

# Sustainable Mediterranean

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Status update of the MSED Action Plan implementation  
Proceedings of the 2nd Meeting of the Mediterranean ESD Committee  
& its Regional Workshop on Education for Sustainable Development

24-26 June 2019

This issue of Sustainable Mediterranean is co-produced by the Mediterranean Information Office for Environment, Culture and Sustainable Development (MIO-ECSD) and the Pedagogical Institute of Cyprus / Ministry of Education and Culture



Special Issue  
No 75



MEDES



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The views and opinions expressed in this issue of Sustainable Mediterranean do not necessarily reflect those of MIO-ECSDE nor of its donors.

This issue of MIO-ECSDE's "Sustainable Mediterranean" journal is devoted to the second Meeting of the Mediterranean Committee on Education for Sustainable Development (ESD) & Regional Workshop on ESD that took place on 24-26 July 2019 in the city of Heraklion in Crete, Greece. It was organised by MIO-ECSDE, its long-standing initiative MEdIES and the UNESCO Chair on ESD in the Mediterranean with the technical and financial support of the Union for the Mediterranean, the Mediterranean Action Plan of UNEP, the Heraklion Development Agency, the Region of Crete, the Ministry of Education, Culture, Sports and Youth of Cyprus. The events were held under the auspices of the Hellenic Ministry of Education, Research and Religious Affairs, the Hellenic Ministry of Environment and Energy and the Hellenic National Commission for UNESCO. The main funding sources were the EU-funded LIFE Operating Grant for non-governmental organisations (NGOs) primarily active in the areas of environment and/or climate action and the Green Fund of the Hellenic Ministry of Environment and Energy.

Eighty (80) representatives participated from major organisations active in the region, namely, UNESCO, the Mediterranean Action Plan of UNEP (UNEP/MAP), the Union for the Mediterranean (UfM), the UN Economic and Social Commission for Europe (UNECE), the League of Arab States (LAS), as well as from Ministries of Education, Ministries of Environment, NGOs and research institutes from twenty (20) countries.

Each and all reported and discussed about how ESD is applied in their countries and institutions on aspects relating to the policy framework (plans, strategies, documents, tools) and the links to the Mediterranean Strategy on ESD and the SDGs. How mainstreaming of ESD curricula and educators' training programmes are operationalized as well as challenges and emerging opportunities met along the way were also highlighted. To keep things as focused as possible, the case studies presented were structured around the following thematic priorities of the region, always through the lens of ESD: Sustainable Consumption and Production (SCP); Combating Marine Litter and Plastics and promoting

Ocean Literacy; Biodiversity, Protected Areas and Biosphere Reserves; and, ESD and Inclusive Societies, human rights and refugees issues.

Particular emphasis was given to the contribution of ESD to rural development and Biosphere Reserves of the MAB/UNESCO Programme, given that the meeting was taking place in the region of Asterousia, a candidate area for designation. It is a part of Crete with natural and cultural heritage of inestimable value, where the local authorities and educators are making great efforts for social mobilization in favour of sustainable development *via* awareness raising and education programmes, supported by the Hellenic National Committee of MAB/UNESCO and MIO-ECSDE.

The workshop concluded with the identification of common challenges in the application of ESD by countries and other stakeholders, as well as ideas for overcoming them. It also formulated the way forward at regional (Mediterranean) level in promoting and applying the Action Plan of the Mediterranean Strategy on ESD and the role of the Mediterranean Committee on ESD. The need to maintain and strengthen the Committee was stressed by all participants as it is a real asset for the region, supporting and facilitating their work.

The present Issue includes adaptations of the interventions and presentations made during the event, in order to promote these Mediterranean ESD initiatives and to highlight the Action Plan of the Mediterranean Strategy on ESD as the guiding regional tool available. It provides an ESD status update by means of highlights, key messages and case studies from most Mediterranean countries.



**Prof. Michael Scoullou,**

*MIO-ECSDE Chairman, MEdIES Coordinator, UNESCO Chair and Network on Sustainable Development Management and Education in the Mediterranean*



## Address by the Minister of Education, Culture, Sports and Youth of Cyprus Mr. Prodromos Prodromou

The global agenda of the UN Sustainable Development Goals 2030 reveals that the greatest challenge the world community is called upon to deal with is safeguarding and preserving the planet, on the basis of guaranteeing the three pillars of “environment- economy- society”.

The severity of sustainable development issues, the continuing environmental degradation, the lack of social cohesion, as well as the global mobilization to halt climate change, preserve natural resources, eradicate conflicts, enhance regional and international movements for gender equality, peace, justice and solidarity, reveal on the one hand the systemic nature of environmental issues and on the other hand emphasize their global nature. At the same time, they point to the responsibility we all have, individually and collectively, to address these global challenges.

The driving force for alerting citizens and societies in general is education. In the context of formal, non-formal and informal settings, education seeks to empower citizens to be active, capable of contributing constructively and productively to the creation of sustainable societies.

This publication aims to highlight and disseminate examples of good practice in Education for Sustainable Development (ESD) developed and implemented in the Mediterranean countries, in the framework of the implementation of the Action Plan of the Mediterranean Strategy for ESD (2016).

It is a great honor to introduce this publication, which follows the progress achieved since the Mediterranean Strategy for ESD was adopted by all the Mediterranean

countries, in Nicosia at the initiative of Cyprus in 2016. The assumption of the Presidency of the Mediterranean Committee for ESD by the Cyprus Ministry of Education, Culture, Sports and Youth, points out the importance and responsibility with which the Republic of Cyprus addresses these issues, not only at national, but also at regional level. The examples and references presented in this second special edition of Sustainable Development about the practices regarding the implementation of the Mediterranean Strategy for ESD in the Mediterranean countries, provide us with positive messages about the effort invested, across all countries, to meet common challenges through education. Considering that this publication will “travel” among all parties involved in ESD -Ministries, NGOs, International Organizations and Mediterranean Institutions- it is important to view it as a means of networking, cooperation, exchange of ideas and examples between the Mediterranean countries, to further enhance sustainability in our region.

**After all, we must not forget that the effort is joint and the struggle is common.**

**The Mediterranean is “our neighborhood” and the Planet is our “OIKOS” (our HOME).**

**Prodromos Prodromou**  
*Minister of Education, Culture, Sports and Youth*  
*Republic of Cyprus*

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# A review of the activities conducted by the Secretariat of the Mediterranean Committee on ESD for promoting the implementation of the Mediterranean Strategy on ESD



## **Prof. Michael Scoullos**

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and Network on Sustainable Development Management and Education in the  
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The Mediterranean Committee on Education for Sustainable Development (ESD) was established at the Ministerial Conference on the “Action Plan for Education for Sustainable Development in the Mediterranean” (Cyprus, 2016) to guide and monitor the implementation of the Mediterranean Strategy on ESD (MSESD) and its Action Plan at the regional level. The MSESD was approved by the Ministers of Environment and Climate Change of the Union for the Mediterranean (UfM) in 2014 (Athens) while the Action Plan was approved by Mediterranean Ministers in charge of Education and Environment at the above-mentioned meeting in Cyprus.

The activities of the Secretariat of the Committee (supported mainly by the Mediterranean Education Initiative for Environment & Sustainability (MEdIES) of MIO-ECSDE), in the period November 2017 to June 2019, focused on the following:

### **A the development of the academic context of ESD**

#### **B training of trainers/educators in Mediterranean countries**

#### **C ESD and Mediterranean Biosphere Reserves**

#### **D international ESD synergies.**

### **A. The development of the academic context of ESD**

Key critical issues driving the academic context of ESD were identified, including the examination of the interlinkages and how the following sectors “feed” one another. Namely, (a) the role of ESD in the protection of the environment and its contribution to Sustainable Development of rural areas, particularly those that have the potential to join specific networks (e.g. smart towns, world heritage sites, biosphere reserves, geoparks, or linked to Natura sites, etc.)

(b) ESD contribution to the achievement of the Sustainable Development Goals (SDGs)

(c) ESD in non-formal and informal settings.

In this context the Secretariat:

1. Continued to closely cooperate with the University of

Athens/UNESCO Chair and Network on Sustainable Development Management and Education in the Mediterranean in the implementation of a post-graduate course on ESD and all related research carried out. Direct training of the post-graduate students on “Non-formal and Informal ESD” took place, providing them also with opportunities for field work and interventions in schools.

2. Participated actively in the UNECE working sessions on the revision of the Indicators on ESD and the follow up on the four UNECE thematic working groups on ESD for 2030: Whole institution approach; Quality education; Digital education/ICTs; Entrepreneurship-Employment-Innovation (4<sup>th</sup> Meeting of the UNECE ESD Steering Committee, May 2019).
3. Provided tutoring support to the international e-learning course “Mediterranean Food and Diet: A multidisciplinary Historic, Cultural, Environmental and Dietary Overview” co-organised by the University of Athens e-learning programme.

### **B. Training of trainers /educators in Mediterranean countries**

An important priority of the Action Plan (AP) of the MSESD and the Committee is the training of trainers and educators of all levels and types (formal and non-formal) in mainstreaming, adapting and applying the Strategy in national contexts. To this end, six national workshops on the MSESD/AP were successfully organised within the EU funded SWIM-H2020 Support Mechanism in Jordan and Palestine (September 2017), Tunisia (October 2017), Algeria (November 2017), and Egypt (December 2018), and a regional one in Cyprus (November 2017). Six hundred ESD public servants, trainers, university staff and non-formal educators were trained in these capacity building activities.

The trainings were combined with inter-institutional meetings during which the ways to boost the proper implementation of the Strategy through its Action Plan and to align them with the national strategies or plans on Sustainable Development (2030) were extensively discussed by the Secretariat and the countries’ experts, who were representatives of various competent Ministries of Education, Environment, Water, Sustainable Development, Youth, as well as of Academia and Civil Society Organizations.

## C. ESD and Mediterranean Biosphere Reserves

The Secretariat has been working systematically in the field of ESD in Biosphere Reserves (BRs) since the latter are ideal environments to apply sustainability in practice. Given that BRs have been internationally recognized as “Sustainable development learning laboratories” the Secretariat co-organised two more Summer Universities promoting the role of ESD in the Sustainable Management of BRs with the support of the UNESCO Regional Office in Venice and the Greek National MAB Committee. The first one took place between 8 and 15 July 2018, in the Parnon Area of Greece in cooperation with the local authorities and the Development Agency of Parnon. Fifty six experts and post-graduate students participated. The second one was held between 21 and 28 July 2019, in the Central Balkan Biosphere Reserve of Bulgaria, in cooperation with the local authorities, the Bulgarian and the Greek National MAB Committees and the Bulgarian Biodiversity Foundation.

Furthermore, high-level meetings were organised in Paris, with the participation also of the President of the Greek National Commission for UNESCO Mrs Tzitzikosta, with UNESCO High-Level Officials: the Ass. Director General on Education, Ms Giannini, the Chief of Staff Office of the DG Mr. Kassianidis, the Deputy Director of Natural Sciences Ms Nair-Bendouelle, and, the Acting Director of the MAB Programme Mr. Godt. The focus of the discussions was ESD in BRs, in the framework of the facilitation of the process of submission of the candidacy of the region of Asterousia, Crete to be included in the UNESCO MAB Network of BRs.

Last but not least, the Secretariat co-organised together with the Arab Network for Environment and Development (RAED) under the auspices and active participation of the League of the Arab States (LAS) a Side Event at the UN Biodiversity Conference (COP14) in Sharm El Sheikh (Egypt) on “ESD & the nexus (water-energy-food-ecosystems) approach” as a tool for safeguarding biodiversity (November 2018).

## D. International ESD synergies

The Secretariat systematically supports synergies with international organisations and bodies and so in this respect the following initiatives were undertaken:

1. Co-creation of the policy brief on “Regional Networks on ESD” emphasising the role of networks in advancing SD/ESD, in close cooperation with the UNESCO GAP Partners Network 1 which is Chaired by MEdIES of MIO-ECSDE.
2. Participation in a series of consultations on the draft position paper on the Future of ESD, marking the launch of the ESD Agenda 2030 for the facilitation of the implementation of the SDGs. The valuable feedback and experience provided by the Mediterranean region in advancing ESD policy through the Action Plan of the MSES was highlighted, including the contributions at the Technical Consultation meeting on the future of Education for Sustainable Development (Bangkok, July 2018) and the UNESCO Forum on ESD & GAP Partner Network meeting (Hanoi, July 2019).
3. Co-authoring of the factsheet presenting the essential information about the MSES, in cooperation with the UN Environment/MAP which was widely disseminated in the region.
4. Authoring the Chapter on “Research, Innovation, Education for SD and Capacity Building” of the State of the Environment and Development in the Mediterranean (SoED) Report 2019.
5. Development of two concept notes, in cooperation with COMSUD, for two flagship initiatives included in the Mediterranean Strategy for Sustainable Development (MSSD) (“Promoting the Aarhus Convention in the region” and “Best practices in solid waste management”). Both have as prerequisites the involvement of the public through public awareness/informal ESD.
6. Cooperation with the UfM in promoting the MSES provisions in the region. The Secretariat also contributed to a UfM publication on “Education for Sustainable Consumption, Behaviour and Lifestyles” (responsible consumers).
7. Development of the Water Education activities of the Malta National Water Awareness Centre (Ghajn) in cooperation with Malta’s Energy & Water Agency. Four experiential educational programmes and associated materials were created on water education.
8. Chairing the ESD Working Group of the World Water Museums Network (WAMUNET), via MIO-ECSDE’s HYDRIA “virtual” museum and as a Member of the WAMUNET Management Board. The Secretariat participated in a “Training of trainers” (WAMUNET Conference in Valencia 2018) and collaborated in the coordination of the international youth contest “The Water We Want”.

# Highlights from the major international organizations and processes with which the MSED is associated



## UNESCO Global Action and the planned “ESD for 2030”

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### A. Putting ESD into context: The Global Action (GAP)

UNESCO is the UN lead agency for Education, including Education for Sustainable Development (ESD). It is mandated to coordinate the current global framework for ESD, the Global Action on ESD (the so-called ‘GAP’) running from 2015 to 2019 as the official follow-up to the precedent UN Decade of ESD (2005-2014). The GAP was put in place to seize the momentum created by the Decade: to generate and scale up ESD action at all levels and areas of education and to accelerate progress towards sustainable development. The GAP’s two main underlying objectives are:

- Reorienting education and learning so that everyone has the opportunity to acquire the knowledge, skills, values and attitudes that empower them to contribute to a sustainable future.
- Enhancing the role of education and learning in all agendas and activities that promote sustainable development.

It also outlines five priority action areas:

- 1) Advancing policy.
- 2) Transforming learning and training environments.
- 3) Building capacity of educators and trainers.
- 4) Empowering and mobilizing youth.
- 5) Accelerating sustainable solutions at local level.

For each of the five priority action areas, UNESCO has set up a network of partners, the “GAP Key Partners” (90 major ESD stakeholders) that collaborate on the implementation of the GAP and serve as a [Global Community of Practice](#). The Mediterranean Education Initiative for Environment & Sustainability (MEdIES) is a GAP Key Partner in charge of “advancing policy”. UNESCO and partners have also conducted a joint flagship project in each of the areas.

With the adoption of the Sustainable Development Goals (SDGs) in 2015, ESD has gained further recognition, as it is notably addressed in SDG Target 4.7: “By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyle.” In addition, the UN General Assembly has on several

occasions affirmed that ESD is “an integral element of the SDG on quality education and a key enabler of all the other SDGs”.

### B. Review of the GAP: Progress achieved at policy level

In terms of GAP achievements (2015-2018) in all five action areas, the following indicators and numbers apply, presented in the following figure.

In terms of advancing policy, GAP Key Partners reached above and beyond the goals they had set for themselves. They produced 959 policy documents (such as national action plans, guidelines), exceeding the initial target by 58%, and supported 1.486 ESD programmes, exceeding the target of 1.089 by 36%.

Policy level support provided by UNESCO fostered progress at global, national and regional level. UNESCO’s support included advocacy at major international conferences such as the annual Climate COPs, production of guidance documents and SDG 4.7 monitoring. At national level, ESD policies were developed in three pilot countries (Costa Rica, Vietnam and Kenya) with the direct support of UNESCO. Each of the three pilot countries is currently involved in and systematically promoting ESD within its (sub-) region. The Mediterranean countries are also considered a good example for advancing policy in the region. In addition, UNESCO supported the distribution of knowledge about GAP, ESD and SDG by publishing various guidance documents such as the Roadmap for GAP implementation (2014), the Guidelines on climate education (2016), Addressing all 17 SDGs through education (2017) and Embedding ESD into textbooks (2017); all available to the public on UNESCO’s website.

### C. Future of ESD: upcoming “ESD for 2030” global framework

In view of the fact that GAP comes to an end in 2019, UNESCO has developed a follow-up framework entitled: “Education for Sustainable Development: Towards achieving the SDGs” (or, in short, “ESD for 2030”) through a broad consultation process involving a large range of different stakeholders. The “ESD for 2030” was unanimously endorsed by the UNESCO General Conference. Its overall goal is to contribute to the building of a more just and sustainable



## Achievements by GAP Key Partners (2015-2018)



world by achieving the 17 SDGs through Education, especially in regards to Transformative Action, Structural Changes and Technological Advances. “ESD for 2030” will continue working on the GAP’s five priority action areas while focusing on scaling up through the partners that, unlike GAP, will all be part of a single inclusive network of partners. Furthermore, it will encourage action and involvement at the national level through the “country initiatives”. Under “ESD for 2030”, UNESCO will directly support national and regional initiatives; coordinate and support the network of partners, including the organisation of regular meetings; monitor, evaluate and ensure evidence-based implementation. UNESCO will also launch and

lead the respective global communication campaign. This framework is expected to be launched at the World Conference on ESD in Berlin, Germany in June 2020.

### How can Mediterranean countries participate?

All UNESCO Member States are invited and expected to contribute to the implementation of “ESD for 2030”. The Mediterranean countries are encouraged to continue to act as champions in advancing ESD at policy and other levels and particularly by leading country initiatives, mobilizing multi-stakeholder processes, advocating and communicating around the SDGs.

## ESD progress within the Union for the Mediterranean



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The Union for the Mediterranean (UfM) officially endorsed the Mediterranean Strategy on Education for Sustainable Development (ESD) in Athens, Greece, on 13 May 2014, on the occasion of the first UfM Ministerial Meeting on Environment and Climate change, where Strategy played a key role. A Ministerial Conference in Nicosia, Cyprus, later defined the role of the UfM in the Strategy’s Action Plan on 8-9 December 2016. More specifically, its role, within the Priority Area 8

(Articles 61-62), was to support the cooperation on ESD at the regional level, to review and facilitate the implementation of the Strategy. Regarding the Priority Area 11 (article 66), the UfM aimed at strengthening sub-regional cooperation through e.g. the “5+5 Dialogue” for the Western Mediterranean sub-region on Water and the “Ionian-Adriatic initiative”. In this context, the UfM Secretariat is involved in different priority thematic issues of the Strategy’s Action Plan such as, among

others, Climate Change Adaptation and Mitigation; Alternative Energy Sources; Biodiversity; Integrated Water Resources Management and Non-Conventional Water Resources (NCWRs); Marine Resources, Blue/Green Economy, Fisheries, Marine litter and Integrated Coastal Zone Management; Sustainable Consumption and Production patterns; Empowerment of Women and Youth; Migration and Refugees Crisis; Sustainable cities and Urban environment. Furthermore, the UfM Secretariat mainstreams Education for Sustainable Development through a multi-stakeholder approach, with higher education institutions and processes<sup>1</sup> as partners.

