



# MEDITERRANEAN WORKSHOP 2017

Naples, 23-24 October

## ABSTRACT BOOK

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## **WORK TRACK**

### **MOBILITY IN EDUCATION, INDUSTRIAL INNOVATION AND BUSINESS CREATION**

## **Internal migration in Mediterranean countries: a broader concept of borders beyond Nation-State paradigms**

Michele Colucci (ISSM-CNR); Stefano Gallo (ISSM-CNR)

### **Participating institutions**

ISSM-CNR

### **Funding scheme/body**

2012-2015: FIRB-MIUR project “*Maritime borders in the Mediterranean: how permeable are they? Exchange, control, denial of access (16th to 21st century)*”

### **Overview of the project**

The FIRB-MIUR project “Maritime borders in the Mediterranean: how permeable are they? Exchange, control, denial of access (16th to 21st century)” has intended to study the regulation and control of trade and transit across the maritime borders of the Mediterranean in a long-term historical perspective and with an interdisciplinary approach, in order to historicize a phenomenon which is of prime relevance today. An approach that combines knowledge of the past with current reality made it possible to decisively and effectively overcome sterile paradigms such as the “clash of civilizations” and dualisms such as “individualism vs. community” that have dominated the political and economic debate of recent decades.

The ISSM-CNR research unit has been focalised to analyzing internal migration in Contemporary Italy with a strong interdisciplinary approach. Four books were published, with the contribution of historians, sociologists, demographers, anthropologists, linguistics and computer scientists: *L’arte di spostarsi. Rapporto 2014 sulle migrazioni interne in Italia* (Donzelli, Roma 2014), *Tempo di cambiare. Rapporto 2015 sulle migrazioni interne in Italia* (Donzelli, Rome 2015), *Fare spazio. Rapporto 2016 sulle migrazioni interne in Italia* (Donzelli, Rome 2016), *In cattedra con la valigia. Gli insegnanti tra stabilizzazione e mobilità. Rapporto 2017 sulle migrazioni interne in Italia* (Donzelli, Rome 2017, forthcoming). The impact in the public sphere and among academics has so far been satisfactory, since the media have talked about the project and relevant partnerships with other research groups have been opened.

The aim of the actual phase of the project is to reformulate the terms of the scientific debate on the issue of internal migration, using a comparative approach between different Mediterranean States. People move between States and borders, but above all people move within the space of individual countries. Countries that often contain strong socio-economic differences and internal divisions. We are

convinced that it is time to study international migration in the light of internal migration, as a stimulus and enrichment, in order to keep together knowledge and skills linked to the plurality of migrations and related cognitive potentialities. Rural mobility, circular mobility, urban oriented mobility, immaterial bureaucratic borders are just some of the aspects neglected by the public debate, which should be analyzed. A deep and broad study on internal migration in the Mediterranean Area will force scholars involved to concentrate in the concrete social and economic conditions of the different contexts. We intend to check whether such an analysis can be used for a different look at Mediterranean mobilities and for a better contribution to the actual political debate.

**Web page: <http://migrazioninterne.it/>**

## **Highway and Traffic Engineering: Curricular Reform for Mediterranean Area (HiT4Med)**

Alfonso Montella, Department of Civil, Architectural and Environmental Engineering, University of Naples Federico II

### **Participating institutions**

P1 University of Naples Federico II, UniNA, Italy; P2 Fondazione FORMIT, FORMIT, Italy; P3 Reseau Metiterranean des Ecoles d'Ingenieurs, RMEI, France; P4 National Technical University of Athens, NTUA, Greece; P5 University of Catania, UniCT, Italy; P6 Universitat Politecnica de Valencia, UPV, Spain; P7 Royal Institute of Technology, KTH, Sweden; P8 Cairo University, CU, Egypt; P9 Zagazig University, ZU, Egypt; P10 Ain Shams University, ASU, Egypt; P11 Arab Academy for Science and Technology and Maritime Transport, AASTMT, Egypt; P12 Holy Spirit University of Kaslik, USEK, Lebanon; P13 Lebanese University, LU, Lebanon; P14 Cadi Ayyad University, UCA, Morocco; P15 Académie Internationale Mohammed VI de l'Aviation Civile, AIAC, Morocco; P16 Institut Supérieur du Transport et de la Logistique de Sousse, ISTLS, Tunisia; P17 Ecole Nationale d'ingénieurs de Sousse, ENISo, Tunisia.

### **Funding scheme/body**

TEMPUS IV/ Education, Audiovisual and Culture Executive Agency (EACEA)

### **Overview of the project**

#### *- Project objectives*

To design, develop and implement a new curriculum programme in Highway and Traffic Engineering in a joint effort between European and Southern Neighbouring Area Universities in line with Bologna requirements.

#### *- Results*

HiT4Med project developed ten master programmes in Highway and Traffic Engineering in the ten Partner Country Universities participating to the project:

- P8 CU, Egypt: Cairo University implemented a new two-year master programme, named Master of Engineering in Transport Safety. First edition started in September 2015 and 6 students were enrolled. Second edition started in October 2016 and 13 students were enrolled. Graduated students during the project lifetime were 6.
- P9 ZU, Egypt: Zagazig University implemented an updated two-years master programme,

named Master of Science in Highway, Transportation and Traffic Engineering. First edition of the updated master programme started in September 2015 and 40 students were enrolled.

– P10 ASU, Egypt: Ain Shams University implemented an updated two-years master programme, named Master of Science in Highway Engineering and Traffic Engineering. First edition of the updated master programme started in September 2015 and 5 students were enrolled.

– P11 AASTMT, Egypt: Arab Academy for Science and Technology and Maritime Transport implemented a new two-years master programme, named Master of Science in Highway, Traffic and Transportation Engineering. First edition of the master programme started in September 2016 and 2 students were enrolled.

– P12 USEK, Lebanon: Holy Spirit University of Kaslik implemented a new two-years Master of Science in Civil Engineering – specialization in Transportation Engineering. Courses of the Master of Science have been offered also at the B.E. level as general education and technical electives. The new Master Programme started in September 2015 and 334 students enrolled in single courses.

– P13 LU, Lebanon: Lebanese University implemented a new one-year master programme, named Specialized Master in Highway, Transportation and Traffic Engineering. First edition started in October 2014, second edition started in September 2015 and third edition started in September 2016. Enrolled students were 19 in the first edition, 11 in the second edition, and 19 in the third edition. Overall, 30 students graduated.

– P14 UCA, Morocco: Cadi Ayyad University implemented a new fourteen-months master programme, named Ingénierie de Trafic et Sécurité Routière. Enrolment of the students is in progress.

– P15 AIAC, Morocco: Académie Internationale Mohammed VI de l'Aviation Civil implemented a new two-years master programme, named Ingénierie et Trafic Routière. The master started in April 2015 and enrolled students are 13.

– P16 ISTLS, Tunisia: Institut Supérieur du Transport et de la Logistique de Sousse implemented a new two-years master programme, named Routes et Ingénierie de Trafic. First edition started in October 2014 with the enrolment of 19 students. Second edition started in September 2015 with the enrolment of 9 students. Graduated students were 5.

– P17 ENISo, Tunisia: Ecole Nationale d'ingénieurs de Sousse implemented a new two-years master programme, named Technology of Roads and Traffic Engineering. First edition started in January 2015, second edition started in September 2015 and third edition started in September

2016. Enrolled students were 18 in the first edition, 11 in the second edition, and 39 in the third edition.

- *Time schedule*

From December 1, 2013 to November 30, 2016.

**Current state of the project**

Completed.

**Link to additional information**

<http://www.hit4med.eu/>



**Tunisian Network for Employability and Development of graduates' skills – TUNED**

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**Participating institutions**

Institution 1 : AlmaLaurea Interuniversity Consortium, Institution 2: University of Monastir, Institution 3: University of Jendouba, Institution 4: University of Gabes, Institution 5: University of Gafsa, Institution 6 : University of Tunis, Institution 7: University of Sfax, Institution 8: University of Carthage, Institution 9: University of Kairouan, Institution 10: University of Granada, Institution 11: University of Cyprus, Institution 12: University of Naples, Institution 13: Mediterranean Universities Union, Institution 14: Tunisian Ministry of Higher Education.

**Funding scheme/body****ERASMUS +**

KA2 – Cooperation for innovation and the exchange of good practices – Capacity Building in the field of Higher Education

**Overview of the project**

- *Project objectives*

- *Activities*

- *Results/Impact*

- *Time schedule*

The TUNED project will accompany and support the Tunisian partner universities, enhancing their High Education (HE) system, promoting curricula convergence with education systems and labour market needs (Bologna Process/Europe 2020 strategy), and carrying out governance reform between HE and society, in accordance with the Doha Declaration (2011): “Establishing national monitoring and evaluation systems based on objective data and quantitative and qualitative indicators to measure student learning and school performance is a shared priority.”

In order to fulfil its aim the TUNED project adopts a bottom-up approach, which starts from the graduates and their university. Its implementation is designed to update and develop the HE sector within society, strengthening the relations between universities and enterprises and improving, in turn, the quality of HE in situ.

The TUNED project was conceived as being complementary to the ISLAH project: Instruments at Support of LABour market and Higher education (TEMPUS V Programme - 2012-2015). Designed to endorse, extend and upgrade the initiative already implemented, TUNED project aims to enhance the quality of HE in Tunisia by adapting the AlmaLaurea model to Tunisian partner universities. The model in question comprises an annual

report on the internal efficiency of the HE system (the graduates' profile survey), an annual survey and report on the external efficiency of the HE system (the graduates' employment condition survey), and the online databank of graduate curricula.

