develop a common approach to sustainable aggregate resource management (**SARM**)
- Sustainable supply mix (**SSM**) planning, at three scales, to ensure efficient and secure supply in SEE.

Implementation Scale (1/3)



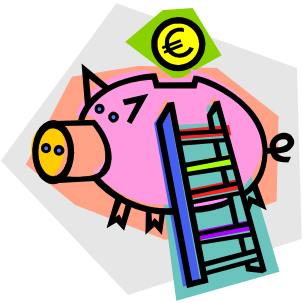
Site level:

- high environmental impacts,
- limited recycling,
- need for stakeholder consultation and capacity
- lack of social license to operate.

Local, site-level activities focus on:

- environmentally friendly extraction through best practices,
- reducing illegal quarrying,
- recycling to reducing use of primary aggregates.

Implementation Scale (2/3)



<u>Regional/national level</u>

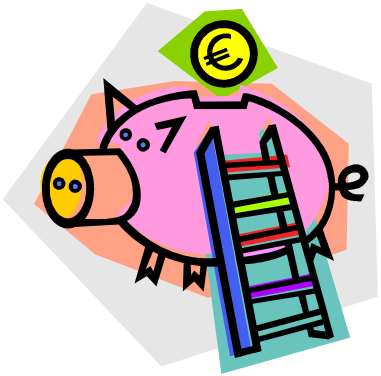
Policies and regulations affecting aggregates

- do not address resource and energy efficiency or EU guidelines
- preclude the use of recycled materials and industrial by-products
- fail to address aggregate consumption in long-term sustainable development and spatial planning.

<u>Region/national activities</u>

- will create a SARM framework for effective management,
- define SSM, as well as recommend how to integrate SSM into planning and legislation.

Implementation Scale (3/3)



Transnational issues

- lack of capacity
- lack of coordination on aggregates production and transport.

Transnational activities will assure

- harmonization of relevant policies and legislation across SEE
- information transfer
- creation of an Aggregates Intelligence System

Expected Results: Local

- More efficient aggregate extraction to maximize net benefits and achieve sustainable quarry life-cycle,
- More frequent adoption of best practices,
- Fewer illegal quarries and use of databases to track illegal activities,
- Increased extraction and demolition waste/by-products recycling to be used as aggregates, and wider use of life cycle analysis.

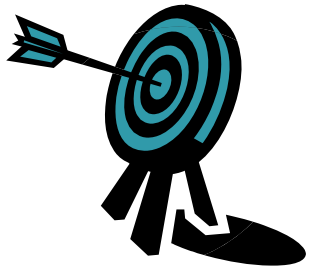
Expected Results: Regional/national

- More policies and legislation that incorporate principles of SARM and SSM,
- More consistent management of aggregates and recycling across SEE regions/nations,
- Greater recognition of need to plan for SSM supported by planning actions,
- More effective, consistent and timely dissemination of information to interested and affected groups,
- Wider adoption of GIS structures to support SARM and SSM,
- More regions/nations creating maps and databases of aggregates & transportation patterns

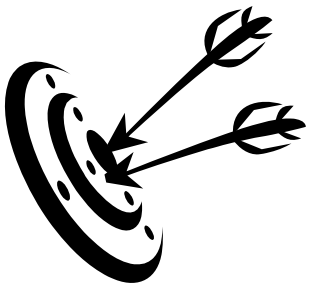
Expected Results: Transnational

- Increased capacity through knowledge transfer,
- Greater policy coordination on SARM and SSM among SEE nations,
- More energy efficient aggregates transport,
- Addition of data and materials to AIS and its utilization by SEE nations,
- Continuing partnership among project members and observers representing ministries in charge or mining, regional authorities, chambers of commerce and industry.

Target Groups



- Scientific Community
- Quarry Operators
- Planners and Practitioners involved in aggregates management
- Stakeholders-Civil Society that are affected by quarrying and recycling



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Work Packages

- WP0-Project Preparation
- WP1-Transnational Project Management and Coordination
- WP2-Communication and Dissemination
- WP3-Extraction and Demolition Site Level
- WP4-Regional and Site Level Activities
- WP5-SEE Transnational Level Activities

WP0-Project Preparation

- Project preparation started in spring of 2008.
- In the 1st stage 14 partners cooperated in preparing the EoI through regular electronic and phone communications.
- The second stage included LP attending the LA seminar and a joint partner meeting in Ljubljana on November 4-5, 2008,
- All partners' roles were more precisely defined. Subsequently, all partners put extensive effort preparation and review of the application.

WP0-Outputs

- Expression of Interest prepared and submitted
- Joint partners meeting implemented
- Application pack prepared and submitted

WP1-Transnational Project Management and Coordination

- Steering Committe (SC): one representative of each partner, the project manager and the communication manager, will be the main project managing body
- Quality Management Board (QMB: project manager, communication manager and WP leaders) will be in charge of thematic managing and monitoring of the project and prepare suggestions and work progress reports for SC.

WP1-Outputs

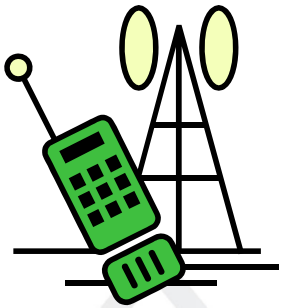
- Quality assurance plan (management plan)
- Persons in charge for administration of project
- Project meetings held
- Financial and progress reports
- Evaluation reports

WP1-Results

- Common management structure established

WP2-Communication and Dissemination

- Aim: Raise the visibility of the project and its outputs for different target groups and general public.
- First objective: establish effective internal and external communication.
  - Internal: electronic notifications meetings.
  - External : leaflets, brochure, posters, website.
- Second objective: plan and implement workshops; Communication activities and response of included individuals will be regularly evaluated by preparing reports based on questionnaires.