In order to promote ESD at all levels (formal and non-formal) the UfM Secretariat works jointly with the Regional Activity Centre for Sustainable Consumption and Production of the United Nations Environment - Mediterranean Action Plan (SCP/RAC) and the Mediterranean Information Office for Environment, Culture and Sustainable Development (MIO-ECSDE) on a publication entitled "Education for Sustainable Consumption, Behaviour and Lifestyles". Focusing on practical case studies and five main lifestyle areas, namely food (nutrition), housing, mobility, consumer goods, and leisure, this publication aims to inspire and encourage educational centres, decision makers and citizens to promote sustainable actions for environmental preservation at all levels.

In addition, the UfM aims to contribute to the implementation of the 2030 Agenda for Sustainable Development at regional level by promoting common responses by the region's countries. Consequently, it joins forces with the international community and particularly with the UN System to address global challenges and achieve the Sustainable Development Goals (SDGs) in the Euro-Mediterranean region, through tangible and concrete activities and initiatives. Since 2017, the UfM Secretariat has specifically referred to the SDGs as indicators for the impact of its activities. In addition to the various other UfM-labelled projects (see below) which cover different aspects promoted by ESD, the UfM also combines the MSES with other initiatives and processes, and promotes it in current and future policy dialogues on the topics of Education, Training, Environment, Green and Blue Economy, Sustainable Consumption and Production, Climate change, and Research and Innovation. The following examples of projects and initiatives that are supported by the UfM contribute more directly to the promotion of ESD in the Mediterranean region:

→ **The Euro-Med University of Fes:** A UfM flagship project, celebrating its 6<sup>th</sup> academic year, which aims at building a new generation of young people with

<sup>1</sup> UfM partners in this sector include UNIMED, EMUNI, the AECHE process, Téthys, Association of Arab Universities (AArU), European University Association (EUA), Network of Universities from the Capitals of Europe (UNICA), Global University Network for Innovation (GUNI), Groupement Interacadémique pour le Développement (GID), The World Academy of Sciences (TWAS), Mediterranean Experts on Climate and Environmental Change (MEDECC), Targeted Open Innovation in Energy, Water and Agriculture in the Southern Mediterranean countries (STOI\_4EWAS), ERANET-MED, etc.

a unique Euro-Mediterranean profile, capable of transforming the region. The degrees it issues are in the areas of Renewable Energy & Energy Efficiency, Environmental Engineering & Water Management. It has an eco-campus labelled by COP22 with 100% of total investment cost covered. In the academic year 2019-2020, 1.809 students were enrolled from across the Euro-Mediterranean region and Sub-Saharan Africa, a number which is expected to reach 7.000 by 2026!

- **The Eastern Mediterranean International School-EMIS (2015-2019):** a new international boarding school which welcomes around 200 students from all over the world, with significant representation from the Euro-Mediterranean region. It offers 16 to 18-year-old students an education over two years, to prepare for the International Baccalaureate Diploma. EMIS aspires to provide an education focused on intellectual stimulation and transversal skills development. The school has developed a "green team", a student-led initiative seeking to create a more sustainable environment at school. EMIS students also organize the annual "Youth Organised Collaboration on Peace and Sustainability" – the YOCOPAS conference.
- **BlueSkills (2019-2023):** a comprehensive training for a long-term education and immediate upskilling experience, circular mobility and knowledge transfer. The project aims to promote capacity building in Blue Economy sectors in the Euro-Mediterranean region and knowledge transfer; boost transferable skills and promote employability for young professionals and researchers; raise awareness on challenges and opportunities related to marine and maritime sectors in the region. The project involves 11 institutions from 10 Mediterranean Countries in studies that include Advanced Studies at Masters level, Summer School, Research Mobility, Professional Traineeships, Workshops and Conferences, Publications, Project Management and Online Portal Management. The beneficiaries are young scientists, researchers and Ph.D. students, project managers, economists, engineers or other professionals, policy-makers and administrators (about 120-140 direct beneficiaries a year).
- **Plastic busters for a Mediterranean free from litter (2016-2020):** the project (funded by the EU Interreg Med) aims to enhance marine litter monitoring methodologies, raise stakeholders' awareness and promote change in perceptions and attitudes towards waste. Over a 4-year period, the project will focus on the entire management cycle of marine litter, from monitoring and assessment, to prevention and mitigation, as well as concentrating on actions that will strengthen networking among pelagic and coastal marine protected areas located in Albania, Croatia, Greece, Italy, France and Spain. Following a "life cycle thinking" and a circular economy approach the project will also carry out systemic evaluations of feasibility, reliability and sustainability, while involving relevant stakeholders such as port authorities, fishermen and municipalities.

# Public Participation, Awareness Raising and ESD in the framework of MAP: Where do we stand and what are the challenges?



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The overarching objective of the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols, i.e. “the preservation and sustainable development of a common heritage, in the interest of present and future generations”, cannot be reached by pursuing current trajectories, unsustainable consumption and production patterns. Achieving this commonly agreed objective requires transformative change, a systemic shift of behaviour, as well as an inclusive approach with the active participation of all stakeholders in the different steps of the policy cycle. Urgent action is needed to integrate the environmental, economic and social spheres on realistic yet desirable transition pathways.

Education – in the broadest sense of the term, including schooling, awareness raising, improved public access to information and participation, life-long learning, etc. – is key to enabling inclusive transitions to sustainable development. Basic education has improved throughout the last two decades, especially in Southern and Eastern Mediterranean Countries (SEMCs) where literacy rates have considerably increased. Most SEMCs have created policies to generalize access to primary and secondary education. Expected years of schooling for new generations in SEMCs are not far from European standards, except for tertiary education which remains a challenge. The education of girls has also improved in SEMCs, with an increased gender parity index of enrolment rate in primary and secondary schools in most Mediterranean countries. However, the share of women in the active population is still low: only 30% in countries of the Middle East and North Africa. The challenge lies also in the fact that advanced education does not provide better protection against unemployment: according to the International Labour Organization (ILO), unemployment rates among individuals of advanced education exceed national average. They reached 42% in Tunisia in 2013, 30.8% in Egypt in 2016 and 54% in the State of Palestine in 2017.

## **A. Public Participation, Awareness Raising, Education and Information Systems in the framework of the MAP - Barcelona Convention system**

According to the Mediterranean Action Plan (MAP) Phase II (1995), “Public information and public participation are a dimension essential for the policy of sustainable development and environmental protection”. The objectives of this

component are to inform the general public “on the state of the development and environment of the Mediterranean and its evolution, and the measures taken to improve it; to enhance the environmental awareness of the population and create a common approach to the environmental problems of the Mediterranean; to facilitate public access to activities for the protection and management of the environment and access to scientific knowledge in a proper manner; and to mobilize and ensure the participation and involvement of major actors concerned (...)”. To achieve the stated objectives at national and regional levels, one of the recommended actions is “to implement coordinated information campaigns and special activities on environmental protection, directed towards managers and decision-makers, as well as children, students, teachers and tourists”.

More recently, the Mediterranean Strategy for Sustainable Development (MSSD), adopted by all Mediterranean countries in 2016 as a strategic policy framework to translate the 2030 Agenda for Sustainable Development at the regional, sub-regional and national level, promoted the engagement of civil society, scientists, local communities and other stakeholders at all levels of the governance process, in order to secure inclusive processes and integrity in decision-making. A specific regional flagship initiative encourages the Access to Information, Public Participation in Decision-making and the Access to Justice in Environmental Matters (Aarhus Convention). The Mediterranean countries have already a series of commitments and tools to engage stakeholders and the public in consultations and participatory governance. These commitments should lead to the application of participatory processes for Environmental Impact Assessment (EIA), Strategic Environmental Assessment (SEA), Integrated Water Resources Management (IWRM), management of specially protected areas, adaptation to climate change, etc. Participatory and information/communication processes are also related to, and supported by, the Mediterranean Strategy of Education for Sustainable Development (MSESD), which constitutes an integral part of the MSSD.

## **B. The MSESD and UNEP/MAP**

The MSESD was endorsed in May 2014 by the UfM Ministerial Meeting on Environment and Climate Change to encourage the Mediterranean countries to develop and incorporate ESD into their formal education systems,

in all relevant subjects and in non-formal and informal education. The Mediterranean Strategy on Sustainable Development (MSSD) recognizes MSED as an integral part of its implementation. In addition, the MSED is acknowledged in the Athens Declaration of COP 19: *“Mindful of the Mediterranean Strategy on Education for Sustainable Development, resolve to enhance public awareness and the role of education promoting sustainability and the implementation of the SDGs in the Mediterranean.”* From the UNEP/MAP perspective, promoting the MSED is fully in line with the approach recommended for the MSSD implementation. Although facilitated by the MAP Secretariat, the MSSD implementation is a collective process based on the participation of all stakeholders. The promotion of MSED is ensured by MIO-ECSDE and the efforts undertaken by this MCS member are encouraged and supported by the MAP system.

#### Relevant actions to the MSED of the MSSD

Under its Strategic direction 6.4 on “Promoting education and research for sustainable development”, the MSSD promotes education and research for SD through the implementation of the Mediterranean Strategy on Education for Sustainable Development. Young Reporters for the Environment (YRE) - How is ESD addressed by the MSSD:

- 6.4.1.** Implement the MSED, which promotes the integration of the principles, values and practices of SD into all aspects of education and learning.
- 6.4.3.** Strengthen the science-policy interface to support decision making by scientific analysis and data, through research fora, seminars and other opportunities for exchange.

- 6.4.4.** Provide professional and vocational training for the management of protected areas.
- 6.4.5.** Promote research and innovation by ensuring that large-scale programmes (e.g. EU Horizon 2020) take Mediterranean priorities for SD into account.
- 6.4.6.** Encourage and support partnerships amongst countries and the exchange of good practices and knowledge in all aspects of education and learning for sustainable development.

Despite the important progress that countries report to the Secretariat of the Mediterranean ESD Committee, there are still some key challenges identified at the regional level:

- ESD, although widely recognized as a prerequisite for the promotion of sustainable development and the SDGs, does not yet receive the needed political backing and, therefore, is still not fully and homogeneously developed throughout the Mediterranean region;
- Better coordination is needed between formal, non-formal, informal ESD initiatives which are frequently supervised by different Ministries including Education, Environment, Health, etc.;
- Availability of adequate human and financial resources is lacking and needs for training a critical mass of educators remain unmet.

## UNECE Strategy for ESD - Strategic Planning 2030



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Since 2005 when it was adopted during the high-level meeting of Education and Environment Ministries in Vilnius, the 56 UNECE Member States have been working together, under the aegis of the United Nations Economic Commission for Europe (UNECE) Steering Committee on Education for Sustainable Development (ESD), on implementing the UNECE Strategy for ESD, as a regional pillar of the global ESD agenda implementation led by

UNESCO. The UNECE Strategy for ESD is a practical tool that supports countries to incorporate ESD into all forms of education.

The Strategy has furthered the recognition of global education initiatives as the way in which education systems should respond to the social, environmental and economic challenges facing the world today. In an assessment of the Strategy’s progress during the first decade, the Evaluation

Report<sup>1</sup> highlighted that important advancements were made on policy integration, curricula, tools, resources and networking. According to the Report, hundreds of initiatives have moved from policy to practice by integrating ESD into the content and process of formal, non-formal and informal education; considerable good practices have been generated by a wide range of stakeholders in the ECE region; progress has been made on ESD indicators, whole-institution planning and teacher competences; important advances have been made in integrating ESD in education policy and curricula, as well as aligning education objectives with national sustainable development visions and goals.

The UNECE Strategy for ESD has helped scale up ESD in policy; early childhood care and education primary and secondary education technical and vocational education and training higher education non-formal education public awareness campaigns and media capacity-building and training stakeholder involvement and partnerships. However, the challenge of integrating ESD system-wide across all

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1 Available at [https://www.unece.org/fileadmin/DAM/env/esd/ESD\\_Publications/10\\_years\\_UNECE\\_Strategy\\_for\\_ESD.pdf](https://www.unece.org/fileadmin/DAM/env/esd/ESD_Publications/10_years_UNECE_Strategy_for_ESD.pdf)

aspects and levels of formal, non-formal and informal learning still stands.

Presently, the Steering Committee on ESD and its expert groups on Strategic Planning and Indicators are working on elaborating the concept note of the Strategy's 2020 to 2030 framework and on revising the current framework for monitoring and evaluation of the Strategy's implementation. The latter needs to be updated based on the challenges of the Strategy's implementation from 2005 until today and the emerging priorities of the global and regional sustainable development agendas.

UNECE will continue to promote ESD in the pan-European region in cooperation with UNESCO, the Mediterranean Strategy on ESD and other partners and processes at global, regional and national level. The next important milestone in this process will be the High-Level Meeting of Education and Environment Ministries during the works of the 9th Environment for Europe Ministerial Conference that will be held in Nicosia, Cyprus in November 2021. This will help further advance ESD in the region as a contribution to the "ESD for 2030" by UNESCO and the 2030 Agenda for Sustainable Development.

## ESD Status update by means of highlights, key messages and case studies



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The policy basis of Malta's Education for Sustainable Development (ESD) process dates back at least to 2012 with the promulgation of the *National Curriculum Framework* that entrenched ESD as a main cross-curricular theme across compulsory education. This milestone, perhaps already long overdue, was developed further, to the extent that the Government commissioned a group of experts from the University of Malta to produce Malta's first ever *National Strategy on Education for Sustainable Development* in 2016. After a slow start, Malta's ESD policy development is currently in full swing across all curricula.

On the verge of 2020, ESD is fully integrated in the compulsory schooling process (up to age 16) and supported by an Education Officer within the Ministry. The Ministry has been participating in the *Global Education Network*

*Europe* since 2018<sup>1</sup>. ESD is also gaining ground at the more transient post-secondary level<sup>2</sup> where undergraduate and postgraduate ESD-oriented courses are now regularly being offered at the University of Malta and the Malta College of Arts, Science and Technology (MCAST)<sup>3</sup>. Efforts are also being directed towards enhancing ESD in the non-formal domain, particularly with respect to water conservation. The following are three case studies highlighting Malta's significant progress on ESD.

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1 <https://gene.eu>.

2 The 'post-secondary level' comprises the 16 to 18-year-old student cohort following courses for the European Qualifications Framework (EQF) Level 4 designed for entry into undergraduate courses offered by the University of Malta.

3 MCAST is Malta's leading tertiary level vocational education institution.

## CASE STUDY 1:

### Young Reporters for the Environment (YRE)

The Young Reporters for the Environment (YRE) who mostly come from Secondary Schools is run on a national basis. YRE is an ongoing initiative that brings together various stakeholders including, students, teachers, and experts from competent authorities such as the Environment and Resources Authority, various non-governmental organisations and policy-makers. Most of YRE submissions are oriented towards environmental issues, and their themes include waste management, marine pollution and the impacts of construction and urban sprawl. YRE provides an excellent opportunity for students to research extensively and publish articles on environmental issues. This enables students to learn more about the various aspects of the environmental crisis – locally, regionally and globally – while practicing their writing skills. The programme could potentially offer students the opportunity to examine the socio-economic dimensions of sustainable development. The number of YRE submissions has been steadily increasing since the academic year 2007-2008.

## CASE STUDY 2:

### An accredited award for non-formal ESD

This programme is offered at the Giovanni Curmi Higher Secondary School, a post-secondary state institution. It is open to all students and consists of a rigorous 75-hour series of ESD events including hands-on activities that typically examine environmental, social and economic aspects. Clean-up events, recycling competitions, alliances between students and NGOs and fund-raising activities for charitable institutions are usually on the schedule. Course participants are also given opportunities to attend talks and seminars by experts in various fields of sustainable development. The final deliverable of the programme is a student project, which after being assessed, is shared with the school community and the public through social media. The students' creativity and innovation, leadership and

teamwork, time management and public speaking skills are among the competencies that are assessed. Student attendance in the ESD sessions is certified by the teacher organisers, while the programme is fully audited by the Accreditation Unit of Directorate for Quality Standards in Education of the Ministry for Education and Employment.

## CASE STUDY 3:

### The National Water Conservation Awareness Centre, Ghajn

Water management is a key sustainability issue in Malta. The recently established National Water Conservation Awareness Centre (*Ghajn*)<sup>4</sup> serves the purpose of providing professional educators, students and the public with an opportunity to learn about water conservation measures and to appreciate their significance. The Centre is a prime example of promoting ESD in non-formal set-ups. It is equipped with technological devices through which visitors can engage on four educational activities namely, *The Water Cycle*, *The Water Operator*, *Water in Forts* and *The Water Hero*, designed to promote water conservation. A theatre and weather station are also available on site. The Centre was awarded the European Sustainability Award by the European Commission in 2019.

### Way forward

Inevitably, the promotion of ESD across and beyond the formal curriculum presents significant challenges. Educators, school administrators and grassroots community stakeholders may still need to assimilate the full impact of its cross-cutting nature and devise pedagogical, methodological and logistics mechanisms in order to adapt. Monitoring and capitalizing on the good practices in our schools, like the successful EkoSkola (<https://www.ekoskola.org.mt>) we are confident Malta is on the right track.

4 <https://www.energywateragency.gov.mt/ghajn/>



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The Greek Ministry of Education & Religious Affairs is in full compliance with the Goals of the UN 2030 Agenda, the European Commission 2020 Strategy, the UNESCO 17 Sustainable Development Goals, the Mediterranean Strategy on Education for Sustainable Development (ESD) and the UNECE Strategy on ESD. The Ministry implements ESD strategies, aiming at sensitizing students, developing active citizens and raising public awareness through schools open to society. The curricula use textbooks that cover a broad range of objectives and provide a dedicated time

zone "flexible zone" for cross-curricula ESD projects on emotional awareness, responsibility, autonomy and critical thinking. Greek students "feel that their teachers give them the opportunity to express themselves" (OECD, 2017) more than their peers in other OECD countries. ESD is also integrated into a range of various other subjects. Citizenship Education is a distinct teaching subject in primary, lower and upper secondary education, with a significant amount of time allocated to it. Part of its curriculum is the teaching of respect to other cultures and religions. In addition, Refugee

Education is becoming an integral part of the formal school system.

ESD school programmes take place within or in addition to the formal curriculum (primary and secondary education accordingly). The School Activities Coordinators is an institution launched by the Ministry in the 1990s to support and expand these educational projects, many of them being on ESD topics. About 10.240 ESD school projects were applied in schools of primary education (250.187 students participated) and 2.828 projects were applied in schools of secondary education (75.912 students participated). Additionally, the Department of Sustainability Education Programmes was founded as part of the Ministry in order to monitor and support the progress of the aforementioned ESD initiatives and structures. In general, ESD programmes cover four thematic areas: Environmental issues, Health issues, including social and psychological aspects, Cultural issues and Educational digital media issues. Legislation to bring together all levels of ESD implementation is pending.

Higher Education also contributes extensively to the advancement of ESD (OECD 2017 report). Besides the University Faculties of Education, numerous post-graduate courses such as the MSc in Environmental Management and Sustainability, the Erasmus Mundus Joint Master Degree in Smart Cities and Communities, the MSc in Sustainable Agriculture and Business (International University), the Education and Human Rights, the MSc in Environment and Health: Management of Environmental Health Effects (National Kapodistrian University), the Language Education for Refugees and Migrants (Open University), the Environmental Education (Aegean University) and the Education for the Environment and Sustainability (Democriton University of Thrace).