Current information in Tunisia is somewhat fragmented for continuous and effective monitoring of the training system, the labour market, and the link between them, and to predict skills requirements to meet labour market needs. The Project will thus support the Tunisian HE system by scaling up the previous ISLAH observatory, database and platform to include the university newcomers, so as to consolidate an integrated supply/demand matching model based on graduate data. All the project activities envisage the following specific objectives:

- to build Tunisian capacities by transferring EU best practices on graduate employability and monitoring university performance
- to enhance the empowerment of Tunisian universities
- to strengthen university/labour market linkages
- to increase the collaboration among universities at local level
- to support an "open" market for highly qualified human capital
- to improve the overall quality of the HE system in Tunisia in line with International standards.

Competence provision and capacity transfer remain project goals provided at all university staffing levels from administration to IT and researchers. Thus the TUNED project will provide beneficiaries with facilitated job intermediation and job demand/supply matching, help reduce graduate unemployment and underemployment (which remains a serious problem for the young in Tunisia), and at the same time seek to ascertain the needs of labour market stakeholders in terms of skills. The TUNED Project formally started in October 2016 and will run until October 2019. Thanks to the project, students, researchers and staff from the Tunisian HE institutions involved will also enhance their capabilities as a result of the international exposure and exchange of best practices with other EU HE institutions. As a long-term result, we can expect the Tunisian HE institutions to engage in structured partnerships with EU institutions, with both sides reaping benefits in terms of increased mobility and mutual enrichment.

### **Current state of the project**

The project started formally in October 2016. To date (August 2017), TUNED is at month 11. The Kickoff meeting was held last January in Bologna, hosted by AlmaLaurea. In June 2017, the project brochure was designed with the contribution of all the partners involved and in July the University of Sfax held the Technical Meeting for Tunisian university staff in charge of managing the university student CV database.

### **Link to additional information**

[1] <http://www.tuned-project.eu/>

[2] <http://www.islah-project.net/>.

## **Boosting Business in the Mediterranean thanks to student mobility in the frame of the HOMERe program**

Léo VINCENT, Honorary Chairman of RMEI, responsible of the HOMERe program

HOMERe is an intra-Mediterranean internship mobility scheme offering companies in search of new business perspectives a unique opportunity for sourcing young talents from the Euro-Mediterranean region to become their interns. HOMERe is giving students the chance of complementing their education thanks to a 6-months practical work experience in a foreign company.

# **BEST PRACTICES AND NEW PROJECTS**

## **WORK TRACK**

### **SUSTAINABLE DEVELOPMENT**

## **Food waste valorization for the production of added-value commodities: Focus on citrus peel waste as a feedstock for sustainable biorefineries**

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The food sector is currently emerging as an area providing a range of advanced and multidisciplinary research and development approaches for sustainable waste management. Food manufacturing generates substantial quantities of residues and waste rich in molecules, such as carbohydrates, fatty acids and proteins, which can be valorized to added-value compounds including chemicals, biofuels and biopolymers through physicochemical and biochemical processing. The restructuring of the traditional fermentation industry into biorefineries that produce low value commodities (e.g. biofuels) as well as biobased chemicals and materials of high value can set the basis for replacement of petrochemical processing with a renewable resource and to develop a minimal waste community. Although a plethora of food-derived potential residues exist, a common conversion technology has not yet been developed. However, several biorefinery strategies have been developed mainly focusing on wheat, bread, corn, sugarcane and citrus waste as feedstocks owing to their lignocellulosic nature. The current state-of-the-art in these biorefineries is reviewed, while an example relevant to the development of a citrus peel-based biorefinery is presented.

The talk incorporates an overview of the methods employed for extraction of valuable components included in the waste (e.g. pectin and essential oils) as well as the conversion of the carbohydrate content generated following pretreatment into platform chemicals (succinic acid). After extraction of essential oils and pectin, different conditions of dilute acid hydrolysis were evaluated based on estimation of the sugars liberated and subsequent fermentation of hydrolyzates for production of succinic acid by *Actinobacillus succinogenes*. The most suitable pretreatment conditions involved 116 °C for 10 min using 5% (w/w) of dry raw material (drm). Thus, a total sugar (ts) yield of 0.21 g<sub>ts</sub> g<sub>drm</sub><sup>-1</sup> and a succinic acid (sa) yield via microbial fermentations of 0.77 g<sub>sa</sub> g<sub>ts</sub><sup>-1</sup> was achieved, while the use of lower solid contents resulted in higher sugar yields. The residues from dilute acid hydrolysis were applied for subsequent enzyme hydrolysis using commercial enzymes and the most suitable combination of enzyme units included 30 IU cellulases and 25 BGL β-glucosidases achieving a yield of 0.58 g<sub>ts</sub> g<sub>drm</sub><sup>-1</sup>. Moreover, elemental analysis in hydrolyzates obtained from dilute acid hydrolysis and a combination of acid and enzyme hydrolysis indicated that during the combined treatment, high

concentrations of  $\text{Mg}^{2+}$  and  $\text{Ca}^{2+}$  ions are liberated as compared to dilute acid hydrolysis, while the concentration of hydroxymethylfurfural was  $0.038 \text{ g L}^{-1}$  demonstrating low formation of inhibitors. The hydrolyzate generated through the combined pretreatment proposed was applied as feedstock for the production of succinic acid achieving a yield of  $0.70 \text{ g}_{\text{sa}} \text{ g}_{\text{tsc}}^{-1}$ . However, although the combined hydrolysis approach could approximately double the sugars released in the hydrolyzate, the economic analysis performed confirmed that the use of the enzymatic treatment could not be competitive. The developed bioprocess constitutes a valuable alternative to the application of energy intensive chemical technologies for succinic acid production.

## D.E.A. PROJECT ABSTRACT

### Project title (and acronym, if any)

Donne Energia Ambiente (D.E.A.)

### Presenting author(s) and affiliation(s), with reference to participating institutions

Francesca Jacobone - Professor of Economia ei Sistemi Produttivi, Università degli Studi Roma Tre and Vice President CREIS

Stefano Gazziano – ENEA Agenzia Nazionale Efficienza Energetica and John Cabot University

### Participating institutions

1. Università degli Studi Roma Tre
2. ENEA / Agenzia Nazionale per l'Efficienza Energetica.
3. ARCS Culture Solidali, ONLUS
4. John Cabot University
5. CREIS – Centro Ricerca Europea per l'Innovazione Sostenibile

### Funding scheme/body, if already funded

t.b.d

### Overview of the project [*max 4,000 characters, spaces included*]

It is acknowledged that women with good skills and professionally active in sectors traditionally considered as “male” occupations represent a model fostering change in the young generations attitude towards the genders role in human society or towards activities “naturally” reserved to men. Such a change is desirable under the “Gender mainstreaming” and “Gender Equality” practices, goals of the European Agenda 2020, and UN 2030 initiative *Transforming our world: the 2030 Agenda for Sustainable Development*.

UN Women, aware of the good results obtained through energy efficiency training for women in developing countries, has indeed funded “capacity building” projects developing and implementing courses on energy matters providing technical competences an “empowerment” to the huge and still unused resource made by women.

DEA proposes to set up vocational training courses on: Energy Efficiency, ICT, Entrepreneurship, Digital Cultural Heritage and specific actions toward empowerment of women to achieve the objectives of the project.

Efficiency in household electric uses will be a focus. International researches show that electrification of rural communities increases both probability of employment and personal empowerment of women as well as safeguarding their health (UN Women, 2013). As a rule, the entire community experiences a better social and psychological standard of life and better health standards (WHO data) and thus a better quality of life.

Electrification costs to guarantee healthy living conditions may be high in certain areas. Nevertheless good practices exist proving how local economies and women entrepreneurship may grow through environmentally sustainable solutions at a low cost, and with positive impacts on women empowerment and female health.

The advantages of such solutions are not limited to women: a higher family income and adequate energy supply obtained by increasing energy efficiency in final uses and productive activities is an advantage to the entire community thanks to the creation of new jobs.

- **Project objectives**

DEA project objectives are:

- Promote gender equality and empowerment of women in rural communities of Southern Tunisia
- Increase energy efficiency in household consumptions as well as in SME's in southern Tunisia
- Stimulate sustainable economic growth and new employment opportunities, particularly so for women and young people.

- **Activities**

DEA initiative will build on existing programmes operated by ARCS in Southern Tunisia with positive results in improving women conditions promoting the setup of mostly women-operated productions of textile based on traditional women experience and skills, and a network of trusted relationships with local communities, authorities and economic operators.

From the existing years of experience, the project partners, interacting with the local community whose trust and involvement was achieved, will understand what the educational needs are to extend the initiative also to energy efficiency, ICT and women entrepreneurship.

UNIROMA3, JCU, the educational institutions of the partnership, will then develop educational curricula, courses syllabi, students expected learning, teacher qualifications. ENEA will provide expertise on energy efficiency technology and applicable best practices.

Once consensus with local community will be achieved, a first pilot will be implemented and the feedback from the results will allow the approval of a "Master in energy efficiency and empowerment" specifically tailored to women and young people. It is expected such Master could be replicated in other areas of the Maghreb with similar conditions to Southern Tunisia.

It is expected courses will specifically target: energy alphabetization (sources, conversion, efficiency in uses and apparatuses, sustainability); Women role in society; Mentoring and seminars on entrepreneurship.

