



This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no [289042].



# **MARine Litter in Europe Seas: Social Awareness and CO-Responsibility**

## **DELIVERABLE 6.1**

### **EDUCATIONAL PACK IN THE WEB-PORTAL, IN 14 LANGUAGES**

**[HTTP://WWW.MARLISCO.EU/EDUCATION.EN.HTML](http://www.marlisco.eu/education.en.html)**

**AND**

**[HTTP://WWW.MARLISCO.EU/SERIOUS-GAME-START.HTML](http://www.marlisco.eu/serious-game-start.html)**



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**Document Information**

**Document**                    **Link to the website of the educational packs “Know, Feel, Act to stop Marine Litter”**

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**Document Information**

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**WEBPAGE:** <http://www.marlisco.eu/education.en.html>

Sea Dream Team: Serious game on marine litter for youngsters. Conception and Realisation Mediatools (P20)

**WEBPAGE:** <http://www.marlisco.eu/serious-game-start.html>

**Approvals**

Date	Partner
12/11/2014	Final Version of the English Edu – Pack shared with partners
27/05/2015	Final Version of the deliverable after the Coordinator approval

**Document History**

Version	Date	Comments & Status	Author
Draft version of structure (what, how, for whom will the material be serving)	Nov 2012 (M6 of the project)	target group, objectives, content and structure shared with consortium. Comments received from P1, P2, P3, P4, P7, P9, P12, P15, P18, P20	Argyro Alampeï (MIO-ECSDE)
First version of the educational material in ENG language posted on basecamp	August 2013 (M15).	Comments received from P1, P2, P4, P7, P9, P12, P15	Scoullos M et al. (see citation)
N/A	March 2014 (M22)	Online Vote for the title of the Educ Pack	Argyro Alampeï (MIO-ECSDE)
Second version (in doc)	April 2014(M23)	Evaluation of the Educ Pack based on Comments comments received from Richard Thomson of UoP (P4)	Scoullos M et al. (see citation)
Third version (in doc)	June 2014 (M25)	Incorporating the input received from the e-course Round I	Scoullos M et al. (see citation)
N/A	July 2014 (M26)	Proposal for graphic set up of the material, comments from P1, P2, P4, P10, P11, P15, P18,	Argyro Alampeï (MIO-ECSDE)



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Forth Eng version (all material set up in graphic files)	Sept 2014 (M28)	Material shared with the partners in the graphic set up.	Scoullos M et al. (see citation)
Final Eng version (all material set up in graphic files)	Nov 2014 (M30)	Final version uploaded on the MARLISCO webpage	Scoullos M et al. (see citation)
Final version in the national languages	Ongoing process, Jan 2015- May 2015	Translations and uploading of the various MARLISCO languages	Scoullos M et al. (see citation) plus translators and editors for each language