## CASE STUDY

### The 53 Environmental Educational Centers

Since 1990, ESD has also been applied by 53 Environmental Educational Centers (EEC). The EECs aim to enhance students' understanding of the connections between societies and their natural environment, to raise their

awareness of the problems and mobilize them through specific activities. They also support school units in ESD activities; interconnect the academic community and the local society; design and implement innovative educational programmes; host school programmes for one or more days; organize teacher trainings and seminars on ESD; develop and disseminate ESD material; develop international cooperation with foreign academic units, scientific organizations and research institutions; coordinate local and national thematic networks and organize awareness-raising events for local communities. The impressive records for the academic year 2017-18 show that the Centers hosted approximately 4.554 schools, 140.324 students and 14.109 teachers of primary and secondary education. The Laws 4547/2018 and 1752/2019 were introduced to turn Centers for Environmental Education into Educational Centers for Sustainability. The Law 3879/2010 (on the Development of Lifelong Learning) allows the implementation of adult programmes in EECs.

As an epilogue, there is a remarkable response from the school community (teachers, students, parents) to the experiential learning scheme. The plethora of the subjects offer a variety to schools while there is an increasing number of schools' requests to participate in projects. The existing policies coincide with the ESD goals, thus enhancing and empowering the individual with a mindful attitude towards personal and collective action.



EEC of Thermou



EEC of Phillipon



## Pedro Abrantes

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In recent years, Education for Sustainable Development (ESD) in Portugal has become part of the core education policies and has considerably improved. Good evidence of this can be found in the *“Profile of Students at the End of Compulsory Education”*, a new vision for curriculum policies published in 2017 by a group of experts designated by the government and with the contribution of thousands of schools. This document provided the main rationale for the national curriculum restructuring in 2018 which included the launch of the “National Strategy for Citizenship Education” coordinated by the Secretaries of State, of Education and of Citizenship and Equality, in cooperation with schools and NGOs, and the “National Strategy of Education for Development”, designed by the Ministry of Education and the Ministry of Foreign Affairs, in cooperation with the education communities and the civil society.

This work brought a new focus on ESD, especially from primary to upper secondary education. According to the new national curriculum framework, which was first launched as a pilot programme in more than 200 schools and then implemented across the country during the school year 2018-2019. Citizenship and Development shall be developed through an interdisciplinary approach. They will be applied in all school grades and in all education and training provisions as a distinct subject from the 5<sup>th</sup> to the 9<sup>th</sup> grade. Besides, all schools shall have a teacher-coordinator and a local citizenship education strategy that will promote, organize and monitor learning activities for all their students, in cooperation with public and civil society organizations.

This new curriculum component, *Citizenship and Development*, promotes active citizenship, democratic participation in intercultural contexts, including sharing and collaboration, as well as debates of ideas on current issues, adapted to different ages and grades. It encompasses 17 interrelated domains, among which the following six will be compulsory for all educational stages - Human Rights, Sustainable Development, Gender Equality, Health, Intercultural Dialogue and Environmental Education- and the rest will be up to the schools to choose. The creation and implementation of the School Citizenship Education Strategy is a challenge that requires leadership, teamwork and commitment from the side of the various school entities, community partners and other stakeholders. It is also a learning process that aims to engage entire school communities. For their own help and development, schools can voluntarily participate in local, national and international projects on this area and benefit from the expertise of many intergovernmental, governmental and non-governmental institutions. Below are some examples, among others:

- The Eco-Schools project, coordinated by the Foundation for Environmental Education and developed currently in 1.724 Portuguese schools with the support of the *Associação Bandeira Azul da Europa*.
- The Fair Trade Young Ambassadors Project, involving 3 Portuguese secondary schools, 3 NGOs from Portugal, France and Belgium, global educators, 1 secondary school and 1 fair trade coffee producers’ co-operative from Peru.
- We propose! (*Nós propomos!*) – Citizenship and Innovation in Geography Education, involving 1 University, 1 ICT company, several municipalities and more than 40 schools spread around the country (around 2.500 students each year).
- Peoples, cultures and bridges: Peace and Global Citizenship Project, involving one municipality, 5 NGOs and 4 secondary schools.

In order to support schools in developing their strategy for citizenship education, there is an in-service 60-hour training that was followed by 936 teachers, most of them Citizenship and Development school coordinators, during the first year of its implementation (2018-19). In-service teacher training sessions are also available at the School Association Teacher Training Centres while more are yet to come. The General Direction of Education has been promoting in-service teacher training sessions and Massive Open Online Courses including general issues on citizenship education as well as specific topics.

According to a survey monitoring the implementation of the new curriculum framework, there has been an impressive increase in school activities and projects on citizenship and sustainable development. The new curriculum has been implemented in a progressive model, starting from the initial grades of each stage – 1<sup>st</sup>, 5<sup>th</sup>, 7<sup>th</sup>, and 10<sup>th</sup> grade, in the Portuguese system – therefore activities and projects on citizenship and development almost doubled in these grades, as opposed to the other grades that are still working under the previous framework. Improvements were especially impressive in Human Rights and Environmental Education.

### CASE STUDY

#### ESD projects pre-existing the Citizenship and Development Strategy

ESD projects were already in place before the launch of the Strategy at national level. These were designed by officials to help local entities enhance their work in the field by adapting them to their own context:



- The *Schools Participatory Budget*, an extra amount of money granted to schools every year (since 2017) only for proposals developed, discussed and voted by students, according to democratic procedures.
- The *Students' Voice*, an initiative available to students in hundreds of schools offering them the opportunity to participate in the education policy-making. Students can debate ideas and proposals for school improvements and present them to the school principal and the national government.

- The Human Rights Celebration in 2018, including a set of activities developed with schools in 2018, as a commemoration of the Universal Declaration on Human Rights (70 years) and the adhesion of Portugal to the European Convention on Human Rights (40 years ago).

For all the above reasons, 2018 was a remarkable year for education in Portugal. Still, a lot has to be done to consolidate the reform and to assure that all citizens become active promoters of social development in their communities making a vital step towards the construction of a fair and sustainable future for the next decades.



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The last few decades, the Ministry of Environment in Jordan, has systematically worked on promoting environmental awareness and responsibility through a wide spectrum of campaigns and actions. Particularly, the last couple of years, the Ministry has been creating a detailed "data base" on environmental content in school and university curricula. Meanwhile, the Ministry has continued to support the institution of the "Eco-schools" and has updated their criteria in cooperation with JREDS that acts as the focal point of the Foundation for Environmental Education (FEE). Additionally, it has co-organised with various stakeholders (educational community, NGOs, CSOs), several environmental awareness campaigns such as:

- the 1<sup>st</sup> "Environmental Theater Competition" entitled: "Jordan is your home, keep it clean!" during the school year 2017-2018. The 2<sup>nd</sup> Competition in 2018-2019 was called "Our water is our life".
- the Drawing competition entitled "Environment has No Borders" supported by the UN Development (UNDP). The winning artworks were displayed on the 2019 calendar.
- School recycling exhibitions and clean-ups were arranged in all governorates.



Snapshot from an act in the framework of the 1st Environmental Theater Competition

## CASE STUDY

### Development of the Environmental Education for Sustainability Strategy (EEFS)

The Ministry of Environment recognizes the need for an innovative strategy for Environmental Education for Sustainability (EEFS). The development of this strategy allows the Ministry to highlight its role in raising environmental awareness and to modify environmental behaviour throughout all members of society. The Strategy, currently under review, is supported by UNDP and expected to officially launch by the end of 2019. Acknowledging the persistent challenges regarding the application of ESD e.g. lack of leadership, lack of standards and benchmarks to measure effectiveness of the initiatives and coordination gap, the Strategy aims to lay the foundations for:

- Creating a strong leadership system;
- Developing effective coordination mechanisms and partnerships;
- Collecting specific baseline data and impact measurement tools;
- Acknowledging the current progress in the EEA;
- Supporting individuals in expressing their commitment to environmental citizenship;
- Launching an accredited professional career development;
- Maintaining rapid progress of key initiatives and building on their momentum.

The Strategy is largely based on the “Strategic 2030 Plan of Ministry of Environment” and on the “Roadmap for Implementing the UNESCO GAP” including topics like Climate change, Biodiversity, Forests and Land Degradation, Disaster Risk Reduction, Sustainable Consumption and Production, Ocean, Seas and Marine Resources. The Strategy targets various types of audiences, from primary and secondary school students (in schools and informal settings such as environmental clubs), higher education students, youth associations, the public (life-long learning) to decision-makers (government officials) stakeholders (civil society, private sector, religious community) and professionals.

The strategy foresees the following two-year actions:

- **ACTION 1.** Establishing a strong leadership and organizational structure
- **ACTION 2.** Conducting research to measure impact by building a data-collection and assessment system for EEFS
- **ACTION 3.** Supporting individuals in expressing their commitment to becoming environmental citizens
- **ACTION 4:** Establishing an accredited professional career development
- **ACTION 5.** Designing the Jordanian Model of EEFS

These actions will be later translated into activities for the application of the strategy.



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The “Egyptian Strategy for Sustainable Development-Vision 2030” provides the overall framework for the application of ESD in the country. Another institutional framework supporting ESD is the “Guideline for Environmental, Population and Health Education - Activities towards Sustainable Development”. The policy document has already been applied since 2013 and includes three main educational areas: (a) Environmental Education (B) Population Education and (c) Health Education.

Apart from its consistency with the SDGs and of course SDG 4, this policy document was developed based on the experience and the outcomes of the implementation of the

United Nations Decade for ESD (2005 – 2014) in the country.

Each thematic area includes a set of relevant goals, which have been “translated” into a diverse range of activities. In addition, the activities besides their detailed description (curricula and content) are accompanied by detailed methodological instructions for the teachers, as well as evaluation guidelines and criteria. These activities (with their goals, content, activities, methodologies and assessment) are developed for grades two to six of Primary School. The whole project was first launched in the school year 2018 – 2019 in all the country’s governorates.



## ESD at the University of Malta

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To date, there is no formal strategy on ESD at the University of Malta. Nevertheless, stemming from the Rector's inaugural speech of the 2018-19 academic year, a Committee for Sustainability was set up to get the university on track towards adopting actions that address the Sustainable Development Goals. In fact, "sustainability" is one of the Core Strategies of the University's Strategic Plan 2020-2025 and in this line, ESD will form an essential part of this strategy. Besides the strategy, Malta is currently developing its National Strategy for ESD (*Nurturing a Sustainable Society*) that addresses priority actions concerning ESD in various sectors of Maltese society.

ESD is mainstreamed in compulsory schooling (i.e. at primary and secondary level) as a Cross Curricular Theme in the National Curriculum Framework. The Centre for Environmental Education & Research (CEER) offers specific study units on ESD for various under/post-graduate courses, specific units in certain teacher education programmes, a Master in ESD and PhD research programmes. However, most ESD programmes at university level are ephemeral. Therefore, the Strategy needs to focus more on ESD programmes for adults. An analysis of the ESD initiatives in Malta reveals that although the importance of ESD is acknowledged, it is not given priority in policy-making *fora* while bureaucracy slows down ESD's progress. This is primarily the result of a confusion about what ESD entails and a lack of recognition of (local) expertise in ESD. Consequently, there is a lack of coordination of ESD initiatives while progress is mainly achieved through actions by NGOs at grassroots level.

Successful ESD depends on flexible structures that adapt to different learners' needs and realities. Such flexibility

(and adaptability) is usually not compatible with traditional institutions of formal education. This was the main reason why the CEER, in charge of providing opportunities for ESD that empower citizens to actively participate in decision making *fora*, teamed up with Nature Trust – FEE Malta offering support in the running of ESD programmes by the Foundation for Environmental Education (FEE), the Eco-Schools, Learning about Forests (LEAF) and Young Reporters for the Environment (YRE) in particular. The case studies presented adopt an interdisciplinary approach addressing various ESD themes and covering formal, non-formal and informal settings.

#### CASE STUDY 1:

##### Promoting organic farming

This project was carried out at the Maria Regina College Dun Manwel Attard, Young Adult Education Resource Centre, in Wardija. This school for youths with disabilities includes gardening as part of its curriculum. The school's Eco-Schools Committee decided to go organic and teamed up with an organic farmer to develop a project that targeted students, teachers, parents and the community. The project sought to promote not just healthy lifestyles, but also ethical and responsible consumption of food.

Initially, the project involved 60 students, together with their teachers and parents and focused on growing herbs, fruits and crops using organic agricultural practices. As the students gathered experience, the school opened up to the community and other schools and started organising outreach sessions during which visitors were introduced to hands-on activities related to organic farming and cooking sessions using organic produce.

Although restrictions on out-of-class activities limited the number of schools visiting the premises, the project had a multiplier effect on other schools which developed their own organic farming projects. Besides helping students to develop entrepreneurship skills, the project promoted inclusion and presented persons with disability as active contributors in society.

#### CASE STUDY 2:

##### Promoting children's voices for sustainability

Primarily through Greta Thunberg's efforts, spaces have been created that promote young people's voices for sustainability. However, way before this practice became "fashionable", CEER in partnership with Nature Trust – FEE Malta developed opportunities during which children and youths face local, national, sub-regional and international



policy-makers to discuss sustainable development issues and share their concerns about the sustainable future of our planet.

One such opportunity is the Young People's Summit during which students meet to discuss and share their ideas about relevant issues of their choice. Their inputs are then collated into a Declaration that is presented at various policy-making fora. One of these fora is the Eco-Schools Parliament during which the students engage in debates with members of parliament. An average of 100 students attends each event.

Besides developing a heightened awareness about sustainability issues, these activities help students to develop skills in self-expression, public speaking, communication and leadership thus empowering them as responsible citizens. Although the student interventions have repeatedly provided valid ideas for policy development about sustainable development at national and international *fora*, the general attitude of certain adults and policy makers still is that "little children should be seen not heard".



## Sustainability at the Technical University of Catalonia

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The Technical University of Catalonia (UPC) has a large tradition of including Sustainable Development in its technical degrees. Although UPC does not offer degrees in social sciences or humanities, Education for Sustainable Development (ESD) has been closely associated with all the technological degrees and the courses offered. After having achieved the integration of "Sustainability and Social Commitment" in standard Subjects as a mandatory transversal competence, we are moving forward in this direction. Actually a "Sustainability Analysis" is now required as a chapter of the final report for all the bachelor theses presented at the Barcelona School of Informatics (FIB)<sup>1</sup>.

### CASE STUDY

#### The Sustainability Analysis within the thesis

The sustainability analysis is based on the application of the matrix of sustainability (in Table 1) to the bachelor and master thesis. The analysis of a project's sustainability is divided into three parts, identified by the matrix columns:

- The Project Put into Production (PPP) which includes the planning, development and implementation of the project.
- The Exploitation of the project, which starts once the project has been implemented and ends when it is dismantled.
- The Risks inherent to the project during its construction, useful life and dismantling.

Each column should be analysed from three perspectives: environmental, economic and social, the three dimensions of sustainability. Risks refer to variables that we can identify but not control, even though they could influence the success or failure of a project. However, unexpected events generally

	PPP	Exploitation	Risks
Environmental	Consumption of the design	Ecological footprint	Environmental
Economic	Invoice	Viability plan	Economic
Social	Personal impact	Social impact	Social

**TABLE 1. Matrix of sustainability for the bachelor and master thesis.**

cannot be foreseen, as they are outside of the expected life cycle. Therefore, they will not be considered in the sustainability analysis. An example of a risk: a mobile application is designed for online sale, but a competitor decides to copy our idea with a similar initiative. An example of an unexpected event: without prior warning, a state law bans internet sales from the following week. Unexpected events cannot be foreseen. If the media had already been discussing the possible approval of such a law, it would be a risk rather than an unexpected event. The meaning of each cell in the matrix is:

- **Environmental/PPP cell:** is about the impact on the environment during the preparation of the bachelor thesis (energy consumption and waste generation). The ecological footprint can be measured, for example, in kWh and tons of CO<sup>2</sup> emissions caused by carrying out the bachelor thesis.
- **Environmental/Exploitation cell:** represents the ecological footprint that the project will have throughout its useful life. It can be measured, for example, using the same parameters as the cell above.
- **Environmental/Risks cell:** concerns all the eventualities that could make the environmental impact of the project more negative than expected in the project report.
- **Economic/PPP cell:** is about the cost of resources (material and human) during the entire project. It would be the equivalent of the invoice that would be sent to a

<sup>1</sup> <http://www.fib.upc.edu/es/estudiar-enginyeria-informatica/treball-final-grau/indicadors.html>. last access on Oct 15th 2019

potential client of the project and requires detailed time planning of the bachelor thesis.

- **Economic/Exploitation cell:** represents the project's viability plan. In the case of a bachelor thesis, this plan will be set out in a highly simplified form.
- **Economic/Risks cell:** concerns all the eventualities that could lead to the project taking longer than planned to become viable or it might never become profitable.
- **Social/PPP cell:** is about the impact that carrying out the project has had on the people who have worked on it. Given that it is difficult to quantify this impact, try to reflect on how the project has changed you and your closest environment.
- **Social/Exploitation cell:** represents the impact that setting up the project will have on the various groups related directly or indirectly with the project. It is difficult to quantify, so you should reflect on the potential effects of your project.

- **Social/Risks cell:** concerns all the eventualities that could lead to the project having a more negative social impact on one of the related groups than forecast in the project report.

To prepare the sustainability analysis, students need to reply to a series of questions presented in Table 2. Row "I" corresponds to the questions students should ask themselves in the Project Management course (the initial stage of the bachelor thesis), while row "F" contains the questions they should ask while they are carrying out the project, the answers of which should be included in the sustainability analysis report (the final stage of the bachelor or master thesis). Not all the questions are relevant or applicable to all types of theses, thus students need to consider accordingly. They should, also, think of any other questions (not included in the table) that might be relevant to their thesis project.

		PPP	Exploitation	Risks
Environmental	I	Have you estimated the environmental impact of undertaking the project? Have you considered how to minimise the impact, for example by reusing resources?	How is the problem that you wish to address currently resolved (state of the art)? In what ways will your solution environmentally improve existing solutions?	
	F	Have you quantified the environmental impact of undertaking the project? What measures have you taken to reduce the impact? Have you quantified this reduction?	What resources do you estimate will be used during the useful life of the project? What will be the environmental impact of these resources?	Could situations occur that would increase the project's ecological footprint?
		If you carried out the project again, could you use fewer resources?	Will the project enable a reduction in the use of other resources? Overall, does the use of the project improve or worsen the ecological footprint?	
Economic	I	Have you estimated the cost of undertaking the project (human and material resources)?	How is the problem that you wish to address currently resolved (state of the art)? In what ways will your solution economically improve existing solutions?	
	F	Have you quantified the cost (human and material resources) of undertaking the project? What decisions have you made to reduce the cost? Have you quantified these savings?	What cost do you estimate the project will have during its useful life? Could this cost be reduced to increase viability?	Could situations occur that are detrimental to the project's viability?
		Is the expected cost similar to the final cost? Have you justified any differences (lessons learnt)?	Have you considered the cost of adaptations/updates/repairs during the useful life of the project?	
Social	I	What do you think undertaking the project has contributed to you personally?	How is the problem that you wish to address currently resolved? In what ways will your solution socially improve (quality of life) existing solutions?	
			Is there a real need for the project?	
	F	Has undertaking this project led to meaningful reflections of the people involved at the personal, professional or ethical level?	Who will benefit from the use of the project? Could any group be adversely affected by the project? To what extent? To what extent does the project solve the problem that was established initially?	Could situations occur in which the project adversely affects a specific population segment? Could the project create any kind of dependency that puts users in a weak position?