- **Results/Impact [in terms of students' training, research, knowledge/technology transfer, etc,]**

DEA will positively impact upon the quality of life of women group by delivering professional training thus improving the possibility of developing economic independence. The communities where the women live will also benefit in terms of household health and sanitation standards, as well as in more energy availability thanks to an efficient use; both issues normally cared for by women.



- **Time schedule**

M1 to M6                    Phase 1: understanding educational needs, reach consensus with local communities, definition of syllabi, curricula, technologies, qualifications of instructors, course schedule. Milestone: project presentation and acceptance.

M 6-12                      First pilot of courses held. Feedback and development of a "Master in energy efficiency and gender equality"

M 13-24                    Master implemented and replications possibilities explored.

Cost estimated year 1: ca 200.000 Eur

- **Links**

ARCS programmes in Tunisia <http://www.arcsculturesolidali.org/it/category/progetti-2/tunisia/>

JCU Institute for Entrepreneurship <http://www.johncabot.edu/entrepreneurship-institute/default.aspx>

ENEA National Agency for Energy Efficiency <http://www.agenziaefficienzaenergetica.it/>

## PROJECT ABSTRACT

### Project title (and acronym, if any)

Strengthening capacities of Mediterranean and African Scientists of the public and private sector regarding management and financing of bankable green projects for green growth in the Mediterranean and African regions

### Presenting author(s) and affiliation(s), with reference to participating institutions

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### Participating institutions

1 OIT (Tunisian Engineering Council)

2 The NGO R20 – Regions of climate action launched in 2010 by Arnold Schwarzenegger with the support of the United Nations, based in Geneva: <https://regions20.org/>

3 The « Ecole Nationale Supérieure des Mines de Saint Etienne » - FRANCE : <http://www.mines-stetienne.fr/lecole/>

4 The ENSIT (Ecole Nationale Supérieure de Tunis) [www.ensit.tn](http://www.ensit.tn)

### Funding scheme/body, if already funded

....AfDB (African Development Bank) and R20, not yet funded

### Overview of the project [*max 4,000 characters, spaces included*]

- *Project objectives*  
**Context:** *The global green economy required paradigm shift is long to take off in spite, there is a profound lack of suitable bankable low carbon and climate resilient infrastructure projects in the Mediterranean and African countries. Sub national Scientist and professionals need to know how to design, develop, structure and implement green infrastructure and to be accompanied on the whole process until green economy becomes bankable projects and business.*  
**The objectives** *of the project are centered around three key actions: (1)A training program aiming at strengthening the capacities of Mediterranean and African Scientists and Professionals from the private and public sector in the fields of management, financing and deployment of bankable green projects; (2)Launch of innovative national systems structured around projects on sustainable infrastructures; (3)The creation of a network of Mediterranean and African experts around the green economy*
  - *Activities*
1. **The first training is a long training course** *of 12 months diploma-awarding Specialized Master's degree from prestigious Schools of Engineering in France, Algeria and Tunisia. This Master degree focuses on the following strategic sectors : environment, renewable energies, energy efficiency for buildings, sustainable management and sustainable mobility, which in fine will help the student " to understand the stakes in this transformation towards a green economy and to be an actor of this transformation by creating and launching innovative bankable initiatives and projects on green infrastructure. At a medium and long term, the aim is to launch online Master degree courses for Mediterranean and African regions. **The second is a short training program** for the sub-national authorities on the SOURCE platform. Source is a public project management tool enabling public sector agencies to improve their project preparation activities and secure*

*appropriate financing to meet international “Sustainable Developments Goals” (SDG) and develop best practice.*

**2. An innovative national system structured around projects on sustainable infrastructures:** *The development of green economy and projects of sustainable infrastructures involves at the same time knowledge, and cooperation of various actors. The institutions which develop the regulatory and fiscal framework, the bodies for education and research, the financial bodies, communities and project leaders, companies, professionals, NGOs, experts. For this, a national system of innovation green economy needs to be established. The governance of this system leans on an information system and processes putting in relation to the various actors and favoring information exchanges and experience.*

**3 The creation** *of a network of Mediterranean and African experts around the green economy. This network would consist of 2 types of experts: Scientists, researchers and experts involved directly or indirectly; The graduates of the Master and the practitioners having benefited from Source training*

- *Results/Impact [in terms of students’ training, research, knowledge/technology transfer, etc.] Each year 15 students per region should graduate, for a total of 60 students per year. On top of adding technical capacity to the African continent, the Master’s thesis are expected to generate opportunities for around 60 investment ready projects per year and to generate more than 120 direct employments for young African graduates and hundreds of indirect employments per year. Projects will include renewable energy production, building refurbishments, street lighting refurbishments, new transports systems, waste collection and sorting systems, waste valorization plants ....*
- *Academic MASTERE degree launched on pro green policies, technologies and finances for infrastructure development in four African region (North, in Oran Algeria, West in Abidjan Ivory Coast, South in South Africa and East in Ethiopia)*
- *Time schedule*
- *3 years, starting from 2018*

### **Current state of the project**

*The project proposal submitted for funding, awaiting for financial agreement*

### Project Description

Light Up a Village aims to help underserved communities using sustainable energy solutions, ranging from heating and refrigeration to lighting up streets and landmarks.

Due to political and economic constraints, some Lebanese villages suffer from a lack of continuous electricity and an unmaintained electrical grid. Remote impoverished villages lack the resources to provide the first cost and the running cost for proper street lighting , water pumping , ec. Together, these problems have put Lebanese citizens in unsafe and unsecure conditions.

For this matter, SSEA – AUB chapter and The Lebanese Solar Energy Society –LSES see the potential in implementing a solution for people in need using the aforementioned energy solutions.

Light Up a Village (LUV) seeks to implement our green energy initiative with the help of corporate sponsors and small businesses across the Lebanese business community.

Light Up a Village is a long term project that seeks to make an impact on all Lebanese villages in need. LUV 1.0, the predecessor to our current project, successfully resulted in the implementation of 15 solar-powered street lights and 10 home kits in the village of Mejdal, Akkar.

Light Up a Village 2.0 aims to expand into the village of Manara, in the Beqaa region of Lebanon, and implement another unique, student-led, green energy initiative.

### SSEA and LSES

This proposal is presented by SSEA- American University of Beirut Chapter(AUB) and LSES .

Students for Sustainable Energy for All (SSEA) is a network comprised of various students across multiple universities around the globe. This network acts as a platform for developing globally-minded leaders who will ensure the energy sustainability of future generations and the health of our planet. A group of students of the American University of Beirut have established a local SSEA chapter under the supervision of a professor and have come up with the Luv project .

The Lebanese Solar Energy Society (LSES) , an NGO active in Lebanon in promoting and advocating renewable energy , has been solicited by the SSEA to provide technical help in preparing design , tender documents and supervision assistance for their LUV project.

## Light Up a Village -LUV

LSES has among its members professional in the field of renewable energy including consultants , suppliers and contactors .

### Our Mission Statement

Contrary to popular belief, numerous parts of the Middle East suffer from energy poverty, along with most of the countries in the world. Starting with the American University of Beirut, the home of our chapter, the family of the SSEA Chapter of AUB is creating initiatives to raise awareness in the region, find solutions for the energy problem, and promote a decade of sustainable energy (2014-2024). In the long run, our family envisions a brighter tomorrow by expanding its projects onto a local and global scale.

All projects will be implemented without any regards to gender, race, sect, political affiliation, sexual orientation or any other discrimination factors. The energy crisis is every citizen's problem. Therefore, we shall put our hands together, SSEA Chapter of AUB along with The Lebanese Solar Energy Society-LSES , with the support of other Initiatives, to help find solutions for impoverished rural areas.

### The problem at hand

Current electricity shortages, compounded by lack of sustainable solutions from the Lebanese government, inhibit Lebanese villages' economic growth and independence. This phenomenon indirectly drives civic engagement groups and the Lebanese people to work hand in hand toward developing solutions. Our project works along those lines. Light Up a Village is driven by the need for change and impact in our society. Since we are concerned mainly with sustainability at SSEA-AUB, we are tackling the street lighting problem with renewable energy solutions in Lebanese villages in need of such support.

### The proposed project

The project will implement solar street lighting in the village of Manara, Beqaa, Lebanon. For LUV 2.0, 20 highly efficient, solar-powered LED lights will be installed in the most active places of the Manara village in Beqaa. Phase 1 includes the main square and the

## Light Up a Village -LUV

adjacent mosque, phase 2 is the entrance of the village, and phase 3 encompasses the population-dense inner neighborhoods. We carried out multiple site visits, in close coordination with the municipality, to end up with our current project plan. Please check the figure below for the village map:



*Google maps: The contours represent the areas where the solar light poles will be placed*

## The Educational Aspect of LUV

One of the unique aspects of this project is its capability to bring young engineers first hands-on experience on practical real world applications. In Light Up a Village project, we plan on carrying out regular site visits to inspect and learn from the implementation of our project. The students will be guided by experts from LSES through the design , tendering and implementation of the project . As a result, students will have the opportunity to learn the system designs and drawings, and more importantly how to turn these designs into reality. By creating this camp, the designers ( LSES) , the Contractor and the student body will work together in mutual beneficence toward building up the solar street lighting system. The students will work as apprentices with the LSES professionals. Furthermore, Light Up a Village is also envisioned as an educational campaign, to further sustainable thinking in Lebanese communities across the country.

## How can we serve Lebanon together?

After establishing Light Up a Village in 2016, and implementing LUV 2.0 in 2017, we plan on continually expanding into larger communities, implementing more innovative solutions for all of Lebanon's underserved communities. This would include introducing solar pumping to the villages ; thus , enabling the remote villages of providing free pumping power. By implementing a humanitarian, non-sectarian, renewable energy project, we envision an eco-friendly and safer Lebanon. With sponsor and partner collaboration, we can continue to realize a successful Light Up a Village.