**List of annexes**

Annex 1_ The educational material in English language (PDF file) can be downloaded here: <a href="http://www.marlisco.eu/tl_files/marlisco/mixed-images/educational_pack/Binder_total_A4_with_covers_150_dpiss.pdf">http://www.marlisco.eu/tl_files/marlisco/mixed-images/educational_pack/Binder_total_A4_with_covers_150_dpiss.pdf</a>
Annex 2_ The educational material in Greek language for Greece (PDF file) can be downloaded here <a href="http://www.marlisco.eu/tl_files/marlisco/mixed-images/educational_pack/Binder_MARLISCO_GR_total_f_low%20res.pdf">http://www.marlisco.eu/tl_files/marlisco/mixed-images/educational_pack/Binder_MARLISCO_GR_total_f_low%20res.pdf</a>
Annex 3_ The educational material in Greek language for Cyprus (PDF file) can be downloaded here <a href="http://www.marlisco.eu/tl_files/marlisco/mixed-images/educational_pack/MARLISCO_EduPack_CY_Complete.pdf">http://www.marlisco.eu/tl_files/marlisco/mixed-images/educational_pack/MARLISCO_EduPack_CY_Complete.pdf</a>
Annex 4_ The educational material in Dutch language (PDF) file can be downloaded here <a href="http://www.marlisco.eu/tl_files/marlisco/mixed-images/educational_pack/marlisco%20educ%20pack%20NL-leaflets-low-2015.pdf">http://www.marlisco.eu/tl_files/marlisco/mixed-images/educational_pack/marlisco%20educ%20pack%20NL-leaflets-low-2015.pdf</a>
Annex 5_ The educational material in Turkish language (PDF file) can be downloaded here <a href="http://www.marlisco.eu/tl_files/marlisco/mixed-images/educational_pack/MARLISCO_Intro_General_Contents-T.pdf">http://www.marlisco.eu/tl_files/marlisco/mixed-images/educational_pack/MARLISCO_Intro_General_Contents-T.pdf</a>
Annex 6_ The educational material in Italian language (PDF file) can be downloaded here <a href="http://www.marlisco.eu/education.en.html">http://www.marlisco.eu/education.en.html</a>
Annex 7_ The educational material in German language (PDF) file soon to be available here <a href="http://www.marlisco.eu/education.en.html">http://www.marlisco.eu/education.en.html</a>
Annex 8 - The educational material in Portuguese language (PDF) file soon to be available here <a href="http://www.marlisco.eu/education.en.html">http://www.marlisco.eu/education.en.html</a>
Annex 9 - The educational material in French language (PDF file) soon to be available here <a href="http://www.marlisco.eu/education.en.html">http://www.marlisco.eu/education.en.html</a>
Annex 10 - The educational material in Romanian language (PDF file) soon to be available here <a href="http://www.marlisco.eu/education.en.html">http://www.marlisco.eu/education.en.html</a>
Annex 11 - The educational material in Danish language (PDF file) soon to be available here <a href="http://www.marlisco.eu/education.en.html">http://www.marlisco.eu/education.en.html</a>
Annex 12 - The educational material in Spanish language (PDF file) soon to be available here <a href="http://www.marlisco.eu/education.en.html">http://www.marlisco.eu/education.en.html</a>
Annex 13 - The educational material in Bulgarian language (PDF file) soon to be available here <a href="http://www.marlisco.eu/education.en.html">http://www.marlisco.eu/education.en.html</a>
Annex 14 - The educational material in Slovenian language (PDF file) soon to be available here <a href="http://www.marlisco.eu/education.en.html">http://www.marlisco.eu/education.en.html</a>



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**TABLE OF CONTENTS**

**EXECUTIVE SUMMARY..... 6**

**DESCRIPTION OF THE EDUCATIONAL MATERIAL “KNOW FEEL ACT”..... 7**

**PROCESS FOLLOWED & CHALLENGES IN DEVELOPING THE EDUCATIONAL MATERIAL “KNOW FEEL ACT” ..... 8**

**DISSEMINATION OF THE EDUCATIONAL PACK “KNOW FEEL, ACT” THROUGH PRINT OUTS AND TRAINING..... 9**

**THE SERIOUS GAME “SEA DREAM TEAM” .....11**

**CONCLUSION .....12**



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## EXECUTIVE SUMMARY

Within MARLISCO the educational material “Know Feel Act! To Stop Marine Litter” (T.6.1) has been prepared to inform, sensitise and enable European teachers and students to take action to tackle the problem of litter in our seas and coasts. This is a joint product of the MARLISCO consortium and within the project duration (2012-2015) it is being translated and applied in the partner countries.

The material has been designed to primarily serve youth aged 10-15 yrs, but can be used also by educators outside the schooling system. It material contains 17 educational activities, each combining a learning task or game (developed in 4 pages) and a worksheet for students (1-2 pages). The activities are self-standing and can be applied separately or combined in clusters, so to meet the needs of the educator that uses them.

The educational material combines updated ML scientific input (as identified by WP1 & WP2), practical advice for young consumers, as well as, hands-on activities on ML. It uses a fresh language, as it targets mainly teenagers and it is considered as a flexible and adaptable for use either at formal education (schools) or non-formal one (NGOs, Museums, youth groups & associations, etc.).

Educ Pack Citation: Scoullos Michael, Alampei Iro, Malotidi Vicky, Vlachogianni Thomie “Know, Feel, Act! to Stop Marine Litter: Lesson plans and activities for middle school learners”, ©MIO-ECSDE, 2014.

The Serious Game (T.6.2) is one more multilingual awareness-raising tool that is an interactive online game developed for youngsters. It is entitled “See Dream Team” and it is based on real life scenaria and roles of stakeholders that are relevant to marine litter (beach users, marina managers, fishermen, etc). It has been developed by Media Tools (P20) and is uploaded in the MARLISCO webpage in the consortium languages.



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## DESCRIPTION OF THE EDUCATIONAL MATERIAL “Know Feel Act”

The main characteristics of the educational material as these were defined collectively by the consortium are the following.

*Target Group:* The main target group of the material is late middle – early secondary school level students (12-15 yrs). It can be used by the students with the facilitation of the educators. The same age range is set for the e-serious game (T6.2, prepared by P20).