**TABLE 2.** Questions in the sustainability matrix of the thesis (I: initial milestone, F: final milestone)



## L'Éducation au Développement Durable dans l'enseignement supérieur en Maroc

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Au Maroc, la Stratégie Nationale pour le Développement Durable est aujourd'hui déjà mise en place et pratiquée. L'éducation pour le développement durable est bien intégrée dans les programmes d'enseignement formel aux niveaux primaire, secondaire et tertiaire.

Une étude a identifié les thèmes liés à l'EDD dans les programmes des collèges et des lycées marocains en particulier. D'après l'étude, les thèmes dont la présence est plus explicite dans les programmes d'enseignement sont : la citoyenneté, les droits de l'homme, la santé et l'environnement. Les thèmes les plus implicites sont la pauvreté, la paix et la démocratie tandis que l'équipe genre, la diversité culturelle et l'éducation relative à la consommation et la production durables sont soit absents ou faiblement présents dans les programmes d'études.

Au niveau de l'enseignement supérieur, la formation en EDD est assurée dans 16 universités au Maroc intégrant les questions sur l'environnement et le développement durable dans les différentes filières telles que les sciences de l'ingénieur, les sciences humaines et sociales et le droit aux niveaux de la licence et du master. L'EDD commence à prendre une place importante dans la recherche scientifique, notamment dans la Faculté des sciences de l'éducation de Rabat, l'institution des métiers d'éducation et de formation and dans les Facultés des sciences à Casablanca, Marrakech et Agadir.

L'EDD est également intégrée dans les programmes de formation des éducateurs. Le département de l'environnement, du Ministère de l'Énergie, des mines et de l'Environnement, met actuellement en œuvre un projet de formation au profit de la société civile et des clubs éducatifs dans 12 régions du Maroc, mettant l'accent sur l'EDD, le changement climatique et les défis environnementaux locaux.

### Étude de cas:

#### L'EDD au profit des jeunes universitaires en région Rabat-salé et Kénitra

L'initiative d'EDD a été réalisée par le Club Marocain pour l'Environnement et le Développement (CMED) et par des jeunes universitaires. Pendant 18 mois, des jeunes universitaires, des éducateurs, des ONG locales et des médias (au total 500 participants dans un cadre géographique régional) ont travaillé ensemble sur des synergies, l'intégration des orientations de la Stratégie Nationale de Développement Durable (SNDD), la stratégie

méditerranéenne de l'EDD et des divers conventions et stratégies. Les participants en coopération avec la FSE ont organisé la « Semaine environnementale et culturelle ».

Les thématiques d'EDD abordés étaient :

- La richesse de la région Rabat- Salé- Kenitra en matière de biodiversité et les sites d'intérêt écologique & biologique comme les sites protégés de Sidi Boughaba et de Merja Zerka
- La gouvernance et la pollution de l'eau dans la région (En rapport avec la Gestion Intégrée des Ressources en Eaux)
- Les déchets et leur gestion y compris les déchets marins
- L'écosystème marin & littoral (En rapport avec la Gestion Intégrée des Zones Côtières)
- Les modes de consommation et de production durable
- Les villes intelligentes « Smart Cities »
- Les valeurs et l'éthique (En rapport avec la charte Nationale de l'Environnement et Développement Durable)
- L'EDD & l'économie (métiers verts & responsabilité des entreprises)
- L'EDD et les acteurs territoriaux : intégration dans la planification territoriale
- L'EDD, les jeunes et les « campus verts » dans les universités

Les principales leçons tirées de cette initiative :

- Le partenariat et la coopération entre le Secrétariat d'État chargé du Développement durable (SEDD), la société civile, les collectivités territoriales, les universités et les médias sont des éléments clés pour la promotion de l'EDD non-formelle.
- Pour réaliser une transition de l'éducation environnementale à l'éducation pour le Développement Durable non-formelle et informelle, il est nécessaire de renforcer les capacités des acteurs étatiques aussi bien que celles de la société civile.
- Les modules à consolider (par rapport à l'environnement) sont l'Éducation à la consommation & à la production durable, Éducation relative à l'inclusion sociale, aux réfugiés et au genre.

# Case studies on Marine Litter and Plastics in the field of ESD



**OPENING PRESENTATION: Increasing awareness on the importance of oceans and educating about the impacts of marine litter and plastics**

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*Did you know that every second breath we take comes from the ocean? Indeed, about half of the atmospheric oxygen comes from phytoplankton photosynthesis: without the oceans, life on earth could not exist as we know it. Nearly all aspects of our lives, no matter where we live, are deeply connected to the ocean. Ocean Literacy is about understanding the ocean's influence on us and ours on the ocean. MIO-ECSDE and MEDIES have been running Ocean Literacy initiatives*

for more than twenty years now helping citizens and other target groups make informed and responsible decisions.

From advocacy, policy formulation and awareness raising, to training educators, providing the appropriate learning materials for their students and strengthening the capacities of professionals and citizens to properly monitor marine litter, the wide-ranging ocean literacy efforts of MIO-ECSDE inspire informed and responsible actions, at all levels.

<b>Interreg Med PLASTIC BUSTERS MPAs (2018-2022)</b>	<b>15 implementing partners</b> and <b>17 associated partners</b> from <b>6 countries</b> .
<b>Mediterranean Action Day (2019)</b>	<b>7 NGOs from 5 countries</b> ran participatory science initiatives on <b>23 beaches</b>
<b>Erasmus+ KA1 mobility course (2018, 2019)</b>	<b>40 teachers and adult trainers</b> received a week-long intensive course on Marine Litter education in Athens
<b>Interreg Med ACT4LITTER (2017-2018)</b>	<b>4 editions of the marine litter watch month, 9 marine litter action plans, 1 decision-making tool</b> to help MPA managers
<b>ENI SWIM-H2020 SM (2016-2019)</b>	beach litter assessment reports in <b>3 countries</b> , some <b>200 professionals</b> trained on marine litter monitoring and management from <b>8 countries</b> via <b>3 national</b> workshops and <b>1 regional</b> workshop, a <b>peer-to-peer activity</b>
<b>IPA-Adriatic DeFishGear (2013-2016)</b>	marine litter monitoring activities in <b>7 countries</b> , a marine litter <b>assessment report</b> , an <b>e-learning module</b> on marine litter monitoring, a <b>GIS database</b> and <b>3 marine litter measures</b> piloted
<b>EU FP7 MARLISCO (2014-2016)</b>	Educational Pack for secondary school level <b>Know Feel Act! to Stop Marine Litter</b> was developed in <b>16 languages</b>
	<b>e-learning course</b> for formal and non-formal educators on marine litter education ran in <b>4 rounds</b> , and trained a total of <b>400 learners</b>
	Mobile <b>exhibition</b> on marine litter with more than <b>70 displays</b> in <b>14 EU countries</b> , reaching a total of <b>tens of thousands</b> of visitors. In Greece alone, up until 2019 the exhibition has been displayed 15 times, reaching about <b>11,000 visitors</b> .

**TABLE 1.** MIO-ECSDE ocean literacy initiatives & outcomes

Many of these initiatives have a strong Education for Sustainable Development (ESD) component. Benefits of enhancing ocean literacy through the ESD methodology are:

- It can easily combine formal (schools) and non-formal learning settings.
- It starts with the learner.
- It links to everyday life practices and habits.
- It can be delivered via many means of engagement (kinetic games, hands-on materials, citizen science, field-trips, story-telling, etc.).

- It can cultivate a strong emotional connection to the sea.
- It enables learners to be active in finding solutions.
- It is linked not only to knowledge but also to attitudes and behavioural change. Yet, achieving behavioural change (going from “knowing” to “doing”) is difficult and remains a challenge for any ESD educator.

Some of the lessons learned from running impactful awareness campaigns on the importance of the oceans are:

CHALLENGES	TIPS
Knowledge is not enough for behaviour change.	Create opportunities for competence building, care and knowledge development.
Low involvement and attraction of the audience	Do not assume you know their needs. Emphasise on personal relevance. Meet your audience where they are.
General scepticism, credibility and usefulness of the campaign being questioned (a 'so what?' mindset).	Have the scientific evidence ready or a team of skilled experts to reply to possible questions.
Main barriers to action: financial cost & inconvenience.	Always suggest alternative actions, ideally zero-cost ones.
Inaction from society due to a catastrophic perception of the environmental threats.	Balance urgency with realistic hope and present achievable goals.
Lack of engagement.	Simplify the message, make it action-oriented, fun and collective.
Lack of resources	Synergize with other initiatives.

Lastly, as individuals, let's think of what we can do to reduce marine litter:

- *Minimise consumption to minimise waste*
- *Reuse and recycle products*
- *Be responsible for your disposal and remember "land and sea are connected"*
- *Avoid single-use disposable cups, plates and utensils*
- *Avoid the use of plastic bags*
- *Refuse to buy items with excess packaging*
- *Use items made from recycled material*
- *Use clothes made by natural fibers*
- *When outdoors, take our trash with us – do not leave it behind*
- *Support environmental initiatives and encourage others to act!*



## Enhancing critical thinking in schools on marine pollution using innovative ICT technologies

### Dr Aravella Zachariou

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Education for Sustainable Development in Cyprus, as part of the National Action Plan for ESD, has been integrated holistically, systemically and in the long term. The ESD National Action Plan touches upon a variety of national policies related with the environment and sustainable development and aims to establish ESD at the core of formal, non-formal and informal education, acknowledging that Education is a prerequisite to change people's mindset, for a safer, healthier and more prosperous world and a better quality of life. The ESD National Action Plan contains a comprehensive account of the key action areas that need to be reformed (e.g. institutional, curricula, non-formal education, professional development, infrastructures, learning and educational materials, synergies and partnerships at the national, regional and international levels, research), so that ESD and the SDGs permeate every aspect of life.

The Unit of Education for Environment and Sustainable Development has been established in Cyprus to integrate, monitor, upgrade and evaluate ESD. It is worth noting that the radical changes in ESD at the national level have set an

example of good practice for others to follow at the regional and international level. This has made Cyprus a champion country on ESD impacting on the formation of regional and international policies such as the Mediterranean ESD Action Plan. Additionally, Cyprus has established an extended network of collaboration on ESD and the SDGs across the Mediterranean Region and the Middle East. By means of this initiative, Cyprus aims to instigate the exchange of expertise and examples of good practice in the field and create a platform of communication and cooperation among the countries so that they work together, support each other and jointly tackle the challenges of creating sustainable, productive and prosperous societies.

Last but not least Cyprus is the Chair of the Mediterranean Committee for ESD monitoring the implementation of the Action Plan of the Mediterranean Strategy on ESD (MSESD). The Action Plan adopted during the Nicosia Ministerial Conference (December 2016), operates as a vehicle of dialogue and exchange amongst the Mediterranean Countries and of actions and initiatives in their efforts to implement the MSESD in their contexts.



## CASE STUDY:

### Enhancing school students' critical thinking skills on marine pollution using innovative Information and Communications Technologies (ICT)

Enhancing school students' critical thinking skills on marine pollution using innovative ICT technologies (SEA4ALL) was a European Erasmus+ project. The project lasted for two years (2017-2019) and aimed to develop environmental consciousness to students of school ages, as well as to school teachers and educators, through the effective use of the innovative and state-of-the-art ICT technologies on the issue of marine pollution with special emphasis on plastic litter and oil spills. During the project, the partners developed innovative learning tools in collaboration with teachers and a teaching and learning strategy to equip teachers with innovative approaches and ICT methods as a driver to develop knowledge and skills. All learning activities and tools developed encourage experimentation, creative thinking and playful game-based learning. They are adaptable to individual's needs and self-paced.



Snapshot from a SEA4ALL field activity

The project impacted more than 50.000 students and 500 teachers and teacher trainers from the participating countries: Greece, Cyprus, UK, Romania, while its tools and learning resources were distributed across various national, European and regional networks (all resources are accessible at the project's webpage: <https://www.sea4all-project.eu/>)

*Another important case of an ESD project, this time about climate change is the so-called: "Action Against Climate Change: The climate calls S.O.S." a national project designed by a wide group of stakeholders, namely, the Unit of EESD-Cyprus Pedagogical Institute, the Office of the European Union in Cyprus, the Cyprus Institute, the Office of the Commissioner for the Environment, the International Festival ANIMAFEST, the Cyprus Cartoon Association, Departments of Education (Primary and Secondary). It is supported by a grant of the Office of the European Union in Cyprus. The project aimed to empower "the voice of youth" against climate change and support students, and to help students and teachers to understand the causes and consequences of climate change, to be informed about suggested actions and measures at the scientific and technological level. Further, to become familiar with EU-promoted policies against climate change and to produce their own tools to increase civil society motivation and awareness on this issue. More than 100 schools participated during the school year 2018-19.*

Both projects made clear that to effectively integrate these complex issues in the educational process, it is necessary to provide students and teachers with integrated learning materials and tools that enhance the processes of learning. Guiding and engaging teachers and students at all the stages of a project's implementation increases the project's effectiveness due to the increased sense of ownership and motivation. Engagement of all stakeholders concerned is also a prerequisite in ESD programmes.



### ESD activities on marine litter of the Egyptian Environmental Affairs Agency (EEAA)

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The concept behind Education for Sustainable Development (ESD) in Egypt is now clear and ESD is no longer misinterpreted as Environmental Education (EE). Therefore, a road map was developed in order to guarantee the smooth application of the ESD activities. More specifically, the entitled ministries and authorities developed strategies and examined official documents. As concerns the Ministry of the Environment/Egyptian Environmental Affairs Agency (EEAA) it has been intensely involved in the preparation of the National Strategy for Sustainable Development "Egypt Vision 2030", which dedicates a whole chapter to ESD and has been successfully cooperating with the Ministry of Education & Vocational Education by co-planning and providing technical support and training. Actually, the

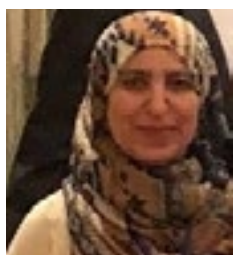
Ministry of Education & Vocational Education has succeeded in integrating and mainstreaming ESD-related concepts and activities into the formal educational curricula of different levels (primary, preparatory and secondary). The Ministry of Higher Education is planning to establish new technological colleges in order to link education to the labour market. ESD related courses have already been developed for undergraduate students and postgraduate researchers. The EEAA is cooperating with both the Ministry of Education & Vocational Education and the Ministry of Higher Education on implementing ESD related activities, among others, in training programmes for educators, curriculum developers, environmental awareness specialists, NGOs officials and academic professors (see the following case study).

## CASE STUDY:

### Capacity building in ESD education focusing on marine litter

The Student Awareness team of EEAA is working to create a human resource capital for Sustainable Development by developing knowledge and fostering a change of behaviour of key audiences. In this context, the EEAA, in cooperation with the EU-funded "SWIM-Horizon 2020 Programme" held capacity building activities on 2-6 December 2018 in Egypt for professors, curriculum developers, NGO staff and officials in order to empower them to apply ESD according to the Mediterranean Strategy on ESD (MSESD) and to focus on marine litter education examples. More than 100 participants participated from several governorates of the country.

Back-to-back with the two trainings they held an inter-institutional consultation on ESD where 20 representatives from the Ministry of Education and Technical Education, the Egyptian Environmental Agency, the Egyptian Sustainable Development Forum, University Professors, and SWIM-H2020 ESD Experts discussed about the implementation of MSESD's Action Plan in line with the country's ESD initiatives and programmes. It should be noted that the capacity building contributed to the mainstreaming of the ESD concept and principles and enabled participants from different institutions and entities to exchange views on the application of the ESD. The trainings offered great opportunities for future networking and cooperation. However, there were no representatives from the fields of Vocational Education and Special Needs Education (learners with disabilities).



### Les activités sur la gestion des déchets marins

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Dans le cadre de la mise en œuvre de la Convention de Barcelone et notamment son protocole relatif à la protection de la mer Méditerranée contre la pollution provenant de sources et activités situées à terre, l'Algérie a mis à jour, avec l'appui du MedPol /PAM-PNUE (d'évaluation et de maîtrise de la pollution marine dans la région méditerranéenne), son Plan d'Action National pour la lutte contre les pollutions marines provoquées par des activités menées à terre (PAN).

Ce Plan d'Action National a pour objectifs d'évaluer à mi-parcours la mise en œuvre du PAN1, d'analyser les écarts et de déterminer des cibles opérationnelles nationales pour répondre aux engagements du Plan régional adopté dans le cadre du protocole tellurique. Le Plan régional vise à atteindre les cibles du Bon Etat Ecologique (BEE) et des trois objectifs écologiques relatifs à la pollution due à l'eutrophisation, aux contaminants et aux détritiques marins.

L'un des projets prévus dans le PAN est l'élaboration d'un Plan d'Action National de Gestion des déchets marins dont l'étape primordiale de réalisation est la caractérisation des déchets marins.

Ainsi, avec l'appui du SWIM-H2020 SM, le Ministère de l'Environnement et des Energies Renouvelables a lancé deux activités, à savoir :

- la caractérisation des déchets marins et côtiers dans les quatorze (14) wilayas côtières ;
- l'élaboration d'un plan national de gestion des déchets côtiers et marins.

Dans ce contexte, un atelier de formation a été organisé les 7 et 8 novembre 2017 pour renforcer les capacités, harmoniser la surveillance des déchets marins, améliorer les connaissances sur les quantités, types et sources des déchets marins, familiariser avec la méthode permettant de surveiller



Instantanés de l'activité

les macro-déchets marins sur les plages et entraîner comment effectuer des relevés de déchets sur les plages et comment en interpréter les résultats.

Cette formation a regroupé plus de 40 personnes représentant les différents secteurs, les Directions de l'Environnement des Wilayas côtières (Directions du Tourisme et de l'Artisanat, des Ressources en Eau, des Services Agricoles, des Travaux Publics, la Direction de la Pêche et des Ressources Halieutiques et des PAPC des

communes concernées), des ONG et des chercheurs. Elle a été menée par des experts du Mécanisme du Soutien SWIM-H2020.

La formation théorique a été axée principalement sur la méthode de surveillance des déchets marins dans l'environnement côtier et marin qui vise à fournir des informations sur les types, les quantités, la distribution et les impacts des débris marins et à identifier leurs sources.

Afin de concrétiser la méthode de surveillance des déchets marins, une sortie à la plage « Sablottes » commune de Hussein Dey, un endroit sélectionné selon des critères bien précis, a été réalisée.

Après la formation, l'activité de caractérisation des débris marins sur les 14 wilayas côtières a été lancée pour identifier 2 plages par Wilaya et pour réaliser des campagnes d'échantillonnage au niveau de chaque plage (2 parcelles par plage). Au total, 4 campagnes d'échantillonnage ont été réalisées. Avant chaque campagne, une réunion des représentants des directions locales a été tenue pour

expliquer les principes et indiquer les moyens à utiliser lors de l'opération.

Sur terrain, l'opération d'échantillonnage consiste à délimiter 2 parcelles de 100 de long sur la largeur de chaque plage, ramasser tous les déchets à l'intérieur de la parcelle délimitée (taille maximale à 2.5cm), faire le tri selon des fiches de caractéristiques des déchets établies par le H2020-SWIM et peser le poids de chaque type de déchet.