## **UN Sustainable Development Solutions Network (SDSN) @ the Università degli Studi di Napoli *Federico II***

Marzocchella Antonio<sup>(a)</sup>, De Capua Alberta<sup>(a,b)</sup>

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The **UN Sustainable Development Solutions Network (SDSN)**<sup>1</sup> has been operating since 2012 under the auspices of the UN Secretary-General. SDSN mobilizes global scientific and technological expertise to promote practical solutions for sustainable development, including the implementation of the Sustainable Development Goals (SDGs) and the Paris Climate Agreement. The SDSN aims to accelerate joint learning and promote integrated approaches that address the interconnected economic, social, and environmental challenges confronting the world. SDSN works closely with United Nations agencies, multilateral financing institutions, the private sector, and civil society. The organization and governance of SDSN aims to enable a large number of leaders from all regions and diverse backgrounds to participate in the development of the network. The SDSN Leadership Council brings together global sustainable development leaders from all regions drawn from civil society, public, and private sectors. It acts as the board of SDSN. Much of SDSN's work is led by National or Regional SDSNs, which mobilize knowledge institutions around the SDGs. Several Thematic Networks mobilize experts from around the world on the technical challenges of implementing the SDGs and the Paris Climate Agreement.

The **SDSN Regional Network for the Mediterranean (SDSN Med)** is hosted by the University of Siena (Italy). The University of Siena has long-standing research and project activities in sustainable development with a particular focus on the Mediterranean. The SDSN Mediterranean will expand its activities to include *inter alia*:

- **Regional and National Pathways to Sustainable Development:** The Network will develop regional pathways towards sustainable development and assist countries/cities in operationalizing them.
- **Teaching on Sustainable Development:** Institutions in the region can collaborate to develop and improve teaching materials and courses on sustainable development through the SDSN's education initiatives and in partnership with the Masters of Development Practice.
- **Applied Research Activities:** the focus on solutions will give rise to ideas and opportunities for applied research in the Mediterranean Region, which could take advantage of the global



network of the SDSN.

In 2015, the SDSN launched its official youth initiative, **SDSN Youth**, to empower youth globally to create sustainable development solutions. SDSN Youth educates young people about the challenges of sustainable development and creates opportunities for them to use their creativity and knowledge to pioneer innovative solutions for the SDGs. In addition, SDSN Youth creates platforms for young people to connect, collaborate and integrate their ideas and perspectives into national and regional pathways for implementation of the SDGs.

Link to additional information:

[1] <http://unsdsn.org>

## PROJECT ABSTRACT

### Project title (and acronym, if any)

Fanar Solid Waste Sorting Facility

### Presenting author(s) and affiliation(s), with reference to participating institutions

Joslin Kehdy – Founder of Recycle Lebanon  
Nour Kanso – Researcher at Recycle Lebanon

### Participating institutions

Municipality of Fanar, Reco Waste

### Funding scheme/body, if already funded

50,000 USD funded by Reco Waste

### Overview of the project [*max 4,000 characters, spaces included*]

Fanar , area located in the Matn district of Mount Lebanon and 7 km away from the capitol, Beirut. The area has been suffering from mismanagement in solid waste due to the crisis that started on July 2015. Some parts of the Fanar are being used as a dump and a burning site to dispose the waste which angered the residents of the area, thus calling for protests and blockage of roads. Therefore, demands for the establishment of a solid waste sorting facility was made by the residents and municipality members and as such Recycle Lebanon has been in-contact with members of the municipality of the Fanar and Reco Waste where Recycle Lebanon will help the latter on education and training at the household level inregards to solid waste management.

**Project objectives:** The aim of this project is to promote and increase recycling and sorting starting at the household level and in-collaboration with the community and municipality. Special emphasis will be given to reducing plastic consumption at the household level.

### Activities:

- Training at the household by doing door to door sorting of solid waste.
- Implementing clean up campaigns around the area as part of Recycle Lebanon’s program “Dive into action”.
- Establishing recycling booths which involve fun educational activities at events/festivals in Fanar.
- Creating an eco-friendly market where retailers and shop owners are encouraged to use recycled material.

**Results/Impact [in terms of students’ training, research, knowledge/technology transfer, etc.] :** Recycle Lebanon intends to educate, promote, and help the community of Fanar establish proper sorting of solid waste and consequently be aware of the issues related to management of waste.

**Time schedule:** The project is still in its preparation phase where Recycle Lebanon is in communication and Reco Waste and Municipality to prepare the administrative and operational part of the facility. The facility should be operating by the beginning of the next year.

### **Current state of the project**

The project is currently in the preparation phase where the official launching of the project would be at beginning of next year.

### **Link to additional information**

- [1] <http://www.dailystar.com.lb/News/Lebanon-News/2016/Aug-13/367027-fanar-municipality-complains-from-waste-dumping-in-area.ashx>
- [2] <https://www.lbcgroup.tv/news/d/lebanon-news/232394/al-fanar-residents-stage-sit-in-against-waste-dump/en>
- [3] <https://www.youtube.com/watch?v=77aL6AUB-0g>

## **A new sustainable infrastructural plan to boost the competitiveness and the integration of the Southern Italian regions and North African.**

Filippo Romeo partner of Vision and Global Trend Institute. The research project was developed by “programma infrastrutture e sviluppo territoriale” ISAG Alti Studi in Geopolitica Scienze Ausiliarie (IsAG), Roma.

### **Participating institutions**

Vision and Global Trend Institute established in Rome.

### **Funding scheme/body**

Budget is granted by ISAG and it is worth 15.000,00 euro

### **Overview of the project**

- *Project objectives*
- The project aims at taking stock of the visionary studies on the creation of a Mediterranean Macro-area encompassing the southern regions of Italy, and North African 's countries.
- All this in compliance with the EU policy aimed at integrating the countries overlooking the Mediterranean basin.
- The core idea is that infrastructures are instruments to overcome geographic shortcomings and represent a powerful factor for economic development and territorial integration.
- The Macro-Region Calabria Sicilia, thank to an infrastructure on the Messina Channel, and linked with the Italian and European network railroad in compliance with AV and AC requirements, could become a prominent international logistic and trade hub.
- A link infrastructure with Tunisia would extend the Macro-Region toward North Africa, which could in turn become a logistics and trade hub of Africa linked with the South Europe.
- This investment could generate a new era of economic development by integrating two different continental area belonging to the Mediterranean basin, placing it at the center of international trade stage.
- The project seeks to find the scientific backing of the largest research and development institutions in the field of infrastructure and logistics (universities, research institutes, ministries, European Commission, etc.) at Italian, European and North African level.

- Political and economic feasibility of the project is one of the main focus and concern of the study.
- The research activities have been launched since 2015 while the results were collected in several publications, which were presented at conferences and academic seminar
- ***Time schedule***

Project start date January 2014

Project finish date January 2017 (first phase)

The second phase is waiting for new funds. It is expected from January 2018 to 2020.

Current state of the project

The project is divided into two phases:

- 1) Establishing a research group and scientific advisory board. Searching and selecting scholars, experts in order to collect and write and publish articles. This phase has been ended.
- 2) Discussing the project with political and scientific institutions. This phase is pending as the promotion for the collection of economic resources has just begun.

### **Link to additional information**

[1]<http://www.geopolitica-online.com/26767/zes-logistica-ed-energia-fattori-di-sviluppo-per-il-porto-di-gioia-tauro-il-resoconto-del-convegno>

[2] <http://www.geopolitica-online.com/29134/la-macro-regione-del-mezzogiorno>

[3].<http://www.isag-italia.org/8112/il-corridoio-scandinavo-mediterraneo-f-romeo-alluniversita-di-messina>

[4] <http://www.isag-italia.org/cms/wp-content/uploads/2015/06/47.-Romeo-Limportanza-di-una-strategia-di-rilancio-infrastrutturale-per-Italia-e-il-suo-Meridione.pdf>

[5] <http://www.geopolitica-online.com/32486/il-porto-di-gioia-tauro-la-conferenza-dellisag-a-montecitorio>

[6] [http://www.ilsole24ore.com/art/impresa-e-territori/2016-06-20/tra-portacontainer-e-zone-speciali-porto-gioia-tauro-cerca-rilancio-110603\\_PRV.shtml?uuid=ADLc8Vf](http://www.ilsole24ore.com/art/impresa-e-territori/2016-06-20/tra-portacontainer-e-zone-speciali-porto-gioia-tauro-cerca-rilancio-110603_PRV.shtml?uuid=ADLc8Vf)

[7][http://www.ilsole24ore.com/art/impresa-e-territori/2017-03-06/stretto-messina-ora-spunta-progetto-un-tunnel-171430\\_PRV.shtml?uuid=AEIvIoi](http://www.ilsole24ore.com/art/impresa-e-territori/2017-03-06/stretto-messina-ora-spunta-progetto-un-tunnel-171430_PRV.shtml?uuid=AEIvIoi)

# **BEST PRACTICES AND NEW PROJECTS**

## **WORK TRACK**

### **CULTURAL HERITAGE**

## PROJECT ABSTRACT

### Project title (and acronym, if any)

International Training for the Preservation and Restoration of Cultural Heritage in the Euro-Mediterranean Region

### Presenting author(s) and affiliation(s), with reference to participating institutions

Laura Baratin

### Participating institutions

University of Urbino – DiSPeA Conservation and Restoration School

### Funding scheme/body, if already funded

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### Overview of the project [*max 4,000 characters, spaces included*]