WP2-Outputs

- Communication strategy and plan
- Articles published in professional magazines
- Project website
- Press conferences
- Promotional leaflets
- Promotional posters
- Transnational capacity building events organized
- Regional and national capacity building workshops
- organized

WP2-Results

- Website - permanent information source in operation
- Individuals reached through dissemination of the manual, leaflets, press conferences, posters
- Administrative actors, private sector actors, SME reached directly through dissemination outputs in the co-operation area
- Advanced tools adopted to increase project visibility: website, manuals, workshops, articles, press conferences, leaflets, posters
- Staff members with increased capacity (awareness / knowledge / skills)

WP3-Extraction and Demolition Site Level

- Decrease environmental and social impacts of quarrying and improving reclamation
- Reduce illegal quarrying,
- Increasing recycling

Methodology: analysis (case studies), synthesis, evaluations, pilot actions

Manuals to be used for capacity building workshops and other outreach activities in WP4.

WP3-Outputs

- Preparatory reports on the basis of case study analyses of each location
- Manual on life cycle analyses
- Joint manual for stakeholders' decision making at local level: How to achieve aggregates resource efficiency in local communities
- Study visits at partners' locations
- Report on the basis of preparatory reports per each activity – on environmentally acceptable quarrying, prevention of illegal quarrying and recycling
- Recommendations for socially acceptable quarrying for industry and for authorities; on socially acceptable mining and on quarry waste
- Action plan for social licence to quarry
- Database framework for illegal quarrying
- New service developed: scheme for life cycle analysis

WP3-Results

- Common agreements on recommendations for environmentally friendly quarrying, recycling and illegal quarrying for industry and authorities
- Common methodologies adopted among partners on database framework on illegal quarrying and LCA Scheme
- Environmental impact studies – synthesis reports
- Pilot actions prepared and implemented for each activity of WP3: Greece for 3.1 and 3.3, Albania, Tirana for action plan and database framework, Slovenia for LCA
- Tools adopted to improve knowledge management within the partnership: study visits, joint methodology on database framework and LCA analysis
- Employees in quarries benefiting directly from newly developed service for LCA
- Private market reactions achieved by increasing environmentally friendly quarrying

WP4-Regional and Site Level Activities

- Bottom-up best practices for resource efficiency and top-down strategic plans for transnational harmonization of policies and legislation intersect.
- Relevant regional/national legislation, regulations, procedures and bottlenecks are studied.
- A framework for SARM will be created
- Planning for secure SSM will be based on regional/national studies that consider nature conservation, water resources and transportation, as well as a GIS of supply-relevant data.
- Plans and recommendations for SSM will reflect economic and strategic importance of the sector.

WP4-Outputs

- Preparatory reports on the analysis of legislation and procedures in each participating country
- Preparatory reports on the national (4: SI, HR, AL, RO) or regional supply (3: AT Styria, GR Pella, IT Parma)
- Recommendations on implementation of (EU) legislation; for aggregate policy and management; and for development and land use planners
- GIS in management of aggregates in terms of resources availability and exploitation, use, transportation types and routes

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WP4-Results

- Common agreements on implementation of (EU) legislation; for aggregate policy and management; and for development and land use planners
- Common, interoperable methodology adopted among partners on GIS
- Regional/local policies improved on SARM and SSM in participating regions
- New tool developed: methodology on GIS
- Advanced tools adopted to improve knowledge management within the partnership: SARM, SSM and GIS
- Regions proactively promoted by all partners and observers
- Common management structures established on SARM and SSM
- Infrastructure of common interest improved: regional aggregate supply improved by Aggregate Intelligence System in 15 regions

WP5-SEE Transnational Level Activities

Transnational aspects of the project, possibilities for harmonizing policies, legislation and regulations related to:

- sustainable aggregates management
- secure supply
- establishing a Regional Centre for SARM and SSM.

First 2 activities lead to recommendations for harmonization and creation of a multi-purpose, multi-scale interoperable Aggregate Intelligence System (AIS) for SEE.

WP5-SEE Outputs

- Manual on SARM and SSM at regional, national and transnational levels
- Study visits combined with transnational events
- Synthesis reports
- Feasibility study for the Regional Centre on SARM and SSM
- Recommendations on the transnational level for decision-makers on SARM and on SSM
- Joint action plan for establishment of the Regional Centre on SARM and SSM
- Service: structure and protocol for AIS as infrastructural ground for regional centre
- Reports on case studies on harmonization (4) and on sustainable supply

WP5-SEE Results

- Common agreements formulated on transnational level for decision-makers on SARM and on SSM
- Common methodology adopted among partners on (AIS)
- New tools developed: 1 manual for stakeholders on regional, national and transnational level and 1 methodology (AIS)
- Pilot action prepared and implemented on trans-border area AT-SI-HRHU on cross-border supply of aggregate resources
- Advanced tool adopted to improve knowledge management within the partnership: AIS
- Individuals benefiting directly from newly developed service on AIS
- Investment proposal prepared for the regional centre on sustainable aggregates management

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Work to date

- Developed project website
- Implemented management plan
- Held two Consortium project meetings
- Submitted communication strategy and plan submitted
- Press conferences held
- Organized regional and national capacity building workshops (Split, Patras)
- Prepared questionnaires for WP3 and WP4
- www.sarmaproject.eu