Le dossier des déchets marins de chaque plage comporte :

- de la feuille d'identité de la plage ;
- de la fiche d'enquête ;
- de la carte de la plage ;
- des photos ;
- du PV de la réunion de préparation de la campagne d'échantillonnage ;
- de la liste des résultats d'échantillonnage.

## Case studies on Education for Sustainable Consumption and Production



### OPENING PRESENTATION: Sustainable Business Models

#### Giorgio Mosangini

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The UN Environment MAP Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC) is a Centre for international cooperation on development and innovation based on Sustainable Consumption and Production (SCP) which develops its activity under the UN Environment Mediterranean Action Plan (MAP). The shift towards SCP involves the implementation of a wide set of strategies by various categories of stakeholders:

- Policy-makers should adopt regulatory frameworks enabling SCP.
- Industries should adopt resource efficiency, cleaner production and circular economy approaches.
- Public and private financial entities should deploy financial instruments supporting SCP.
- Civil society should promote sustainable consumption solutions and requires sustainable products and services.
- Knowledge on SCP should be developed and disseminated.
- New companies and start-ups should adopt green and circular innovative business models.

Among all the strategies and stakeholders, one of the main drivers for SCP is the transformation of company production processes and the emergence of Green and Circular Business Models. The transition towards sustainability requires new companies and start-ups to promote new Sustainable Business Models. Sustainable entrepreneurship applies a triple bottom line to business development on the basis of interdependency between the environment, society and economy. A Sustainable Business Model acts in three ways; not only does it create economic value, but also ecological value addressing environmental challenges and social value addressing social needs.

Sustainable Business Models create environmental value by transforming ecological challenges into economic opportunities (through eco-innovation) and reducing environmental impacts through life cycle thinking and eco-design. Emerging Circular Business Models adopting eco-innovation and life-cycle thinking need to focus on five main strategies:

- Prevent pollution and save resources.
- Extend resource use and reduce disposal.

- Recover resources after disposal.
- Increase resource utilisation rate.
- Shift to circular supplies.

The SCP/RAC, adopting this approach of Sustainable Business Development and aiming to support Sustainable Business Development in the Mediterranean has built the “Switchers Support”, funded by the EC<sup>1</sup>, in the framework of the SwitchMed Initiative. The programme provides support to entrepreneurs and business development organizations through sustainable business model creation, business plan creation, access to finance, access to market, networking and community development, as well as promotion of supporting policies. SCP/RAC has developed specific methodologies and tools serving as the core of the Sustainable Business Development. So far, more than 2.200 Green Entrepreneurs have developed and tested their Sustainable Business Models in the MENA Region and 48 green and circular start-ups have been incubated. At the same time, matchmaking activities between financial institutions and green start-ups have raised more than 2,5 million euros. SCP/RAC also promotes a Mediterranean community of Green Businesses: The Switchers. The stories of more than 360 Change Makers are available on the Switchers platform<sup>2</sup>.

1 <http://www.switchmed.eu>

2 <http://www.theswitchers.eu>

As regards to the correlation between ESD and Circular Business Development, shared goals include the following:

- Shifting from current linear business models to circular business models.
- Shifting societal values and norms from a focus on material wealth towards well-being.
- Transforming behaviours towards sustainable lifestyles at individual and community level.

Efforts to reach these goals, raise awareness and engage multiple stakeholders should reach education and research institutions, media, policy makers and the private sector. Lastly, below are some mutual lines of actions between ESD and the Circular Business Development:

- Include eco-design, life cycle thinking, sustainable business models, etc. in major university degrees: business administration, engineering, design schools, etc.
- Make available resources to sustainable business models at all levels of education.
- Promote research on sustainable business models.
- Promote good practices and scale-up successful green business initiatives.
- Include green and circular entrepreneurship into the National Plans on ESD and the national frameworks for ESD.



## Education for Sustainable Consumption, Behaviour and Lifestyles: A collection of case studies from the Mediterranean

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The resolution adopted by the United Nations Environment Assembly (UNEA) on 15 March 2019, “invites all Member States and relevant stakeholders, as appropriate, to design and implement public policies, plans programmes that support education and raise awareness of the importance of sustainable consumption, sustainable lifestyles and sustainable consumer behaviour, and those that develop related skills for academia and the private sector, including the financial sector”.

To this end, the Union for the Mediterranean (UfM), in collaboration with the Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC) and the Mediterranean Information Office for Environment, Culture and Sustainable Development (MIO-ECSDE) developed a resource-guide aiming to:

- Contribute to the efforts to implement the UNEA Resolution, by analysing, linking and increasing the visibility of the work done at regional level in the framework of formal and non-formal ESD and ESC.

- Show how ESC at the interface of both ESD and SC can contribute to shape and encourage sustainable consumption, behaviour and lifestyles in the Mediterranean region and beyond.
- Serve as a guide to inspire decision-makers and relevant entities and support citizens to identify opportunities that decrease their environmental impact through simple, everyday actions.
- Serve as a concrete contribution to the Mediterranean Strategy on ESD, as approved and as an important contribution to the UfM post-2020 agenda in line with the Sustainable Development Goals (SDGs).

The 16 case studies presented come from educational centres, decision-makers, stakeholders as well as citizens groups, and focus on five areas: housing, mobility, food (nutrition), leisure and consumer goods. These cases represent just a small volume of the outstanding work already in place at a regional level and further seek to encourage others to act in the Mediterranean area.

This publication shows how both formal and non-formal education are equally important when it comes to the transfer of knowledge and ideas more intrinsically linked to consumption choices. To this extent, the authors also include a section that details a series of tools and sustainability platforms to further support this notion.

Finally, the publication concludes with key messages extracted from the cases and ongoing projects to inspire policy-makers, educational institutions and other relevant stakeholders to adopt and include elements of Education for Sustainable Consumption (ESC) directly into educational curricula and non-formal educational activities.



## Education for Sustainable Consumption by Green Steps for Environmental Literacy

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Green Steps for Environmental Literacy (GSEL) was established in 1998 with the mission of providing Environmental Education *via* interactive activities for kids that combine humour and cartoons. Teacher trainings and development of educational resources in collaboration with universities and other NGOs, are among GSEL's core activities.

### CASE STUDY:

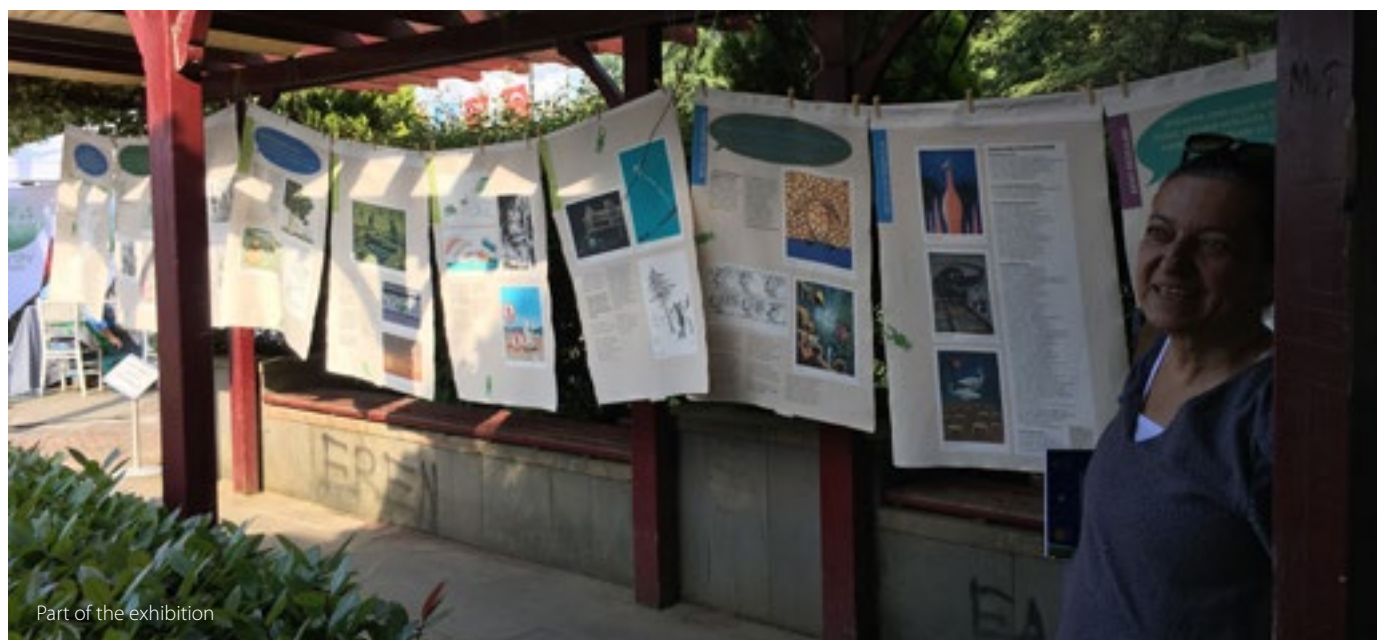
#### A cartoon exhibition on responsible consumption

The GSEL Cartoon Exhibition, one of our most well-known and successful activities, provides a brief background of environmental issues in Turkey and on global scale, such as Natural Resources, Earth, Water and Air, Biological Diversity, Urban Ecology and Urbanization, Energy and Climate Change, Health, and Consumer Behaviour -with the latter having a distinct place and 'role' in the exhibition. The exhibition consists of 19 panels (70x100 cm) and was created in 2015 with the cooperation of prominent cartoonists and the Cartoonist Association. Since then, it has been displayed in numerous schools, universities, municipal public spaces,

eco-festivities, book and art fairs and shopping malls, in several cities and provinces of the country, namely Istanbul, Şirince, Küçükkuyu, Birgi and Bodrum. It has reached approximately 30.000 people so far and it is still running.

The exhibition was designed to reach all age groups. The section on "Energy and Climate Change" has been used in the international school campaign "Fridays for future". The cartoons provide "food for thought" through their powerful messages, facts and figures. Cartoonist workshops are held during the exhibition, cartoon competitions on environment are independently organized in certain schools. It should be noted that following the ruling policies in Turkey, some public schools did not accept to host the exhibition.

A few words about ESD in Turkey: In general, Environmental Education on Sustainability is present across all school curricula in the Turkish educational system as a component embedded in the various Subjects and not as a separate course. The term 'sustainability' does not actually appear as such in the Subjects content. Some universities offer undergraduate and post-graduate courses on ESD.



Part of the exhibition



## Sustainable water production and consumption, from ancient times to the present, by sensitization in schools<sup>1</sup>

**Prof. Habib Ben Boubaker**

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The project's main goal is to promote sustainable water consumption and production at home and schools by tracing the ancient methods of water management. It is promoted by the University of Manouba in collaboration with the Association de Sauvegarde de la Medina et du Patrimoine de Kelibia (ASMP), the Institut National du Patrimoine and the Municipality of Kelibia.

The project focuses on showcasing the ancient methods of water management in the archaeological ruins of the Punic city of Kerkouane (outside of Kelibia) so the students can understand water extraction and the related concepts (aquifers, water tanks, wells). The school visits to the ruins are based on the interactive guidance of the teachers. Once the students learn the processes of water extraction from ancient to modern times, environmental awareness seminars at school follow to raise their awareness on the importance of saving water. The project also engages students in

examining the problem of lack of water in their own schools for which they often identify and suggest rainwater use as a solution (i.e. for toilet flushing or gardening).

These take-home messages and recommendations inspire students to change their daily habits in order to reduce the water consumption. The project encourages students to carry out home surveys and to record: (i) water consumption practices (ii) water cost on the family budget (iii) willingness to install water-saving faucets at school. Students bring the survey results to class where they discuss how they can find solutions, coordinate small-scale actions and bring some change.

In addition, some scale-up activities (i.e. competitions) are organized at where students can elaborate on the best practices and initiatives of water production and sustainable consumption and become fully engaged in the solution.



ABOVE Field visits and activities for teachers and students in Kerkouane ancient water monuments.

LEFT Water works in the ruins of Kerkouane Punic city.

<sup>1</sup> <http://www.hydraproject.info/en/tunisia-kerkouane-punic-city/relevance4/>



## Education for Sustainable Consumption Activities by the Makhzoumi Foundation

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Since the establishment of the Foundation in 1997, thousands of school students all over the country have attended environmental awareness sessions on two main topics: (a) the importance of reforestation and the fight against desertification, followed by tree planting activities, (b) sustainable consumption and waste management and the importance of the “3R” concept, followed by environmental craft workshops, on making art crafts from household waste. These actions on sustainable consumption and production are combined with annual school contests about the SDGs held in partnership with the UNESCO National Committee across all Lebanese schools and a prize awarding ceremony at the end of the academic year. The 2018 theme of the contest was “My City, My Community, in 2030” and the 2019: “Let’s Plant and Preserve our School, our Environment”.

Moreover, upcycling workshops combining art along with respect for the environment are held in order to empower rural or refugee women. Upcycling is the process of converting old or discarded materials into something useful and beautiful by refashioning them, e.g. patchwork-découpage, papier mâché, etc. Exhibitions are organized so that the trainees can display and sell their products.

### **CASE STUDY:**

#### **Civil Society in Action for Sustainable Development**

This was a project implemented from 2016 to 2018 in partnership with Armadilla (Italian NGO), ALMEE (Lebanese NGO) and MIO-ECSDE, funded by the EU and managed by OMSAR. It aimed to promote social and economic development in the West, Mid and North Bekaa regions through empowering citizens for sustainable change in their communities.

The project reached 1.308 students from 30 schools, 3 unions of municipalities, 300 women and youth, and 83 local stakeholders through the following set of activities:

→ Survey on “Lebanese Youth Response towards Sustainable Development”

- Continuing monitoring and assistance seminars for local stakeholders
- Carbon footprint (Greenhouse Gas – GHG) Reduction Competition in the 30 participating schools of the project
- Trainings for 60 beneficiaries on Beekeeping and business skills
- Environmental craft workshops for women and youth, business skills sessions and craft production laboratories
- Environmental arts and crafts fair during the closing ceremony of the project where women exhibited their work
- TV commercial and social media post on the reduction of single-use plastics
- Production of textile bags to promote the reduction of single use plastic and the concept of re-using
- Installation of renewable energy devices in the participating schools and the unions of Municipalities.

#### **Key highlights:**

- The Carbon Footprint Competition showed that young people are motivated to participate in environmental actions that have a direct positive impact on their communities.
- The textile bags and the TV spot received many positive comments.
- Days before the arts and crafts fair was set to open, several participants started producing and selling their artworks
- Organizers noticed that parents should be involved in the awareness raising component to help students with on-site visits and the study of some practical cases. Therefore, this component will be added to the project’s next phase.
- It is necessary to encourage the municipalities to start working on reducing their energy and water consumption.

# Case studies on Education for Biodiversity, Protected Areas and Biosphere Reserves

## OPENING PRESENTATION:

### The Biosphere Reserves (BRs) as Learning Laboratories for SD & ESD

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### Background

To comprehend the relationship between Education for Sustainable Development (ESD) with emphasis on Biosphere Reserves (BRs) and other designated sites we have to start by reminding ourselves of the background of the relationship between Man & the Biosphere/Nature in general (see figure 1). Humans were initially fully integrated in nature but soon they realised that they are something different from other creatures. They developed technologies, tools, cultures and existential questions leading to spirituality.

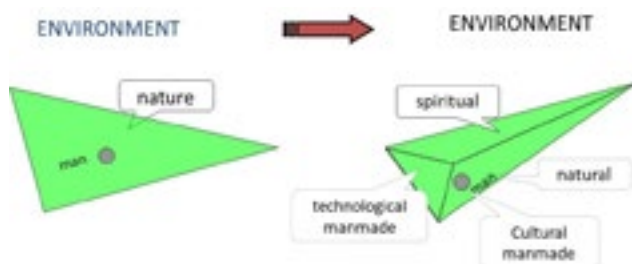


Fig.1

Seeing the "Anthroposphere" as a tetrahedron (figure 2) it has as basis the natural environment which has remained the same "our Earth". The human overstructure, the "Anthroposphere" has become gigantic but the Biosphere, Geosphere and all other "spheres" that correspond to the natural world/our Environment, that had remained the same, have been disturbed or even decreased.

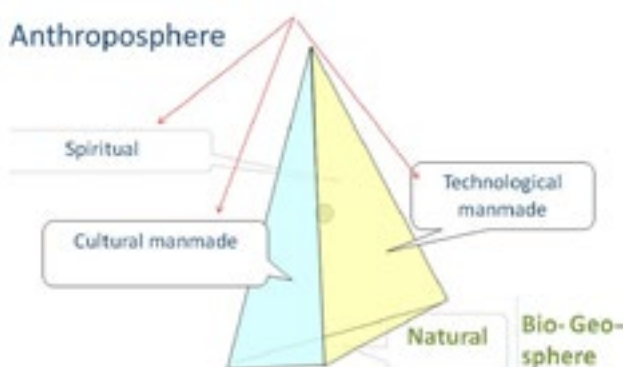


Fig.2

This led many thinkers, the UN and other bodies to direct our learning accordingly. "Learning to live within the environmental limits of our planet and to build a just, equitable and peaceful society" was one of the key messages of I. Bokova in her capacity as UNESCO Director General. In this article we briefly review:

The fields of ESD which are directly linked to BRs, or may gain from such a link. In other words, what can ESD gain from BRs? Where are BRs useful/necessary for ESD?

The management processes in BRs that can benefit from appropriate ESD interventions. What can BRs gain from ESD? How may ESD help the management?

Of paramount importance before any further elaboration is to understand fully the nature of sustainable development and visualise it in order to fully grasp the nature and the content of ESD (see fig. 3)

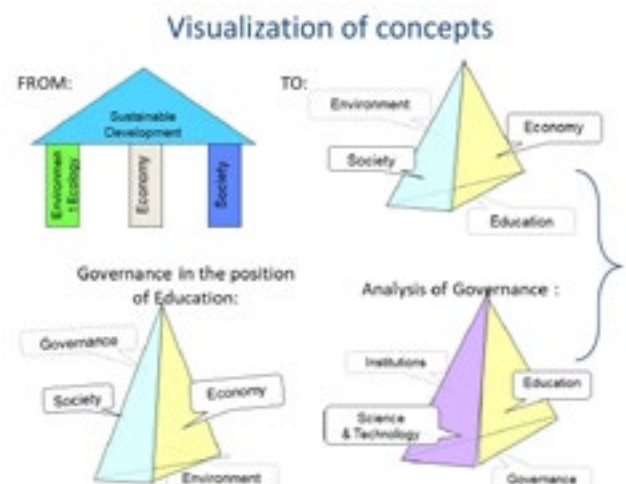


Fig.3

All those need to be brought together "in" and "for" biodiversity. Where? Basically, within the Biosphere Reserves (BRs) of the MAB/UNESCO Programme and in other specially designated areas where ESD could become a key tool in the hands of the managers.

### What is the MAB?

Launched in 1971, the UNESCO Programme "Man and the Biosphere" (MAB) is an intergovernmental programme that aims to create a scientific basis for the relationship of societies



with their environment. By combining natural and social sciences, economics and awareness, MAB promotes the protection of biodiversity, ecosystems and the promotion of innovative approaches to economic development that are socially, culturally and environmentally appropriate, and as such, sustainable. Education is fundamental to achieve MAB objectives while the BRs are ideal areas for ESD development and implementation. The BRs are nominated by national governments and remain under the sovereign jurisdiction of the states where they are located. Their status is internationally recognised. The World Network of BRs accounts more than 700 BRs from 120 countries.