*“Cultural heritage helps to define European identity. It is a fundamental expression of the richness and diversity of European culture. An irreplaceable witness of the past, the protection of our cultural heritage presents a common interest to European states, which must ensure it is passed on to future generations. In order to fulfill this responsibility, each state has set up specialist institutions and services and adopted a legislative framework under which cultural goods, recognized for their historic or artistic value, or according to other patrimonial criteria, are subject to a legal regime which can provide in particular for their conservation-restoration. Some cultural goods lie outside this system of protection or have not yet been recognized according to criteria proposed by national standards or laws. These goods are no less part of the cultural heritage, the conservation-restoration of which it is important to ensure in accordance with principles which guarantee the quality of action taken and the continuity of this heritage..... Furthermore, European community law issues standards which have a direct effect on the practice of the profession of conservator-restorer. These standards relate primarily to systems of recognition of diplomas and qualifications as well as to conditions drawn up by states for entering and practicing the profession. The profession of conservator-restorer of cultural heritage is thus confined within this ambivalence: entry to and practice of the profession are determined by community regulations, whereas the status of cultural heritage at which they are directed, and the standards of conservation-restoration are governed by national provisions, controlled by states and are likely therefore to vary greatly by country. **In other words, the professional environment – professional qualifications, entry to and practice of the profession, are greatly affected and determined by European community law, while the conditions for carrying out work on cultural property, which are part of the cultural heritage of the state, are largely determined by national laws.**” (European Recommendation for the Conservation and Restoration of Cultural Heritage del 07/03/2013 )*

The Euro-Mediterranean countries will have to reflect on their training path, generally in the face of problems of conservation, preservation and valorization: risk management, management, emergency interventions.

The general aim is to modernize and adapt the curriculum by introducing a new Euro-Mediterranean

curriculum for heritage preservation.

The specific objectives of the paper are:

- to identify learning content to be included in a new cycle of studies;
- to develop new skills for teachers and technical staff;
- to develop a network to support the new cycle of studies;
- to transfer a multidisciplinary approach to the new cycle of studies;
- to innovate teaching methods that encourage the use of new technologies;
- to encourage the development of cross-border restoration policy and heritage conservation with development and specific protocols;
- to harmonize programs between the Mediterranean countries and the EU, the aim of which is, in particular, to adopt a system of readily comparable titles;

"Restoration is the moment of methodological recognition of works of art in physical coherence and in their double polarity and historical beauty with a view to their transmission of the future ..."  
(Cesare Brandi).

The restoration and its formation can then be conceived as a land of intersection between the historical, scientific and technical components, capable of producing scientific knowledge and preserving our heritage, the historical memory of each country.

Taken in its interdisciplinary aspects restoration becomes an important expression of contemporary society and changes, an added value for the growth of the economy of all countries

The work seeks to identify the framework of international training in the field of cultural heritage, with the help of some guidelines



## **TEMPUS INFOBC; An innovative experience for the conservation and restoration of cultural properties in Tunisia**

Dr. Ines Ouertani, architect, professor in Manouba University , Tunisia

Coordinator of the project Tempus INFOBC, Manouba partner.

ouertaniness@yahoo.fr

### **Participating institution**

Manouba University, Faculté des lettres, des arts et des humanités.

### **Overview of the project**

The project aims to modernize the studies in the field of conservation and restoration giving a new structure of training. The Tempus project, INFOBC, represents an opportunity to share the experiences and the methods of training of the curator / restorer of cultural properties to face the academic and professional integration problems.

The idea of creating an interface Institute- professional background was developed and based on the reforms undertaken by the Government to improve Higher Education (PDESAQ Program 2006-2014) materialized by the adoption of the LMD reform and supplemented by the Law N ° 19 of 25 February 2008.

The general aim is to introduce a new curriculum Euro-Mediterranean Partnership for the Preservation and Management of Heritage with Specific Skills cultural, technical and scientific.

The specific objectives of the project will be to develop the first level of studies by improving new skills for teachers and technical staff by encouraging the use of new technologies in teaching. The main expected results are:

1. The creation and the activation of a first level of studies with 10/20 students;
2. Training of teachers and technicians (30) for the first level of studies;
3. The unification of the formative courses and the adoption of a system to recognize the academic certificate through agreements between the universities concerned;
4. The development of a local network to support the new cycle of studies (website for the experimentation of the FAD) and for the valorization of the course;
5. Dissemination of content via the UNIMED Network

The project Tempus INFOBC, have also other specific objectives of which it has realized a large part. At First, the priority was to identify the learning content to be included in the new course of study and to develop new skills for teachers and technical staff. Next, it was interesting to focus on the development of a local network to support the new cycle of studies and the transfer of a multidisciplinary approach to the new cycle of studies. The

innovation of the teaching methods that encourage the use of new technologies and the development of a cross-border restoration policy with the development of specific protocols were also were also relevant objectives

**Partners of the project TEMPUS INFOBC :**

Université d'Urbino – Département des Sciences de Base et Fondamentaux – DiSBEF, Italie

Ecole Nationale Supérieure des Arts et Métiers ParisTech, France

Université de Barcelone – Faculté des Beaux-Arts, Espagne

Union des Universités de la Méditerranée, Italie

Université IUAV de Vénice – Laboratoire Multimédial MeLa

Université de Tunis – Institut Supérieur des Métiers du Patrimoine de Tunis, Tunisie

Université de la Manouba – Faculté des Arts et des Humanités, Tunisie

Université de Sousse – Institut Supérieur des Beaux-Arts, Tunisie

Université de Gabès, Tunisie

Université de Sfax – Faculté des Lettres et Sciences Humaines, Tunisie

Université Ezzitouna, Tunisie

Ministère de l'Education Supérieure et de la Recherche Scientifique, Tunisie

**Current state of the project**

80%

## **The School of Restoration and Conservation of Cultural Heritage at the University of Holy Spirit in Lebanon (USEK)**

Prof. Arch. Joseph Zaarour, USEK

### **Participating institutions**

University of Holy Spirit in Lebanon (USEK)

### **Funding scheme/body**

MIUR, Italy

Università di Urbino “Carlo Bo” (UNIURB)

University of Holy Spirit in Lebanon (USEK)

### **Overview of the project**

The project of establishing a School of Restoration and Conservation at the USEK has been started in 2016 through the Cooperation between the University of Holy Spirit in Lebanon (USEK) and the University of Urbino (UNIURB), with the support of Italian MIUR.

The School will be the first in Lebanon and in Middle East, and aims to protect the cultural heritage of the region and to prepare local professionals able to properly act in several sites of the region, being part of an International and Italian net of scholars and restorers.

The theoretical courses with the participation of Italian and Lebanese teachers will start in the Spring Semester 2018, while the School will fully operate from academic year 2018-19.

### **Current state of the project**

In progress

## **Cosmic Ray Muon Radiography of Egyptian Pyramids with Nuclear Emulsions in the ScanPyramids project**

Kunihiro Morishima<sup>1</sup>

### **Participating institutions**

1 Nagoya University

### **Overview of the project**

ScanPyramids [1] is an international scientific research project to investigate Egyptian Pyramids. The project has started in October 2015, which was organized mainly by Egypt's Ministry of Antiquities and Heritage Innovation Preservation Institute (HIP). In this project, three innovative technologies (cosmic ray muon radiography, thermography, three dimensional accurate measurement with drone) are applied for the investigation. We are conducting cosmic ray muon radiography with nuclear emulsions for imaging of inner structures of pyramids. We installed nuclear emulsions inside the Bent Pyramid at Dahshur and the Khufu's Pyramid at Giza. Through this investigation, we demonstrated imaging of the known chamber inside the Bent Pyramid [2] and we detected unknown void behind the north face of the Khufu's Pyramid [3]. We are performing an additional investigation for understanding the structure of new void and analysis of nuclear emulsions installed in the Queen's Chamber.

### **Current state of the project**

Under investigation

### **Link to additional information**

[1] <http://www.scanpyramids.org/>

[2] [http://www.hip.institute/press/HIP\\_INSTITUTE\\_CP7\\_EN.pdf](http://www.hip.institute/press/HIP_INSTITUTE_CP7_EN.pdf)

[3] [http://www.hip.institute/press/HIP\\_INSTITUTE\\_CP9\\_EN.pdf](http://www.hip.institute/press/HIP_INSTITUTE_CP9_EN.pdf)

## **The Archaeology of the inaccessible**

Carlo Rescigno<sup>1</sup> , Paolo Strolin<sup>2</sup>

### **Participating institutions**

1 Università della Campania Luigi Vanvitelli, 2 Università di Napoli Federico II e INFN

### **Funding scheme/body**

The development of the experimental apparatus has been funded in the frame of the MU-RAY project and MURAVES projects for the muography of Mt. Vesuvius. The formation of a collaboration is the first step for the application of the muography technique to the archaeological site of Cumae.

### **Overview of the project [*max 4,000 characters, spaces included*]**

Nature has provided X-rays to investigate through “radiography” the interior of the human body. It has provided the highly penetrating particles called “muons” to investigate the interior of massive bodies through “muography”. Muons are abundantly produced by particles of extremely energy generated in the cosmos through largely unknown mechanisms, when they interact with matter in the upper atmosphere. A steady shower of high-energy muons invests the Earth’s surface, invisible and totally careless of our bodies. They penetrate inside massive bodies and, in principle as with X-ray, through transparency one can image their internal structure, such as the presence of cavities.

Two complementary techniques are exploited for muon detection. The so-called “nuclear emulsion” makes use of films as those used for photography or X-rays before the advent of digital photo-sensors, but sensitive to single particles and with typical exposure times of a few months. Electronic muon detectors allow for online analysis from remote locations, but need electrical power supply.

Muography was first applied in 1970 by the Nobel laureate Louis Alvarez for the search of hidden chambers in the Chefren pyramid [1]. In recent years muography was successfully applied to image the interior of volcanoes’ edifices. The applications in Archaeology are highlighted by the Scan Pyramids project [2] and by the muography of Mt. Echia in Naples [3] for what concerns the nuclear emulsion and the electronic technique, respectively.

The Mediterranean as a whole has an immense cultural heritage resulting from millennia of history. Thanks to the technological progress since Alvarez’s pioneering work, muography can become a

widespread technique for Archaeological investigations on what is otherwise inaccessible. We propose to set up a collaborative effort to this aim, with a multidisciplinary approach and in collaboration with industry. The *Cumae*'s acropolis is suitable for an ambitious pilot study, and will open the way to applications in other archaeological sites.

*Cumae* has a rich and ancient history. In book VI of the *Aeneid*, Virgil himself tells about the arrival of the Trojan hero on the shore of *Cumae* and about his ascent to rock with its sacred woods, dominated by the Temple of Apollo and with a cave hosting the Cumaean Sibyl, oracle of Apollo and Artemis. In the texture of the ancient city, the acropolis was rich of temples, processional roads and public monuments, of which we only have partial archaeological evidence. The presence of a theatre is expected from epigraphic documents, but not yet archaeologically attested. Cisterns and other cavities intercept the foundations of the oldest buildings [4-5].

The body of the acropolis consists of lava and tuff, reaching the altitude of 80 m asl. Tunnels and cavities have been excavated in the course of history. At the base runs the *Cripta Romana*, excavated in the late Republican period to connect the area of the Forum to the shore in the years of the turbulent war against *Sextus Pompeius*. At a higher altitude, along the side of the cliff, runs the tunnel leading to the so-called Sibyl's cave, according to the interpretation by its discoverer in 1932, Amedeo Maiuri. This interpretation has been disproved in recent years.

Muon detectors (emulsion or electronic) located in known cavities will detect muons coming from above, searching for patterns of anomalous absorption indicating the presence of unknown structures. In particular, a low absorption will give evidence of unknown cavities. For a three-dimensional mapping, at least three viewpoints are required. Synergies with conventional techniques will be exploited. On the NW side a complex system of military tunnels, excavated during the Second World War for defence purposes, offer additional possibilities to allocate the detector. Moreover several stone quarries penetrate inside the mountain since ancient times.

The morphology of the *Cumae*'s acropolis is similar to that of Mt. Echia in Naples, the latter being however characterized by a more complex system of cavities. Based on existing experience and tools, we will perform computer simulations to estimate the sensitivity of the investigations.

### **Current state of the project**

Design study in progress.

### **Link to additional information**

- [1] L.W. Alvarez et al., [\*Search for Hidden Chambers in the Pyramids\*](#), Science 167 (1970) 832-839.
- [2] *The Scan Pyramids Mission*, <http://www.scanpyramids.org/>
- [3] G. Saracino et al., [\*Imaging of underground cavities with cosmic-ray muons from observations at Mt. Echia \(Naples\)\*](#), Nature Scientific Reports 7, Article number: 1181 (2017), doi:10.1038/s41598-017-01277-3.
- [4] *Cuma, il Tempio di Giove e la terrazza superiore dell'acropoli. Contributi e documenti*, a cura di Carlo Rescigno, Edizioni Osanna, Venosa 2012
- [5] C. Rescigno, "I templi della Rocca e l'architettura sacra a Cuma tra età ellenistica e romana", in *L'architettura del sacro in età romana: paesaggi, modelli, forme e comunicazione*, a cura di M. Valenti, Roma 2016, pp. 113-125.

## **The muography of deep underground structures at Mt. Echia (Naples), and the perspectives open for Archaeology.**

Saracino Giulio<sup>1,2</sup>

<sup>1</sup> University of Napoli Federico II, <sup>2</sup> Istituto Nazionale di Fisica Nucleare, sezione di Napoli

### **Funding scheme/body**

The investigation at Mt. Echia has been funded by INFN, University of Naples and the Italian Ministry of Instruction, University and Research ( METROPOLIS project PON 03PE\_00093\_4). Collaborations have to be formed for future investigations of other sites.

### **Overview of the project**

Among the elementary particles with very energy generated through the interactions of “cosmic rays” in the Earth’s atmosphere and reaching the Earth’s surface as a kind of rain invisible to human eyes, those called “muons” are characterized by a high penetrating power through matter. This abundant muon flux on Earth can thus be used to perform "muographies" of massive objects, in analogy to X-ray radiography for the human body i.e. on the basis of a different absorption depending of the density.

The pioneering application of this technique was the search for hidden chambers inside the Chefren’s pyramid, performed by the Nobelist Louis Alvarez in 1970 [1]. Almost six decades since then, the technological progress has led to the development of a new generation of muon detectors suitable to a variety of applications. In the field of Archaeology, such detectors can be practically be used in a wide range of non-invasive investigations on hidden structures. It is thus time to exploit the muographic technique by setting up multidisciplinary collaborations involving archaeologists as well as physicists.

For what concerns muon detection, two kinds of techniques are available and can be chosen according to the case. The so-called “nuclear emulsion” - as in the Scan Pyramids Mission [2] – are capable of visually recording with very high precision the tracks of single muons on a kind of special photographic films, to be inspected using automated microscopes. With “electronic techniques” the muon tracks are recorded as electronic signals that are subsequently digitized, transmitted and processed using information technologies, with the possibility of online monitoring and data analysis from remote locations.

Profiting of the technical progress, it is now possible construct electronic muon detectors easy to transport and to install, robust and with low consumption of electrical power. An electronic muon detector with such features - originally developed for muography of volcanoes’ edifices - was installed in a cavity located in the depth of Mt Echia in Naples [3], where the ancient city of Parthenope was



founded around the VIII century BC. In the course of centuries, galleries and cavities have been excavated for various purposes inside the mountain. They are only partially known and their investigation presents an intrinsic historic interest. In a wider perspective, the muography of such a complex underground structure had the purpose of assessing the potentialities that are presently offered by muography for archaeological investigations.

Known underground structures inside Mt. Echia were indeed detected, and indications for unknown cavities have been found. The success of the muography of Mt. Echia shows that a new instrument is available for archaeological investigations of underground structures and encourages its application to other sites, of which the Mediterranean is particularly rich. Among them, the Cumae's acropolis is a very interesting possibility, due to the similar morphology and its archaeological interest.

### **Current state of the project**

A three-dimensional investigation of Mt. Echia is in progress. The study of other sites is starting, in collaboration with archaeologists.

### **Link to additional information**

- [1] L.W. Alvarez et al., [\*Search for Hidden Chambers in the Pyramids\*](#), Science 167 (1970) 832-839.
- [2] *The Scan Pyramids Mission*, <http://www.scanpyramids.org/>
- [3] G. Saracino et al., [\*Imaging of underground cavities with cosmic-ray muons from observations at Mt. Echia \(Naples\)\*](#), Nature Scientific Reports 7, Article number: 1181 (2017), doi:10.1038/s41598-017-01277-3.

## **Memoria Mari**

Marco Sannini, Jazz Composition Chairman, Conservatorio S.Pietro a Majella di Napoli

- Douro Generation (PT) Prof. Laurent Filipe Prof.ssa Paula Castelar
- Dipartimento di Linguistica Università Orientale (IT) Prof.ssa Johanna Monti
- Conservatorio di Musica di Cosenza (IT) M°Nicola Pisani
- Progetto Sonora (IT) M° Eugenio Ottieri
- Associazione Scarlatti M°Tommaso Rossi
- University of Nicosia (CY) Prof. Yiannis Miralis
- Prof. Francesco M. Sacerdoti Adjunct Professor Temple University (IT-USA)
- Ismez (IT)
- Università degli Studi della Campania Luigi Vanvitelli Prof. Carlo Rescigno

The Project “Memoria Mari” is about to search and develop a Musical Koinè among the people of the Mediterranean area and consists in starting and coordinating a web of resources, referring to the institutions concerned, to research and elaborate the melodies that have "traveled" between the peoples; born, handed down and influenced by the specific and common cultures of the ethnic and geographical areas overlooking our sea.

Working on the "Melodic Memories" then, that over through the ages have influenced the development of the musical traditions.

Structures involved, through experts, will engage in an activity consisting in several steps:

- 1- Ethno-musicological research on traditional melodies, identifying common traits and the processing the acquired material
- 2- Find and coordinate youth human resources, identifying young performers from different countries and selecting the instruments needed for the birth of a multicultural Ensemble.
- 3- Reprocess and orchestrate the materials and identification of the elements (music memes) designed to convey improvisational practices.
- 4- Concertation in the form of workshops and performances
- 5- Creation of an Ensemble in order to share and spread the work done, through international concerts and lectures.

## **The Cultural Heritage of Mediterranean Diet: revitalize a traditional model adapting it to present knowledge and needs.**

Rivellese AA, Riccardi G, Annuzzi G, Giacco R\*, Vitale M.

Department of Clinical Medicine and Surgery, Federico II University; \*Institute of Food Sciences, National Research Council, Avellino.