### BRs properties and functions

Before 2015 the BRs were considered as areas comprising terrestrial, marine and coastal ecosystems, with each BR promoting solutions reconciling the conservation of biodiversity with its sustainable use. The key management principle of BRs is based on differentiated intensity of management in three zones: the “core zone” of strict protection, the “buffer zone”, and, the “transition zone” where sustainable development is encouraged (see fig. 4).

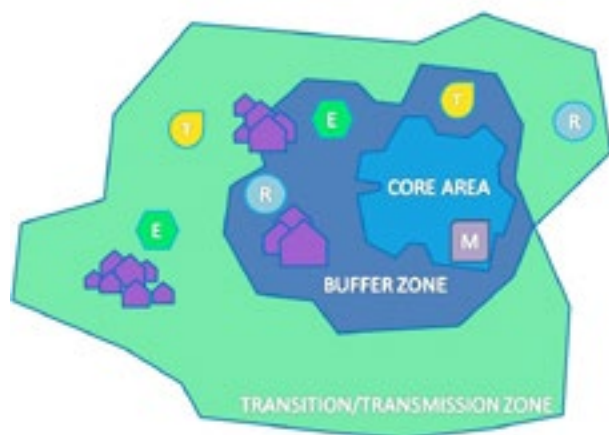


Fig.4

After 2015 and the adoption of the Seville Strategy the BRs are basically approached as “Science for Sustainability support sites” and as special places for testing interdisciplinary approaches to understand and manage changes and interactions between social and ecological systems, including conflict prevention and management of biodiversity. Based on the Seville Strategy and the Lima Action Plan (2016) the BRs pursue the following values, which are all supported by ESD:

- Positivity: honouring life, celebrating people and nature.
- Participation: people are the key to sustainable development, they must be involved.
- Innovation: finding solutions, exploring new paths every day.
- Collectivity: fostering relationships, being part of something greater than us.

Additionally, the BRs can play a fundamental role in the concrete implementation of almost all Sustainable Development Goals (SDGs) (see figure 5). This is evident from their fundamental functions, which are the following:

- Conservation of: landscapes, ecosystems, biodiversity, species generic variation
- Logistic support: research, monitoring, ESD, training, knowledge
- Development: economic, human and culturally adapted, “sustainable”



Fig.5

It is evident that the above functions need to be reflected in the educational approaches implemented therein. Also, an important differentiation between Protected Areas and Biosphere Reserves should be reflected on the type of applied education as well, meaning applying ESD instead of simple EE.

### ESD in BRs

From the very beginning of Education, the direct contact with nature (being in nature) and observation (either *in situ* or in the laboratory, *in vivo* or *in vitro*) was an important learning tool for empirical knowledge and deeper reflection. Taking this as an entry point when talking about a sustainable development approach for the establishment of BRs, in order to safeguard the protection of natural and cultural characteristics with the direct or indirect support and participation of the local society we need to ensure:

- Protection of the habitats.
- Sustainable management of natural resources.
- Conservation of species generic variations.
- Promotion of scientific research.
- Conservation of cultural heritage, both tangible and intangible.
- Appropriate recreation activities and eco-cultural tourism.
- Sustainable, organic agriculture and manufacturing of environmentally friendly local products.
- Maintenance, development, improvement and promotion of a set of services and goods necessary for the well-being of current and future generations, within and outside the BRs.
- Education with particular emphasis on ESD.

More particularly, focusing on ESD characteristics and scope, in relation to BRs we need to remind ourselves that ESD as a cross-cutting field embraces Environmental Education, Education for Development, Global Citizenship Education (GCE), Global Education, Education for Peace and Human Rights, etc., and touches upon key themes such as: poverty,

citizenship, peace, democracy, security, human rights, social and economic development, health, gender equity, cultural diversity, functioning and protection of the environment and natural resources, sustainable production and consumption patterns. In this context, the BRs allow for demonstrating good or not so good practices e.g. obstacles or misconceptions to explain and learn from them. By nature, ESD seeks to balance human and economic welfare for the present and future generations with cultural values and respect for the environment and the earth's natural resources. It also aims to empower and inspire people of all ages living within or around BRs to develop the appropriate knowledge and skills, to adopt attitudes and values and shape behaviours towards sustainable development of their areas in order to assume responsibilities for creating a sustainable future. Last but not least, both the ESD and BR management require multi- and intra-disciplinary approaches. Figure 6 depicts the generic content of ESD to be applied in BRs, using the double tetrahedron (hexahedron) of sustainable development and the tools to support it.

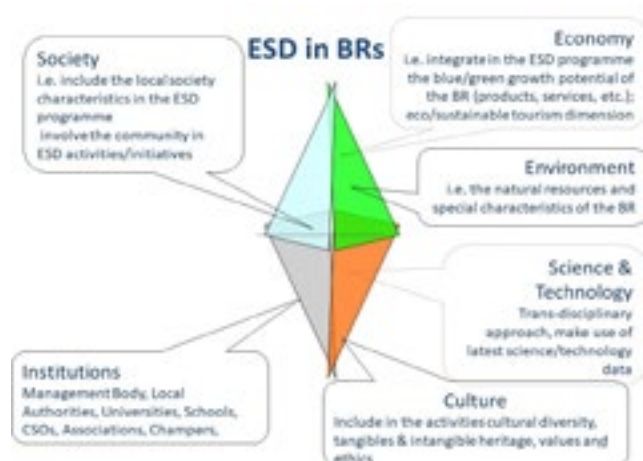


Fig.6

Based on the aforementioned generic goals for ESD, the ESD goals in and for BRs are:

- To highlight the special natural and socio-cultural characteristics of the area.
- To highlight the local issues and the opportunities for development and stimulate progress.
- To encourage the locals on how to better “value”, preserve and manage the area in a sustainable way.
- To help visitors contribute to the sustainable development of the area.
- For the visitors to collect nice memories and positive feelings so that they can have an impact on the sustainable management of the area and beyond.
- To stimulate or enhance the tendency for expansion or creation of new BRs.

Last but not least, the target group of ESD programmes and activities in BRs shall involve all concerned stakeholders, and those who will be receivers, “transmitters” of the SD message, including all from pre-school to tertiary education level, learners, educators and services providers, as shown in figure 7.

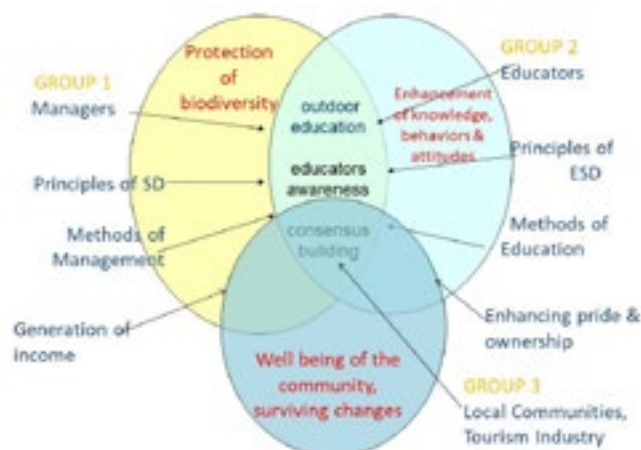


Fig.7

In order to meet the aforementioned goals and engage the above target groups, various activities can be implemented. For example, MEDIES/MIO-ECSDE has been working systematically in the field of ESD in BRs for more than 15 years and has designed and applied a wide range of activities, from the production of educational resources for teachers, workshops and summer universities. The activities presented in the following table may stimulate and inspire stakeholders who wish to apply their own ESD actions in/ and for BRs.

## MEDIES/MIO-ECSDE activities on ESD in BRs

### ESD in BRs and other designated Areas Resource Book

This resource book co-developed with UNESCO Paris aims to build the capacities of educators and professionals working in BRs and other designated sites, on how to use the sites as open-air ESD laboratories and as learning environments to carry out ESD programmes. The book links the educational process within the sites with their actual management and protection. It is accessible (free) from the link: <https://medies.net/347-2/>



### E-course on Management of MAB Biosphere Reserves & other designated areas

The e-course is developed on the e-learning platform of MIO-ECSDE in English. It is facilitated by two tutors, over a duration of 4-weeks and it is free of charge. Its content is based on the content of the resource book “ESD in BRs” (see above description).

## Summer Universities



of BRs and other designated areas. One of the key

Since 2014, a series of summer universities have been organized by MEDIES/ MIO-ECSDE involving a group of national and local stakeholders, with the support of the Regional Office of UNESCO in Venice. The universities target post-graduates and young professionals from the Euro-Mediterranean region aiming to build capacities in the sectors of sustainable management

thematic pillars of these summer universities is ESD and its approaches and perspectives in regards to the BR in which the event is organised. The venue of the summer schools is usually an existing BR or a site- candidate in the BR network, and namely, Amfissa, in the Parnassus mountain range area, Greece (2014), Samothraki Island, Greece (2016), Sardinia, Italy (2017), the Parnon area, Greece (2018) and Central BR of Bulgaria (2019).

## Trainings / Workshops

Several experiential and participatory workshops on the topic of ESD in BRs have been organised bringing together formal and non-formal educators, trainers and practitioners from Europe and the Mediterranean to share, discuss and co-learn (in Greece in 2008, 2009, 2010, 2012 and 2016).



## Integration of the Asterousia Mountain Range into the UNESCO/MAB Network of sites

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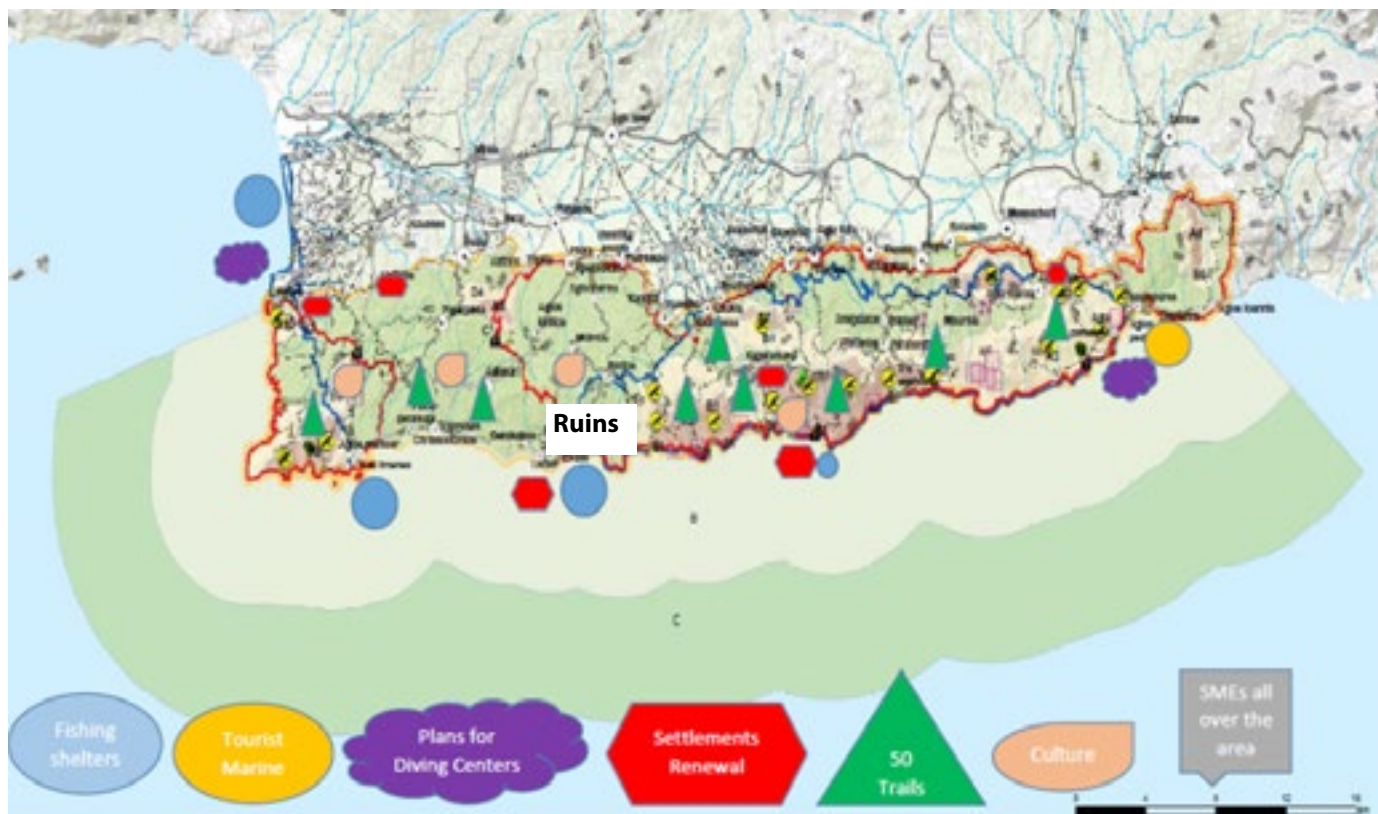
By virtue of its expert human resources and administration, the quality of services, transparency of operations and effectiveness in the management of projects and programmes, the Heraklion Development Agency (HDA) was assigned the submission of the Asterousia Mountain Range into the UNESCO/MAB Network of Biosphere Reserves (BRs) by the Region of Crete in July 2017. The HDA was pleased to be in charge of a project that was in line with its ideals of a sustainable, creative, balanced development of the Cretan land, consistent and measurable enhancement of the quality of life of the local population, environmental protection, cultural heritage protection and social cohesion and to assist to Asterousia's successful nomination. The bottom-up approach commonly used by the HDA since the EU LEADER Initiative in 1992 has stimulated great interaction among the local people, authorities and the HDA, rendering communication easier and effective.

The HDA has developed a local development plan applying to most Heraklion Prefecture areas, including the Asterousia Mountain Range. This plan has already been approved by the Ministry of Rural Development and Food and the Region of Crete, allowing the HDA to run budgeted projects of approximately 30 million euro by the end of 2023. In brief, the abovementioned projects aim at rural and coastal development, social cohesion and decrease of unemployment. As regards specifically to the Asterousia Mountain Range, there is an estimated public expenditure of 7.4 million euro public action projects that include urban renewal, creation of social and public infrastructure (healthcare units, nursery schools, institutions, ports, etc.),

tracing and maintaining trekking paths and climbing trails, environmental protection actions and development of alternative forms of tourism and, last but not least, strengthening actions in the field of culture (Museums, Cultural Centres, etc.). The HDA has already secured 1.2 million euro for the development of the Mountain Range of Asterousia including cycling paths, protection of gorges, mountaineering trails, village restorations, a tourist information centre, etc. An extra amount of 1.4 million euro is due to be approved by the end of 2019.

In addition, local Small and Medium Enterprises (SMEs) are financially supported by LEADER programmes with a total estimated public expenditure of 1.66 million euros for the period 2018-2023 so that they adopt enhancement actions focusing on the standardization and processing of agricultural products, the tourism field, the industry and the services to the local population. Among HDA's priorities are the promotion of the agri-food identity of the region, the improvement of organic practices, the improvement of local agricultural and livestock products, along with the support of the local population, to the start of new business, and professional activities in the context of a sustainable tourism model and ecotourism. The HDA does not exclude the local artisans and the services for the children, the elderly and the handicapped population.

Furthermore, building on our successful transregional and transnational cooperation projects on Mediterranean and local gastronomy, ecotourism in mountainous areas (teaching livestock farms, routes) and Greek island culture,



Map of the Asterousia coastal & mountainous area indicating the actions - completed or planned.

we can plan further ahead on sustainable development at local level. Some of the future projects in the coastal zone of the region are, to name a few, "Diving Centers in the Mediterranean", "Fishing tourism in Greece" and "Sea threats in the Mediterranean Sea".

In the crucial sector of Education and Social Cohesion, the HDA aspires to inform and raise residents' and especially young people's awareness through environmental education programmes, cultural activities, business management, product promotion practices, high quality standards in cultivation and product packaging, etc.

The HDA promotes youth employment by financing training and consultations to integrate young people in the labour market, either as employees or as new entrepreneurs. The map above depicts actions - completed or planned - in Asterousia Mountain (coastal & mountainous) area.

### THE ASTEROUSIA MOUNTAIN RANGE AS A CANDIDATE BIOSPHERE RESERVE – LOCAL MANAGEMENT

Should the proposal be approved by the UNESCO/MAB Committee, we need to consider a very significant performance parameter. The parameter refers to the coordination of the stakeholders for the success of the biosphere reserve operation. The HDA in cooperation with the Region of Crete, the local operators and the UNESCO/MAB Greek National Committee propose the following management scheme:

A Local Management Committee of Asterousia (LMCA) will be established, with 27 partners from all sectors such as Municipalities, Universities, the Geotechnical Chamber, the Ephorate of Antiquities, local cultural associations, local mountaineering /cavern clubs, hotel businesses, fishermen's associations, farmers' associations and disability organizations. The support of the Management Body for the

Protected Area of Central & Eastern Crete is confirmed and of the UNESCO/MAB Greek National Committee. An Executive Committee will be established with 9 members from the Region of Crete, the Municipalities, the Management Body for the Protected Area of Central & Eastern Crete, the HDA, the environmental operators and the social operators. The Committee will: ensure the smooth operation of the LMCA, support and facilitate the implementation of decisions, enhance cooperation between competent authorities and coordinate the action of the support units. Moreover, two units of advisors to the LMCA will be created:

1. The Scientific and Technical Unit: This group will include members of the LMCA, such as research institutes and scientific/technical bodies, aiming at developing a high-quality Biosphere Reserve Management Plan with the use of the best available scientific knowledge and practice.
2. The Economic and Social Unit: This group will be composed of members of LMCA, such as local cultural associations and producers' associations, reflecting on women and youth by means of the feedback of the producers, the social entities and acting as an advisory body for the drafting and regular monitoring of the Biosphere Reserve Management Plan.

Finally, the HDA will offer its premises and high standard technical support, especially for secretarial services and scientific services for the technical, social and financial units, financial and legal support for the operations of LMCA. The HDA is also in charge of approving the budget and the action plan of the LMCA.

In addition to the Management Scheme, a cooperative model will be created (Management Body of C & A Crete) that will combine local representation with institutional protection and policies of protection, promotion of

sustainable development at the regional level. The cooperation of the Local Management Scheme with the Managing Body of the related Protected Areas has a great potential to support management and protection efforts and to allow interventions by local and regional authorities and the central administration, at least in terms of protection of the Natura 2000 sites. The Asterousia Mountains, in the

south of the city of Heraklion, have enormous potential for mild development that respects the environment and the local values. The most important task for the HDA is to make the Asterousia people believe in themselves and in the potential of their region, to make them feel that we are always on hand and to make them commit in engaging in Asterousia's efforts to join the MAB / UNESCO Network.

## Good examples of ESD and Biodiversity in Montenegro

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### Education on Biodiversity

The National Strategy for Sustainable Development until 2030 includes ESD amongst the main goals, action plans and indicators for monitoring of SDG 4. Since 2012, the Ministry of Education and Bureau for Education Services of Montenegro has been developing and implementing the national curriculum for all educational levels, including also the cross-cutting topic of Education for Sustainable Development (ESD). Eight cross-curricular topics at all education levels (from pre-primary to the university level) are integrated in the Montenegrin education system: Climate change, Green economy, Environmental protection, Sustainable cities and settlements, Biodiversity, Health education, Human rights education and Entrepreneurial learning. Cross-curricular topics are compulsory for all schools and teachers. The preconditions for the successful achievement of ESD goals are their inclusion in cross-curricular topics of the school work plans and the full curricula, in the teacher and staff's professional skills development and training, as well as through inclusion of the local community and the wider public.