### **Overview of the project**

#### *Project Objectives*

The traditional Mediterranean diet reduces the risk of heart disease, cancer, and Parkinson and Alzheimer diseases. Unfortunately, modern Mediterranean diet has little resemblance with the traditional one: all Mediterranean countries succumb to the modern “Western diet” that brings about high rates of obesity, diabetes, hypertension, hypercholesterolemia, and heart disease.

Therefore, the aims of this project are:

- To clarify the main characteristics of the traditional Mediterranean diet taking into account products and foods typical of different countries, on both sides of the Mediterranean Sea.
- To implement a correct dietary model, based on the scientifically based re-evaluation of the traditional diet, adapting this model to needs and characteristics of present fast-changing life.

#### *Activities*

The objectives of this project are challenging, requiring different activities at different levels.

1. Evaluation of dietary habits of different populations in collaboration with research groups from various countries. Migrants from North Africa and eastern Mediterranean countries will also be interviewed.
2. Implementation of a diet resembling the traditional Mediterranean diet at worksites.  
Workplaces are a suitable setting for improving eating habits. We have developed a nutritional intervention program based on the main characteristics of the Mediterranean diet, for implementation at corporate canteens. Briefly, this program is designed to (1) provide advice on healthy nutrition to the whole worksite population through panels, totems, tablemats and handout leaflets exhibited in the canteens and (2) make available and promote the choice of a large variety of healthy foods typical of the Mediterranean tradition (whole grain cereals, legumes, vegetables, fruit, fish, extra-virgin olive oil as the main dressing fat).
3. Implementation of menus typical of the Mediterranean diet in restaurants of different Mediterranean countries.

Identification of menus typical of the ancient Mediterranean diet, revised according to present scientific knowledge and elaborated as new recipes by chefs with healthy cooking proficiency. These menus, evaluated by expert dieticians and respecting healthy nutritional composition, will be signed with a “Mediterranean” brand and their use promoted as “Inspired by traditional Mediterranean diet”.

4. Implementation of typical Mediterranean products at school canteens, in particular for healthy breakfast/snacks.

Children and adolescents remain the population farther away from the principles of Mediterranean diet. A most negative aspect is the widespread use of breakfast and snacks made of commercial “Western” products rich in calories, saturated fat and poor in dietary fibre. To counteract this harmful eating behaviour, it may be necessary to offer and promote at school canteens “Healthy Mediterranean snacks” sharing the following: made from whole cereals and natural yeast, containing at least 30% of fruit and/or nuts and/or vegetables, dressed with extra-virgin olive oil, rich in polyphenols and with a low glycaemic index.

### *Results/Impact*

Students and scientists in Dietetics and Human Nutrition from different Mediterranean countries could join the different activities with fruitful exchanges between countries.

The most relevant potential result of this project is improving eating habits in Mediterranean countries based on the rescue of this specific gastronomic tradition with relevant beneficial impact on the prevalence of chronic degenerative diseases. The project might also have a favourable economic impact for Mediterranean countries, since it will promote new versions of local foods that can be exported worldwide.

### *Time Schedule*

0-12 months: Identification and design of the different nutritional intervention programs.

12-30 months: Implementation of nutrition intervention programs.

30-36 months: Analysis of results and writing of scientific papers.

### **Current state of the project**

The first activity on the implementation of the real Mediterranean diet at the worksite canteens has been carried out in two sites: the corporate canteens at Barilla G & R. F.lli S.p.A and the canteen of the Azienda Ospedaliera Universitaria Federico II, Naples.

# **BEST PRACTICES AND NEW PROJECTS**

## **WORK TRACK**

### **LOGISTICS AND MARINE STRATEGY**

## **PROMETHEE**

### **Promoting cooperation, synergies and integrating research with policy making in Mediterranean Desulphurisation**

Dragan Ciscic, professor University of Rijeka

#### **Overview of the project**

For Europe, shipping has been one of the key stepping stones to economic growth and prosperity throughout its history. The environmental performance of the sector and reduction of the risks for human health is a core objective of the EU, and it is inherently also a global issue. Shipping is a large and growing source of the greenhouse gas emissions, and SO<sub>2</sub> emissions from international shipping are expected to increase surpassing by 2020 all land based sources in EU. The desulphurisation as well as decarbonisation of maritime transport will require the active participation of numerous stakeholders, as there is prediction of the transformation in dynamics of shipping. The objectives of the action are creating a strong network of researchers and experts in order to explore impact on maritime transport, deep-sea shipping, short sea services and possible modal shifts. As the Mediterranean area is one of the world's most important waterways the problem, the reach of action is global.

80% of world trade is carried by sea whilst short-sea shipping carries 40% of intra-European freight. With more than 400 million sea passengers passing through European ports each year, maritime transport has also a direct impact on the quality of life of citizens, both as tourists and inhabitants of islands and peripheral regions. In recent years, growth in the world economy and international merchandise trade has fuelled demand for maritime transport services.

The environmental performance of the sector and reduction of the risks for human health is a core objective of the European Union, and it is inherently also a global issue. Research and the innovation it supports are essential tools in the global effort to achieve environmental and sustainable development and provide a means of immediate action.

Shipping is a large and growing source of the greenhouse gas emissions that are causing climate change. The European Union wants a global approach taken to reducing emissions from international shipping. Air pollutant emissions from maritime transport can travel over long distances and thus increasingly contribute to air quality problems in the EU.

Emissions from the global shipping industry amount to around 1 billion tonnes a year, accounting for 3% of the world's total greenhouse gas (GHG) emissions and 4% of the EU's total emissions. While pollutant emissions from land-based sources are gradually coming down, those from

shipping show a continuous increase. Even after accounting for enforcement of MARPOL Annex VI, which sets limits on the sulphur content of marine fuels for the Baltic Sea, the North Sea and the English Channel, emissions of SO<sub>2</sub> from international shipping are expected to increase by 45 per cent between 2000 and 2020. As a result, by 2020 the emissions from international shipping around Europe will have surpassed the total from all land-based sources in all member states combined.

The International Convention for the Prevention of Pollution from Ships (MARPOL) was adopted by the IMO in 1973, and is the main international convention covering the prevention of pollution of the marine environment by ships. In 1997, following lengthy negotiations, the IMO adopted Annex VI (Prevention of Air Pollution from Ships) to the MARPOL Convention, establishing limits on emissions of sulphur oxides, nitrogen oxides and others, as well as enabling the creation of Sulphur Emission Control Areas (SECAs), in which even tighter limits would apply. Mediterranean is the main source of the SO<sub>2</sub> pollution in Europe, and is expected to be defined as a SECA zone in nearly future.

As implementation of new legislative may contribute to increase of costs and prices of sea transport as distillates fuels are more expensive than residual fuels and may lead to increase of fuel price by around 65-80%. Not all ships will be similarly affected by the increased fuel prices. Impact depends on the share of fuel costs out of the overall transport cost for the specific ship type. It can be concluded that such types of ships as container ships, general cargo ships ( as the fuel costs are more than 50% of all costs) will be particularly affected by an increased fuel price.

Significant increase in costs of transportation by sea as a consequence of using the more expensive fuel may reduce competitiveness of sea transport drastically and cause that, in many cases, short sea shipping will not be cost - effective. This may lead to a modal backshift from sea to road and or even change directions of supply chain flows in order to avoid the SECA.

Reduction of the sulphur content in marine fuels to 0.1% might lead to

- a) a serious disruption of the commercial dynamics of shipping in the ECAs,
- b) a considerable increase in vessel operating costs,
- c) a lower competitiveness compared to other modes and
- d) a modal shift from sea to road (which would contradict the EC objective of promoting the use of sea/short sea transport

Although the SECA zone in Baltic area will be operative by 2015, the reach of SECA zone in Mediterranean will be global, as shipping route from Europe and America to Middle and Far East is

passing through. Indeed all of the traffic between Europe and Middle and Far East, as well as 50% of the traffic between America and Middle and Far East

This COST Action aims to address this gap in knowledge and sets out to: a) explore, challenge and develop the interdisciplinary potentials of research in the fields of maritime transport, economy, logistics, legislation, and ecology; b) build bridges and promote knowledge transfer between the research, practitioner and policy-making communities, both across these knowledge areas and different European regions and contexts. This will be achieved by creating a collaborative European network of research centres and stakeholders in the maritime industry, ship owners, shipbuilders, ports, governments and academia, in the process of preparation for Mediterranean to become a sulphur emission control area

Given these aims, the COST framework stands as the most appropriate instrument to support these goals (when compared with others like H2020 or Eureka), given that there is already a discrete range of research happening in these topics separately (both nationally and/or EU funded), but no common platform to provide opportunities for cross-disciplinary research and capacity-building.

This Action will provide such a platform, delivering the following benefits:

- a) the creation of a new research network that will act as a catalyst to innovate by providing examples of best practice via case studies;
- b) the transmission of best practice to wider groups - thereby acting as a mechanism for knowledge transfer;
- c) the provision of new perspectives at an academic level as well as to practitioners and policy makers; and
- d) the enhancement of a cluster of Early Career Researchers (including PhD students) across a range of disciplines reflecting the Action's aims and the expertise of the network.
- e) The aim of the Action is to explore, challenge and develop the interdisciplinary potentials of research in the fields of maritime transport, logistics, supply chain management, environmental and transport law, maritime economy, governmental policies and ecology, as well as build bridges and promote knowledge transfer between the researchers, practitioner and policy-making communities, both across these knowledge areas and different European regions and contexts.
- f) This proposal will make a number of innovative contributions in the technical and methodological aspects, especially in bringing together previously



unconnected research communities, with stakeholders and general public experts. Integrating Stakeholders and general public experts as Working Group members will be integrated into the whole project from an assessment of end-user needs to the dissemination of results. Main innovation is promotion of cooperation, creation of synergies and integration of research with policy making in Desulphurisation of Mediterranean

## Objectives

- a) The objectives of the project are creating a strong network of researchers and experts in order to explore all the problems that will occur by introducing SECA zones. The impact on maritime transport and short sea services, especially due to the anticipated large increase in costs, creates a total external cost balance, taking into account possible modal shifts.
- b) To monitor and identify the events in Baltic SECA zone and its effect on surroundings and to develop models , projections and policies for Mediterranean
- c) To create new business models and policy implications for the implementation of the proposed desulphurisation strategies. The strategies require new business relationships among parties, and new government policies setting up an environment
- d) To develop inter-disciplinary research capacity, explore existing research frames and plan new research pathways through collaboration between established and early career researchers on the Action's key knowledge areas ( maritime transport, logistics, ,maritime economy, supply chain management, governmental policies and ecology ), in a well specified series of seminars, conferences, researchers' exchanges, summer schools and joint publications
- e) To explore opportunities for development of cross-disciplinary methodological approaches and promote knowledge transfer between different empirical research traditions, by bringing together different research communities experienced in the evaluation of ecological, transportation, economic and management dimensions;
- f) To provide a core inter-disciplinary body of knowledge that can support both the continuation of wider research collaborations or specific research spin-offs with different thematic and geographical foci, through the development of new EU partnerships and joint research proposals;
- g) To involve the policymaking and practitioner communities in order to open up the scientific discussion to these stakeholders and find effective ways to transfer knowledge and put it into

practice, including the production of research-informed strategic insights and recommendations. This inter-stakeholder dialogue will be promoted both by widening the participation in the Action's seminars and conferences to industry and public sector representatives, as well as creating dedicated outputs aimed at informing policy and practice drawing from best available research.

Secondary/specific objectives:

- a) Research network meetings (conferences, workshops and training schools)
  - a. Two large scale research conferences
  - b. Four joint WGs workshops/seminars over four years (one joint workshop per year), bringing together all WGs to allow the development of work both within and across each WG.
- b) Support to Early Career Researchers (developing research capacity):
  - a. Four summer graduate schools for early career researchers in four years,
  - b. Promotion of at least one new PhD project around each WG's theme.
- c) Transfer and sharing of knowledge, capacity building, and circulation of ideas will also be facilitated, through innovative means of communication (such as webinars and video-conferences and other distance communication techniques) and dialogue between scientific communities and operators and practitioners
- d) Setting up of a knowledge database that will be used to store complex structured and unstructured information enabling finding the information on a given topic or general method of analysis. The knowledge base will be used to optimize information collection, organization, and retrieval for project stakeholders and general public.
- e) Publications/dissemination:
  - a. Two sets of conference proceedings
  - b. One Final Action Publication, in the format of an edited book of key issues and findings;
  - c. Publication of research results in high quality peer-reviewed journals per WG an
  - d. A dedicated Action website, together with a virtual research network community.

## **Current state of the project**

Preparation

## **Maritime strategy for the development of seaside cities: cooperation, synergies and integrating research with policy making in San Vincenzo Pier collaborative regeneration project**

Massimo Clemente and Eleonora Giovene di Girasole (IRISS-CNR, Italy)

Urban regeneration involves specific features in coastal urban areas for several factors: concentration of people, functions and activities, as well as for the maritime identity originated from geographical position and community history. In urban regeneration, the factor of social dimension, in relation to sustainability together with economic and environmental dimension, has been seen for years important and crucial. In this context, IRISS-CNR research group is carrying on studies aimed at defining and testing a collaborative planning methodology for urban regeneration in seaside cities, looking at the sea and the maritime culture as “common goods”. Through an Action Research approach, the metropolitan coast of Naples becomes the testing ground. This presentation shows the experiment in progress at San Vincenzo Pier, the main breakwater of the Port of Naples. Despite its historic-cultural value, the pier lays in a state of abandon and unavailability. The aim of the project is to recover the pier in its port function (touristic port, mooring areas for yacht) and to create a public space on the sea, promoting the communication among Institutions, urban community and stakeholders.

## ***A Portus for each Port***

Alessandra Acampora, PhD Architect, Università degli studi di Napoli Federico II

Roberta Amirante, Full Professor, Università degli studi di Napoli Federico II

### **Participating institutions**

Università degli Studi di Napoli Federico II, Dipartimento di Architettura

### **Overview of the project**

The **cruise tourism** has increased exponentially in recent times and the **Mediterranean Cruise** is among the most popular routes.

As well as for European intellectuals of 1700, that with the grand Tour were discovering classicism, so today more than 5 million passengers a year choose a holiday in the Mediterranean with the same (alleged) intent. But the sense more precisely of the trip in the Mediterranean and in its cities, apparently unifying element of cruise holidays as well as sponsored by the companies, is in practice denied by the way and the times restricted to this kind of experience.

It's easy to report negatively the difference between travel and vacation and yet there is no doubt that the potential related to **mass size** of the cruises could be exploited much more useful than the advantages that cities touched by tours may have both with regard to the cultural growth of cruise passengers and more concretely to their awareness of the "quality" of City tap:

awareness that could maybe get them to come back, and this time to have these cities a different experience.

An **experience** as possible and even necessary in those cities of the Mediterranean, reduced from cruises to *vacation* spots, ask instead of being treated as a destination for a *travel*, why have historical and cultural character that cannot be reduced to a fleeting *trip*.

As we know often cruise passengers are quickly rerouted to external sites or very limited parts of the city of arrival are not able to return the richness and complexity that are characteristic of Mediterranean cities, terms of interplay between nature and culture, history and geography, archaeology and modernity.

Without interfering in this way, managed by cruise companies, the proposal is to identify, through architecture, a **place** that allows cruisers to **expand** albeit slightly **experience** the city, acquiring pieces of knowledge and breeding, although fleetingly life and city dwellers.

To accomplish this the search performs a historical landmark that has both a physical and a symbolic character: the **portus**, traditional meeting place between merchants and citizens, always placed in a

place of contact between port and city.

Donatella Calabi explains the "portus":

*“a closed area, still protected, used as a deposit, or as a stage of a journey for loading and unloading goods. Is the original meaning of entrance, passage, crossing .... the portus is a permanent square.*

*Is the uninterrupted transit center, is a cluster of markets where the exchange of goods, people, information, cultural and artistic models is interrelated with administrative, religious and teaching functions, more complex than ever”(Calabi, 1993).*

The logic that should inspire action uses the logic of **edutainment** (education + entertainment) and is based on the functions of commercial ation (vocation of every port since ancient times), exhibitions, information and training, which are called from one side to **increase the chance of knowledge** of the city from the perspective of the culture, the other to **build physical relationships** more porous between port and city.

In this operation, the physical configuration of the portus assumes a significant relief in itself: not just for the "accuracy" of his position but also for the conformation of its spaces, to the viewpoints that privileges, for relationships – even from a distance – that builds.

The "portus" could be incarnated in a **new architecture**, through the **reuse of an existing building**, through the **construction of a route** that holds together different things, or through the assembly of different spaces, which may contain within them a series of mixed functions, for both citizens and tourists, who will transform the image of the city in a richer, more profound "**imaginary**".

Goal of the trial is therefore is the construction/reconstruction/recycling of a space (of threshold, of edge, of limit) capable of accommodating large masses that can be functionalized to show the city to whoever visits it, through a way that could be cultural or even pop, and at the same time attracts citizens towards the harbour. Porous and permeable space, of passage and crossing inside the harbor that could fit in the lineup of the cruise excursion.

### **Current state of the project**

PhD research (discussed 4 May 2016)

# **STRATEGIC ISSUES ABOUT HARBOURS**

## **The historic harbour landscapes of Eastern Mediterranean cities and the challenges of enhancement**

Vilma Hastaoglou-Martinidis, Professor Emerita, Aristotle University of Thessaloniki

The old ports of the Eastern Mediterranean cities constitute a precious urban heritage directly linked to their history and present physiognomy. Created since the end of the 19<sup>th</sup> century as gateway to westernisation of the multicultural oriental towns, they embody tangible memories of technical culture, exchange and entrepreneurship, trade and labour, and represent the power of empire, colonization and globalization. All major urban transformations left their particular imprint on the seafront and entailed the drastic restructuring of the relationship of the city to the sea. Historic harbour landscapes represent the last layer of the Mediterranean urban palimpsest, landmarks of both specific and generic identity of the Mediterranean cities.

The rehabilitation of historic harbour sites – grew obsolete by the post-war developments – surfaced in the Eastern Mediterranean since the 1990s. Within a globalised and competitive context, and a burgeoning cruise activity, large projects for the enhancement and reuse evidence the quest for a renewed waterfront and the shaping of a culture-led consumption space.

To highlight the importance of this precious urban and architectural port heritage for contemporary strategies of urban regeneration the paper will start by outlining the main steps in the creation of historic harbour sites and their subsequent evolution to present day. Then, it will attempt an overview of urban and architectural projects undertaken during the last two decades in the seafronts of the Eastern Mediterranean port-cities – such as Alexandria, Beirut, Istanbul, Izmir, Thessaloniki etc. – emphasising on the significance of this strategy as a step towards an aspired urban identity. The cases to be presented intend to evidence the potential that these precious heritage sites offer to the cities for re-establishing themselves in the region; as well as to stress on the threats that the adoption of globalised rehabilitation models represent to this end. The analysis will focus on planning and urban management based upon heritage recognition, drawing attention to the urban form as a key feature for the future urban identity.