Teacher and school management trainings have been developed and performed with more than 35% of all teachers and school managers having passed the training courses. The indicator on the ESD implementation has already been included in the Methodology for Quality Assurance and Improvement of the Quality of Educational Work in the Educational Institutions.

### CASE STUDY:

#### The "SCHOOL4CITY" & "SCHOOL GARDEN" Programmes

The content and learning outcomes of the cross-curricular topic "biodiversity" are related to:

1. Biological diversity (genetic diversity, diversity of species and ecosystem diversity)
2. Desertification, soil degradation
3. Mountains, forests, caves, canyons, agrobiodiversity
4. Continental aquatic ecosystems
5. Coastal areas and marine habitats
6. Biodiversity protection

Within the three-year project SCHOOL4CITY, implemented in partnership with NGO Exeditio – Centre for Sustainable Spatial Development, the Bureau for Education Services of Montenegro and JAS - Jugend Architektur Stadt e.V. (Youth Architecture City) from Essen, Germany, the cross-curricular topic Biodiversity was further reinforced, together with the International Eco-schools. The project SCHOOL4CITY has largely focused on activities in the schoolyards, production of teacher manuals and organization of teacher trainings. Through the project, more than 650 teachers in all regional parts of Montenegro attended training programmes aiming to enable them to implement the cross-curricular theme "Biodiversity". The content of the trainings included the following topics: biodiversity protection, protected areas, conservation biology, internationally protected habitats, protected species, the Ramsar List, UNESCO Natural and Cultural World Heritage List, national parks, ecological and conservation function, biogenetics, health, educational and aesthetic function. The teacher trainings were delivered through several activities, such as teachers exploring parts of the ecosystem, then carrying out "red" and "blue" critical observations, drawing Gulliver's map and in the end presenting results and preparing a number of lesson plans.

The project "SCHOOL4CITY" is funded by the *Deutsche Bundesstiftung Umwelt - DBU* (German Federal Environmental Foundation) with the support of the Montenegrin Commission for the Allocation of Part of Revenues from the Games of Chance, the NGO "Exeditio" and the Bureau for Education Services. The project made evident that that the best age to start ESD is at the pre-primary education level. A successful achievement of ESD goals is reached by including cross-curricular topics in the schoolwork plans, full curricula, annual teacher plans, lesson plans and annual plans for CPD.

The SCHOOL GARDEN is another project that widely supports and helps the implementation of the Eco-school project in Montenegro. Gardens were created in 10 educational institutions engaging more than 2.000 children from pre-primary and primary educational institutions and 100 teachers from different regions in Montenegro. This part of the project was delivered through 10 workshops with various activities in order to complete the schoolyard gardens within a four-month period. The workshops included a quiz, a game to recognise and evaluate spaces, a lecture and practical activities in the schoolyard. Children

discussed different topics such as “Spaces” in which we learn or play. What can we do in a school garden? Nature, the environment and school. The environment and us. What is a seed? The importance of seeds. Seeds in households/ agriculture. Keeping the seed. The journey from a seed to a plant to a tree. Seeds in agriculture. How are gardens made? How do seeds circulate in nature and how are the forests formed and configured? The importance of urban green and suburban green areas (parks, forests). What kind of schools do we like? How to make a school a better place for learning and living.

Children worked on developing manuals and then carried out work outdoors. The topics and fields covered the difference between organic and inorganic waste; treatment of organic waste; viewing “waste as a resource”, processes of rotting; microorganisms and micro-life that live in soil; soil protection and healthy soil; healthy plants and natural conditions for their growth and health; birds, migratory birds and resident birds. Finally, the children constructed the garden elements (i.e. beds) and planted the trees and flowers.



Snapshot from the SCHOOL GARDEN activities



## Education on Biodiversity by the Arab Network for Environment and Development (RAED)

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The SDGs cover a wide range of complex social, economic and environmental challenges. Addressing them will require transformations on how societies and economies function and how we interact with our planet. Education, research, innovation and leadership are essential in helping society address these challenges. The education sector (formal, informal or non-formal education) is one of the few sectors that can support, promote, and contribute to achieving all the 17 United Nations Sustainable Development Goals (UN SDGs). Educational institutions, including universities, are essential to achieve the SDGs because they can equip the next generation with the skills, knowledge and understanding how to handle sustainability challenges and opportunities. Universities can also provide examples and use their expertise, capacities, and leadership to influence stakeholders to adopt and model more sustainable practices. To be effective however, the educational sector should be fully committed to supporting and implementing the 2030 Agenda for Sustainable Development.

### CASE STUDY:

#### Biodiversity Education activities by RAED

On November 13-27, 2018, Egypt hosted the 14<sup>th</sup> Conference of Parties for the United Nations Convention of Biodiversity (CBD COP14). In July 2018, the Arab Network for Environment and Development (RAED) was assigned by the Ministry of Environment to take charge of the participation of Youth and CSOs in the event. Therefore, RAED put out an immediate action plan with the main goal

to raise public awareness on biodiversity and mobilize a large part of the motivated youth, and engage CSOs and partner organizations. In September and October 2018, RAED organized 4 preparatory meetings with more than 800 participants, aiming to:

- Educate participants on Biodiversity, international conventions, the link between the UN Convention on Biodiversity and the SDGs, etc.
- Discuss the role of youth and CSOs during the CBD COP 14
- Encourage participants to undertake different activities all over Egypt before, during and after the event to mainstream biodiversity and engage concerned stakeholders
- Train youth to fulfil their role in logistics
- Facilitate the preparation of side events to enable university students and CSOs to present their activities, initiatives and projects on biodiversity
- Set up a market at Peace Park to sell traditional and environmental products

Throughout this action, RAED cooperated with the Egyptian Sustainable Development Forum (ESDF), the Ministry of Environment, the Ministry of Youth, the Ministry of Social Solidarity, the GEF / Small Grants, the National Council for Women, Civil Society Organizations, 20 Egyptian Universities, youth & children, women groups and media. The immediate

results of the action were:

- The engagement of 320 youth either with their own side events or in the logistics support team.
- The participation of 23 national CSOs in the organization of 11 side events.
- The formation of a network of CSOs in the field of BD to share knowledge and experience.

Based on the results of mainstreaming biodiversity on the national level, during the holy month of Ramadan (June –July 2019), a radio program was prepared by the Nature and Science Foundation with the support of the GEF Small Grants aiming to raise public awareness about the fauna and flora of Egypt and to communicate key conservation issues to the public. Thus, 30 species were chosen to highlight specific conservation issues that relate to those species and similar ones. As a result, an average of 20 calls was received per episode from people all across the country's governorates. 30 winners were selected from 26 different governorates. The activity raised the awareness on biodiversity and protected areas all over Egypt.

### CASE STUDY:

#### Engaging Youth in Egypt in Advocating for Ethics-Grounded Climate Action

RAED in cooperation with UNESCO performed an activity for university students aiming to develop a high level of awareness and understanding of climate change challenges on the global, regional and national levels. The activity, based on the UNESCO Declaration of Ethical Principles in relation to Climate Change, encouraged youth to develop advocacy tools through practical initiatives in order to facilitate the application of the Declaration on the local and national levels. A total of 55 Students representing 5

Egyptian universities participated in the youth camp. One of the topics discussed was the impact of climate change on biodiversity. At the end of the youth camp, a one-day field visit was organized to the Wadi Degla Protected area, where students were better informed on the negative impacts on animals, birds, plants, etc.

In conclusion, one may say that the world is changing rapidly and education is the main tool for change. Lately, countries have pledged to report on and achieve several global commitments that cannot be achieved by a single party. They need a participatory approach where everyone should contribute and be committed to fulfil their responsibilities. Education institutions, among all other partners, are considered a core partner to achieve sustainable development in different sectors. Finally, essential keys to ESD success are the effective partnerships, the multi-stakeholder approach, community participation, public awareness and capacity building and synergies.



Field visits of university students

## Case studies on Education for Sustainable Development & Inclusive Societies



**OPENING PRESENTATION: ESTIA: Accommodation & Assistance for Asylum Seekers and Beneficiaries of International Protection on Crete, Greece**

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### Global Trends on the Refugee Issue

According to the UN Refugee Agency (UNHCR) Global Trends annual report, we are now witnessing the highest levels of displacement on record. An unprecedented 70,8 million people around the world have been forced from their homes. Among them, are nearly 25,9 million refugees, over half of whom are under the age of 18. There are also millions

of stateless people who have been denied a nationality and thus access to basic rights such as education, healthcare, employment and the freedom of movement.

- 13,6 million newly displaced: An estimated 13,6 million people were recently displaced due to conflict or persecution in 2018. This included 10,8 million individuals

# 70.8 million

forcibly displaced people worldwide



Internally Displaced People  
**41.3 million**

Refugees  
**25.9 million**

20.4 million under UNHCR's mandate  
5.5 million Palestinian refugees under UNRWA's mandate

Asylum-seekers  
**3.5 million**

## Where the world's displaced people are being hosted



About 80 per cent of refugees live in countries neighbouring their countries of origin

**57%** of UNHCR refugees came from three countries

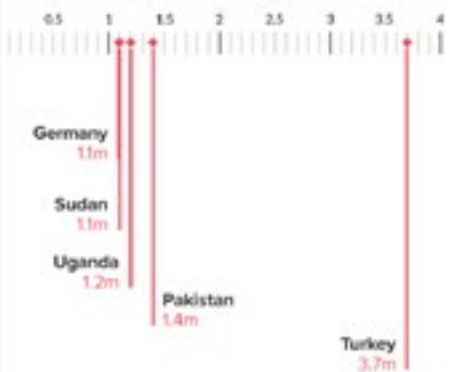


**341,800** new asylum seekers

The greatest number of new asylum applications in 2018 was from Venezuelans



## Top refugee-hosting countries



UNHCR has data on

**3.9 million** stateless people

but there are thought to be millions more



**92,400** refugees resettled

**37,000** people

a day forced to flee their homes because of conflict and persecution

**16,803** personnel

UNHCR employs 16,803 people worldwide (as of 31 May 2019)

**134** countries

We work in 134 countries (as of 31 May 2019)

We are funded almost entirely by voluntary contributions, with 86 per cent from governments and the European Union and 10 per cent from private donors

Source: UNHCR / 19 June 2019



- displaced within the borders of their own country and 2,8 million new refugees and new asylum-seekers.
- 37.000 new displacements every day: The number of new displacements in 2018 was equivalent to an average of 37.000 people being forced to flee their homes every day.
- Countries in developed regions hosted 16 % of refugees, while one third of the global refugee population (6,7 million people) came from the Least Developed Countries.
- 2,9 million displaced people returned! During 2018, 2,9 million displaced people returned to their areas or countries of origin, including 2,3 million IDPs and nearly 600.000 refugees. Returns have not kept pace with the rate of new displacements.
- 1,7 million new claims: Asylum-seekers submitted 1,7 million new claims. With 254.300 such claims, the United States of America was the world's largest recipient of new individual applications, followed by Peru (192.500) Germany (161.900), France (114.500) and Turkey (83.800).
- 81.300 refugees for resettlement: In 2018, UNHCR helped resettle 81.300 refugees to other states. According to

- government statistics, 25 countries admitted 92.400 refugees for resettlement during the year, with or without UNHCR's assistance.
- 138.600 unaccompanied or separated children: Some 27.600 unaccompanied and separated children sought asylum on an individual basis and a total of 111.000 unaccompanied and separated child refugees were reported in 2018. Both numbers are considered significant and underestimated.
- 67% from 5 countries: Altogether, more than two thirds of all refugees worldwide came from just 5 countries: the Syrian Arab Republic (6,7 million), Afghanistan (2,7 million), South Sudan (2,3 million), Myanmar (1,1 million), Somalia (0,9 million).
- 50% children: Children below 18 years of age constituted about half of the refugee population in 2018, up from 41% in 2009 but similar to the previous few years.

In a world where nearly 1 person is forcibly displaced every two seconds as a result of conflict or persecution, international organizations, governments, regional or local authorities are facing complex challenges to overcome a wide range of issues concerning the protection and integration of beneficiaries of international protection.



## **ESTIA: Emergency Support for Integration and Accommodation**

UNHCR works with the Greek Government, local authorities and NGOs to provide urban accommodation and cash assistance to refugees and asylum-seekers in Greece through "ESTIA" that stands for Emergency Support for Integration and Accommodation, funded by the Asylum, Migration and Integration Fund of the European Union.

Urban accommodation provides a normal daily life for refugees and asylum seekers in Greece and facilitates their access to services, including **education** and the eventual integration for those who will remain in the country. Also, the host population embraces diversity through renting their apartments and living peacefully together. Cash assistance restores dignity and empowers refugees and asylum-seekers by letting them choose how to cover their basic daily needs. It also contributes directly to the economy of the host community through the purchase of services and goods.

In 2019, the Heraklion Development Agency (HDA), as a partner of UNHCR and together with its local partners, was assigned to create shelters for a total of 1.100 fully registered asylum seekers referred by UNHCR by renting approximately 200 private apartments. It is generally noted that the preferred form of accommodation for the asylum seekers is individual apartments located inside the local communities as, this reinforces the role of local authorities, activates local support networks and increases the self-reliance of the people of concern. So, the available apartments and houses are in urban areas with easy access to public transportation and administrative, medical, educational and employment services. All apartments have sufficient furnishing and basic house equipment, ensuring safety, life quality and privacy of their residents. In many apartments, there are special provisions for people with disabilities. Accommodation supervisors are responsible for the apartments' operation

e.g. payment of bills, undertaking necessary repairs and maintenance, communicating with neighbours, services, etc.

Furthermore, each rented apartment is assigned to a social scientist in charge of the overall stay of its residents, including reception and departure, guidance and information dissemination, resolving issues that may arise, accompaniment or mediation/referral to organizations/ services, school enrolment for minors, link to health providers etc. The social scientists are available to the beneficiaries for any emergency. Interpreters are available 24 hours / 7 days in order to facilitate communication between beneficiaries and staff members, as well as other public services.

Despite the complexity, challenges and difficulties, ESTIA's performance in Crete is considered very successful, providing a strong base for further action and development. Cretan society has accepted and supported asylum seekers and refugees according to a multi-level inclusion approach, with the active involvement of key stakeholders and local communities. In this context, emphasis was placed on providing a multilevel network of support and integration services, even though the main focus is on housing. The services are provided by experienced and trained staff with a focus on equal rights, accessibility, respect for diversity and social justice, emphasizing on the active involvement of the guests themselves. In addition, integration is perceived as a social process that creates a society of equal opportunities and cultural diversity. Restoring the human dignity of every vulnerable group of citizens is primarily a political responsibility and a historically important act of political culture in both Greece and Europe. It is a chance for local societies to prove their ethics and values. In Crete, we are determined to put all our efforts into supporting this initiative and we invite other communities to step in this direction.



## **School Parliaments for Rights & Democracy**

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Since 2004, Land and Human to Advocate Progress (LHAP) in Jordan has been leading the school parliaments campaign addressing 7<sup>th</sup> to 11<sup>th</sup> grade school students (10-16 years of age) to educate them about their rights and democracy and encourage them to participate in the political life in Jordan. The ultimate goal of the project was to be institutionalized by the Ministry of Education and become part of the extra-curricular school activities, a goal that was reached in 2010. LHAP focuses on educating the new generation, as the main drivers for change, and future decision-makers, public officials and parliamentarians. This project, supported by the Ministry of Education and various donors (it received 14 grants), started in 2004 by 5 gender-balanced schools in the North East Badia of Jordan and reached 150 schools

in 10 out of 12 governorates of Jordan! The Ministry of Education developed bylaws and extended the concept, to reach all schools (more than 4.000) where school parliament elections are carried out every year. The school-elected parliamentarians meet regularly, discuss issues, including the school's internal affairs and build bridges between the school and the community. In each of the 14 projects, students and teachers learn about their rights, from a specific training manual and they carry out student elections to form the school parliament (each class elects two 7<sup>th</sup> to 11<sup>th</sup> grade students). A school parliament consists of all the elected students from every class.

Then, students participate in trainings and issue a school parliament newsletter and form a human rights unit in

the school library by donating 25 books to each school. The teachers are also trained from the project's manual and they also visit the Jordanian Parliament and meet Parliamentarians. They meet as a regional or provisional school parliament representing the executive authority (Ministry of Education) and the Parliamentarians.

In 2006, an analytical study in 68 school parliaments measured the progress and evaluated the outcomes of the project since its launch. The results were very encouraging showing positive impact on the students' knowledge and behaviour. Between 2004 and 2010, more than 30 school parliament newsletters were issued, 2 studies were conducted (The Role of School Parliament on awareness, democracy and human rights and Institutionalizing School Parliament) and 3 training manuals were created: "Sports foster human rights and improve Community tolerance", "Human rights and democracy" and "Civic Education and Citizenship for a successful democratic transition".

In 2015 LHAP managed to get funds to re-activate the project and test its viability and sustainability. To this end, the following two projects were carried out: "Sport Fosters Human Rights Respect and Improves Community Tolerance" (2015-2016) and "A School Where I learn my Rights" (2015-2017).

#### **In a nutshell:**

#### **Project outreach:**

12 governorates, more than 4.000 schools and 120.000 teachers in 42 directorates of education.



Students Parliament meeting their representatives in Jordan Parliament

#### **Resources:**

15 funded projects and King Abdullah II Fund 50.000 JD, LHAP pool of experts and Authorities support (KAF II, Ministry of Education and Ministry of Political and Parliamentary Affairs).

#### **Lessons learnt:**

- Students and teachers are a key factor in promoting democracy and encouraging political participation.
- The Government is a key player in supporting the project and proving its forward-thinking mentality. NGOs are a platform for dialogue among the different players.
- The project needs support from influential individuals and institutions. The Ministry of Education has to allocate funds annually to keep the initiative going.



## **Social dimension of ESD in Bosnia and Herzegovina- Democracy and Human Rights**

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Bosnia and Herzegovina does not have a separate strategy in place for Education for Sustainable Development, although some of its segments have already been included in existing strategic education documents (e.g. A Platform for Development in preschool education for the period 2017-2022, Priorities for Higher Education Development in B&H for the period 2016-2026).

The Ministry of Civil Affairs of B&H is working on a new strategic document for education (all levels and types of education) which will, among other things, include the goals of Sustainable Development, in line with the resolution of the Council of Ministers of Bosnia and Herzegovina that requires all new strategic documents to refer to the SDGs.

Since the launch of the SDGs, competent institutions have been cooperating closely with all government levels in terms of identifying, creating and planning policies in the context of SDG4 and ESD. In 2017, the government appointed certain institutions to lead and coordinate the

Agenda 2030 and the Goals of Sustainable Development. To that end, the Council of Ministers appointed the Directorate for Economic Planning of BH as the state-level technical body in charge of implementing Agenda 2030 and the Goals of Sustainable Development. The development process of the Sustainable Development Goals Framework in BH, which will include education goals, is currently being drafted. However, it is important to highlight the efforts being made to offer civic and human rights education, create an inclusive society and build a democratic culture in the country.

Democracy and Human Rights has been introduced as a subject, while civic education is now studied at all educational levels, from pre-school to higher education.

In 2015, the Agency for Pre-primary, Primary and Secondary Education (APOS) developed a Common Core Curriculum for "Democracy and Human Rights" based on learning outcomes. The common core implies the development of specific knowledge, skills and competences that can help

young people to understand common values and principles such as democracy, solidarity, tolerance, human rights and the rule of law and democratic response to contemporary challenges such as migration and the rights of migrants and refugees to education.

Along with the teaching content and learning, a teacher training programme for the Democracy and Human Rights subject was also developed. Over the past 20 years, over one million students in Bosnia and Herzegovina have attended civic education, more than 37.000 teachers have attended trainings and millions of textbooks have been distributed. Based on a recent review of the current activities on civic education and the promotion of democratic culture, it is

clear that over the last few years a lot has been done in the country.

In May 2019, the Ministry of Civil Affairs of BH introduced new important activities which aimed to develop the School Manual for the inclusion of refugees / asylum seekers in the system of education in Bosnia and Herzegovina. The activity is carried out with intensive cooperation with responsible ministries and pedagogical institutions, and with technical assistance from UNICEF. The Manual represents a response to the migration crisis, i.e. an effort to create an institutional framework for inclusion of refugees and asylum seekers in the regular education system in Bosnia and Herzegovina.

## Brief report of the 2nd Executive Meeting of the Mediterranean Committee on ESD, 24 June, Heraklion, Crete, Greece

*The members of the Committee are the international organisations: UNESCO Office in Venice, the Union for the Mediterranean, UNEP/ Mediterranean Action Plan, UNECE, the League of Arab States and the Ministries of Education of Cyprus (Chair), Croatia, Greece, Malta, Portugal and the Ministry of Environment of Jordan. The Technical Secretariat of the Mediterranean ESD Committee is supported by MEDIES of MIO-ECSDE and the Scientific Secretariat is provided by the UNESCO Chair of Education for Sustainable Development Management and Education in the Mediterranean held at the University of Athens.*

On June 24th the second Executive Meeting of the Mediterranean Committee on ESD took place to review the activities undertaken by the Secretariat between December 2017 to June 2019 for promoting the mainstreaming and implementation of the Mediterranean Strategy on Education for Sustainable Development. All members of the Committee were represented with apologies only from Croatia. The meeting was co-chaired by Dr. Aravella Zachariou from the Ministry of Education, Culture, Sports and Youth of Cyprus (Chair of the Committee) and Ms Anastasia Giannakou from the Ministry of Education of Greece. The meeting started with Prof. Scoullou's presentation of the activities by the Secretariat (November 2017-June 2019) (see page 5). Prof. Scoullou also presented the work done for the mobilization of resources for the operation of the Secretariat and for the organization of national and regional capacity building activities. Furthermore, the orientations for 2019 – 2021, considering the priorities of the members and the developments at regional and global level were discussed.

The following key points were highlighted:

1. The members expressed their appreciation for the work carried out and congratulated the Secretariat of the Committee for its continuous efforts, taking into account also the restricted available resources and the significant work done in the "training-of-trainers" area. UNESCO and

UNECE particularly asked for more information about the content and methodologies of these trainings and their potential for "replicability".

2. The Mediterranean Strategy on ESD and the work of the Committee requires further visibility and needs to be brought to the attention of other ministries and government bodies apart from the ministries of education.
3. Eventually, bilateral agreements between the countries could be seen as vehicles for promoting the Mediterranean Strategy on ESD and related provisions.
4. The rich variety of the reported ESD programmes and initiatives, though very interesting, shows that the approaches are somewhat "fragmented". The Secretariat and the members need to intensify their efforts to work closer in implementing the Strategy and its Action Plan. Along this line, it was suggested that the MEDIES webpage could be supported and used to host a "space" where good examples of MSED/AP and ESD policies can be promoted and interesting applications by countries and stakeholders can be demonstrated.
5. Intensification of efforts is needed towards the mobilization of resources but also for participation, contribution and benefiting from the planned *fora*, meetings and frameworks coordinated by the members, and in order to support the work of the Committee.
6. The importance for the Mediterranean of the "whole institution approach" was once more stressed as an example of an inclusive and concrete application of ESD feeding into all SDGs.
7. Several of the thematic orientations of the Strategy and its Action Plan were briefly reviewed and the following were reconfirmed as priorities for activities:
  - Marine litter/plastics
  - Refugee crisis



Snapshot from the second Executive Meeting of the Committee with (from left to right in the central table) Dr. Zachariou, Cyprus, Prof. Scoullou, UNESCO Chair, and Ms Giannakou, Greece, co-chairing the meeting.

- Biodiversity loss, protected areas, biosphere reserves, cultural landscapes
- Water heritage, including water culture
- Climate Change
- Blue, green and circular economy
- Digitalization of education
- ESD in early childhood
- Environmental pollution and health, and mental health
- Nutrition issues as part of ESD
- Poverty crisis throughout the Mediterranean and the globe
- Sustainable consumption and production principles and practical approaches.

The Committee also discussed the upcoming landmark events for the further promotion of the Strategy at international and regional level, and elaborated on the optimum way for the work of the Committee to be presented in these occasions. The following events were discussed:

- UNESCO final GAP Conference Hanoi, July 2019
- New York Climate Change Meeting, September 2019
- Barcelona Convention COP21, Naples, December 2019
- UNESCO ESD 2030 Conference, Berlin, June 2020
- UfM Ministerial on Environment & Climate, 2nd half 2020
- Youth Forum Cyprus, 2020
- UNECE Environment for Europe High-level Meeting, Cyprus, 2021

## Main outcomes of the Regional Workshop of the Mediterranean Committee on ESD, 25 - 26 June, Heraklion Conference Centre, Crete, Greece

The 80 participants of the two-day Regional Workshop on ESD (International Organizations and Ministry representatives, Academia, educators and NGO representatives) were actively engaged in sessions presenting and debating about experiences on ESD plans, programmes and initiatives related to the implementation of the Mediterranean Strategy on ESD and its Action Plan. They also elaborated on the links to the strategies, frameworks and educational initiatives to support the implementation of the SDGs at national level, either in formal or in non-formal education, and highlighted lessons learnt, challenges and emerging opportunities. In fact, the thematic projects

and initiatives presented, were highly appreciated by the participants and particularly by their “transferability”. The case studies were grouped under four main thematic priorities for the Mediterranean region:

- **Education for sustainable consumption and production**, with 4 case studies presented from Lebanon, Tunisia and Turkey.
- **Ocean literacy**, with emphasis on combating marine litter and in particular plastics, with 3 case studies presented from Algeria, Cyprus and Egypt.
- **Biodiversity issues**, with special emphasis on Natura 2000 sites, Biosphere Reserves and other protected areas

as laboratories for sustainable development, with 3 case studies presented from Greece, Egypt and Montenegro.

- **Human rights, refugees and inclusive societies,** with 3 case studies presented from Bosnia-Herzegovina, Greece and Jordan.

In addition, 8 more cross-topic case studies from Egypt, Greece, Jordan, Italy, Malta, Morocco, Portugal and Spain were also presented.

During the session of Education for Sustainable Consumption (ESC) it was highlighted that sustainable consumption in its essence, is about finding workable solutions to imbalances in consumption and production models – social, economic and environmental – through responsible behaviour aligned with sustainability principles. The aim is to ensure that the basic needs of the global community are met, excess is reduced and environmental damage is avoided. ESC covers all stages from production to distribution, use and disposal and provides the means to learners and educators to be aware of the life-cycles of products and services and to rethink lifestyles. The concept and model of the Circular Business Development was also discussed during the session and the objectives and approaches that it shares with ESD, and namely:

- Shifting from current linear business models to circular ones.
- Shifting societal values and norms, from a focus on material wealth towards well-being.
- Transforming behaviours towards sustainable lifestyles at individual and community level.
- Promotion and application of the life-cycle approach of products and services
- Research
- Promotion of good practices and scaling them up.

The session devoted to ocean literacy and the challenge of combating marine litter and plastics through the lenses of ESD gave some important take-home messages:

- Knowledge on marine litter should be further developed and disseminated. The UN Decade on Ocean Literacy is an excellent opportunity to foster awareness raising and to build capacities.
- ESD provides the proper learner-centred enabling environment (formal and non-formal) linking to everyday life practices, offering a diversity of means of engagement and methods.
- Non-formal and informal ESD through the work of the civil society needs to further promote ocean literacy and awareness raising on marine issues, with emphasis on plastic litter, single use plastics and the use of sustainable products and services.
- Marine litter provides an entry to experience-based ESD projects, with achievable goals, simple and clear messages, action-oriented and citizen-science based.

At centre stage were also the local efforts so that the Asterousia region of Crete becomes a Biosphere Reserve (BR) under MAB/UNESCO. As it was highlighted in the Session on Biodiversity, Biosphere Reserves and other protected areas, that BRs are considered as ideal places for ESD

showing learners the efforts for applying sustainability in practice. They can be embraced not only by educators but also by scientists, planners, policy-makers, businesses and local communities to bring to learners diverse knowledge, scientific investigation and experiences linking biodiversity conservation with socio-economic development for human well-being. The BRs aim for local development and this provides important educational and awareness raising potential for the people within, around and outside BRs, as well as for the visitors. The BRs can be considered as “Sustainable Development learning laboratories” providing opportunities to promote their special natural and socio-cultural values, as well as opportunities for local development in a sustainable way.

During the session on ESD, human rights, refugees and inclusive societies, it was stressed that schools embraced by the local society and local actors as well as by non-formal education stakeholders, have a key role to play in promoting collective and individual commitment to both sustainability and inclusion, breaking down barriers and cultural divides, and instilling values of respect and acceptance that youth will carry with them throughout their lives. Particularly the non-formal initiatives around sustainability and inclusion, often more flexible, are able to respond to demands created in rapidly changing conditions and environments. Such initiatives are particularly relevant and helpful in the Mediterranean countries, faced with an unprecedented flow of people, most of whom are highly vulnerable and susceptible to exclusion and discrimination by largely unprepared local communities. Many of these populations are also vulnerable due to lack of awareness, knowledge and education. Last but not least, it was reminded that after all, the SDGs, and in particular SDG4, is quite explicit, calling for an inclusive and equitable, quality education and lifelong learning opportunities for all.

The workshop was concluded by identifying the opportunities ahead (e.g. the new global ESD framework “ESD for 2030” to be launched by UNESCO in Berlin in June 2020), the common challenges in applying ESD and a set of recommendations and key take-home messages to promote the implementation of the Mediterranean Strategy on ESD and its Action Plan:

- In general, all countries have important progress to share in relation to ESD national plans, strategies, programmes and projects and the links to SDGs. Prof. Scoullou, on behalf of the Secretariat of the Committee, pledged to report this progress to the liaised international organisations and bodies and make proper presentations in the relevant *fora* and meetings (e.g. in UNESCO ESD Forum in Vietnam, July 2019 and in Berlin World Conference on ESD, June 2020, etc.).
- The need to maintain and strengthen the Committee was recognized by all participants as a major facilitator of their work and as an asset for the region.
- The representatives of the International Organisations reconfirmed their will to further support the Committee and promote the Strategy and its Action Plan.
- The emerging international contexts and particularly the “ESD for 2030” shall be fully “utilised” to showcase and amplify the regional achievements in the Mediterranean region and to offer the experiences gained to other interested regions, “eco-” or “sub-” regions. A key message

by the participants was to prioritize within the “ESD for 2030” the collaboration with the regional initiatives and frameworks, in addition to the national ones. Experience has shown in many regions, and in the Mediterranean in particular, which is a North-South interface, that the introduction of new ideas about sustainability and ESD in countries is facilitated through the regional approaches to the national level.

- As in 2017, the need for more strengthened collaboration among countries, stakeholders and programmes is still quite high. The Secretariat committed to intensify its activities towards this end.
- The gender issue has to be further addressed and promoted through the processes of the Strategy and its Action Plan.
- The Secretariat will also try to increase, upgrade and combine initiatives of the Network of the Mediterranean Universities for Sustainable Development (SD) focusing on Education for Sustainable Development (MedUnNet) that have an important role in the promotion of ESD in the higher educational community of the region and be adapted to the new contexts.
- The example of the Asterousia region in preparing to join the Global Network of MAB/UNESCO can be showcased as a good practice of a territory that is committed and works on the ground towards sustainability.

A few days after the Workshop ended the participants were invited to evaluate it online. The outcomes of this evaluation showed that the participants voiced a high level (**95%**) of overall satisfaction. Components that they mostly valued were:

- The positive interaction, networking and exchange of experiences, practices and information on ESD.
- The best practices highlighting the correlation of theory and practice, presented great diversity and “transferability”.
- The awareness gained from the ESD efforts reported, showed a strong commitment.

Last but not least, the majority acknowledged that they benefited and were inspired through their participation in the meeting to adopt and adapt to their own contexts ideas from initiatives shared by other delegates and to link, to the extent possible, existing national initiatives to relevant regional ones -under the MSED umbrella- or to other national efforts e.g. through bilateral cooperation schemes.



# Annex. Programme of the meetings

## 24 JUNE 2019

### 2nd Executive Meeting of the Mediterranean Committee on ESD • *Capsis Astoria Hotel, Heraklion*

19.00 – 21.00 Executive Meeting of the Mediterranean Committee on ESD

## 25 JUNE 2019

### REGIONAL WORKSHOP ON ESD

#### Progress related to the MSES and its Action Plan & Thematic Sessions • *Cultural & Conference Centre of Heraklion*

09.00 - 09.30 Registrations

#### 09.30 - 10.30 **SESSION 1 • Opening**

- Welcome Addresses
- Objectives of the meeting

> Cypriot Ministry of Education & Culture • Hellenic Ministry of Education & Religious Affairs  
UNESCO, UN Environment /MAP, UfM, UNECE, LAS  
Region of Crete, Heraklion Development Agency

#### 10.30 - 12.00 **SESSION 2 • The MSES & its Action Plan**

- **The MSES & its Action Plan (AP): Review of developments at regional level**

> Prof Michael Scoullou • MIO-ECSDE, UNESCO Chair on ESD in the Mediterranean/ University of Athens

- **Tour de table by the countries – Discussion** > Coordinator: Aravella Zachariou • Chair of MSES, Cyprus

12.00 – 12.30 Coffee Break

#### 12.30 – 14.00 **SESSION 3 • MSES inputs & links with major international processes**

PRESENTATIONS:

- **Review of the GAP & planned 'ESD for 2030' Programme** > Miriam Tereick • UNESCO
- **ESD progress within the UfM** > Giuseppe Provenzano • UfM
- **Awareness Raising on SD & ESD as integral part of the MSES** > Jullien LeTellier • UN Environment MAP
- **UNECE Strategy for ESD - Strategic Planning 2030** > Nona Iliukhina • UNECE
- **League of Arab States (LAS) Efforts & Challenges on ESD** > Doha Khalifa • LAS

14.00 - 15.00 Lunch Break

#### 15.00 - 17.00 **SESSION 4 • Marine Litter & Plastics within ESD**

OPENING PRESENTATIONS:

- **Tackling marine litter within the Barcelona Convention processes**

> Jullien LeTellier • UN Environment MAP

- **MEDIES/MIO-ECSDE educational activities to tackle marine litter & promote ocean literacy MEDIES**

> Iro Alamei • MIO-ECSDE/MEDIES

*Case studies & interventions by participants*

09.00 - 10.45 **SESSION 5 • Education for Sustainable Consumption & Production**

OPENING PRESENTATIONS:

■ **Education for Sustainable Consumption, Behaviour and Lifestyles**

> Elena Garcia • UfM Project on SCP

■ **Green & circular businesses and needs concerning formal and non-formal education**

> Giorgio Mosangini • SCP RAC

*Case studies & interventions by participants*

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10.45 - 11.15 Coffee Break

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11.15 - 13.00 **SESSION 6 • Education for Biodiversity, Protected Areas & Biosphere Reserves**

OPENING PRESENTATIONS:

■ **Biosphere Reserves (BRs) as Learning Laboratories for SD & ESD**

> Prof Michael Scoullos • Greek National Committee of MAB/UNESCO

> Vasilis Psallidas • MIO-ECSDE

■ **The case of Asterousia as a candidate area to the Network of Biosphere Reserves of MAB UNESCO: the development of the proposal** > Theano Vrentzou • Vice Governor of Crete, AREPO

■ **Integration of the Asterousia Mountain range into the UNESCO/MAB Network of sites - The implementation plan"** > Amalia Tavladoraki, Heraklion Development Agency

*Case studies & interventions by participants*

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13.00 - 14.00 Lunch Break

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14.00 - 16.30 **SESSION 7 • Education for Sustainable Development & Inclusive Societies**

OPENING PRESENTATIONS:

■ **ESTIA: Emergency Support to Integration and Accommodation for Asylum Seekers and Refugees. The case study of Crete** > Dimitra Kampeli • Heraklion Development Agency

■ **Preparing Egyptian and Refugee Teachers towards Quality** > Prof Vasilios Makrakis • Frederick University

*Case studies & interventions by participants*

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16.30 - 17.00 **SESSION 8 • Closing Session**

■ **Debrief & wrap up**

■ **Closing discussion**

> Coordinator: Prof Michael Scoullos • MIO-ECSDE,  
UNESCO Chair on ESD in the Mediterranean/University of Athens

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## MIO-ECSDE

The Mediterranean Information Office for Environment, Culture and Sustainable Development, is a Federation of Mediterranean Non-Governmental Organizations (NGOs) for the Environment and Development. MIO-ECSDE acts as a technical and political platform for the intervention of NGOs in the Mediterranean scene. In cooperation with Governments, International Organizations and other socio-economic partners, MIO-ECSDE plays an active role for the protection of the environment and the sustainable development of the Mediterranean Region.

## Background

MIO-ECSDE became a federation of Mediterranean NGOs in March 1996. Its roots go back to the early 80s, when the expanding Mediterranean membership of the European Community encouraged the European Environmental Bureau (EEB) to form its Mediterranean Committee supported by Elliniki Etairia (The Hellenic Society for the Protection of the Environment and the Cultural Heritage). The Mediterranean Information Office (MIO) was established in 1990 as a network of NGOs, under a joint project of EEB and Elliniki Etairia and in close collaboration with the Arab Network of Environment and Development (RAED). The continuous expansion of MIO-ECSDE's Mediterranean NGO network and the increasing request for their representation in Mediterranean and International Fora, led to the transformation of MIO-ECSDE to its current NGO Federation status. Today it has a membership of 130 NGOs from 30 Mediterranean countries.

## Our Mission

Our mission is to protect the Natural Environment (flora and fauna, biotopes, forests, coasts, natural resources, climate) and the Cultural Heritage (archaeological monuments, and traditional settlements, cities, etc.) of the Mediterranean Region. The ultimate goal of MIO-ECSDE is to promote Sustainable Development in a peaceful Mediterranean.

## Major tools and methods

Major tools and methods used by MIO-ECSDE in order to achieve its objectives are the following:

- Promotion of the understanding and collaboration among the people of the Mediterranean, especially through their NGOs, between NGOs and Governments, Parliaments, Local Authorities, International Organizations and socio-economic actors of the Mediterranean Region.
- Assistance for the establishment, strengthening, cooperation and co-ordination of Mediterranean NGOs and facilitation of their efforts by ensuring the flow of information among relevant bodies.
- Promotion of education, research and study on Mediterranean issues, by facilitating collaboration between NGOs and Scientific and Academic Institutions.
- Raising of public awareness on crucial Mediterranean environmental issues, through campaigns, publications, exhibitions, public presentations, etc.

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