*Objectives (for the learners and the educators that use it):*

- to know the different types of common marine litter and their characteristics;
- to explain the sources, causes and the impact of marine litter as well as any regional variations;
- to understand the attitudes and behaviours associated with littering so as to best confront them;
- to make informed decisions and be motivated to take action against marine litter; • to investigate current tools and policies on marine litter issues..

*Themes and Structure:* The contents of the material are developed in four sections to cover the following themes:

- (A) Introduction on different types and characteristics of marine litter;
- (B) Main sources of land and sea-based marine litter;
- (C) Impact on ecosystems and livelihoods;
- (D) Potential solutions: individuals and groups at local, national and international levels.

These four sections are comprised of several activities to cover the theme in question. Each activity contains some background information on the issue tackled, materials and step by step instructions on how to carry out the activity, as well as a supplementary Worksheet to be filled out by the learners.

The educational material is comprised of the following components:

- an introductory section outlining its scope and content
- 17 lesson plans (or activities) each including the learning objectives, estimated duration, background information step-by-step procedure to complete the activity, practical suggestions and references. Each activity is accompanied by a worksheet to be completed by the learners
- a how-to-use section with guidelines and suggestions

*Design as Separate Activity Sheets:* The educational activities have been designed as self-standing sheets (each is 4 pages long, meant to function as a folding A3 sheet when printed) rather than bound all together in the form of book. This way they can be applied separately or combined in clusters, according to the users' (educators') needs. So the educator may choose to print only one, or a mix that serves better his objectives. To save on printing costs the Activity sheet is in 4 colours, while the Worksheets are in Black and White (to be easily photocopied).

*Evaluation:* The Worksheets in the material comprise the main evaluation tool of the learning process. The authors avoided overloading worksheets with many or complicated questions and kept them within a page or two (one sheet) to facilitate their reproduction. Worksheets are where learners record their observations, ideas, suggestions, etc. and at the same time keep track of their own learning.



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## **PROCESS FOLLOWED & CHALLENGES IN DEVELOPING THE EDUCATIONAL MATERIAL “Know Feel Act”**

P16 undertook all necessary preparatory actions related to the development of the educational material. The educational material related concept and general description was presented to the NPs in M6 (Dec 2012). Since then the target group, objectives, content and structure of the educational material have been defined, with contributions from P1, P2, P3, P4, P7, P9, P12, P15, P18, P20.

The authoring process was longer than expected due to the size of the material. P16 drafted the first version of the educational material which was posted on basecamp on August 2013 (M15). A call for comments and feedback was launched, which yielded responses/inputs from P1, P2, P4, P7, P9, P12, P15. In order to collect the maximum possible input from all partners, after consolidating the above mentioned contributions a second round for comments was launched for comments on basecamp in November 2013 (M18-M21).

After consultation with NPs (by M21), evaluation from the University of Plymouth (M23), the input from the first round of the E-course (M24) and the graphic set up (M24-26), the educational material pages has been finalised in English and uploaded in the webpage in July 2014 (M26).

In March 2014 (M22) an online voting amongst the consortium took place in order to decide on the title. “Know, Feel Act to Stop Marine Litter” was found the most popular by the NPs, amongst the other seven proposals.

The graphic layout of the material was also open to the suggestions of the NPs: A layout for the material has been proposed to NPs, so as to be user friendly in July 2014. Their received comments and suggestions from NPs were used to improve and finalise it.

Due to the size of the evolving educational material (totalling ~ 120 pages) and the participatory process followed for its development in all stages, with input from all partners there has been a delay, in the product development. The delay was also due to the fact that the material incorporated outputs and findings from other WPs, especially WP1 and WP2). The material that has been completed in English language in July 2014 (M26) in a doc format, and shared with the set up in the graphic layout a few months later in November 2014 (M30).

In the next months (M26-M36) the NPs engaged in a) translating the texts in their languages – while incorporating small additions and adaptations if needed and b) Setting up the material in the given graphic set up. As soon as the PDF files are being finalised and shared by the partners the Educational Materials in the various languages are being uploaded in the webpage (by Kusten Union, P11).

The process of translation, local additions and adaptation and the graphic set up has been a quite lengthy, as many partners encountered problems with e.g. handling the graphic files, translation, research for local case studies to enrich it, or other bureaucratic obstacles (e.g. getting the ISBN, etc). Also, the fact that there were proposals to change/improve the graphic content at the very last phases of the project, created further delays, (such as in the decision for a change made last consortium meeting in February 2015).

As of 27/05/2015 the completed and uploaded translated versions of the material are. 1. English, 2. Greek (for Greece), 3. Greek (for Cyprus) 4. Dutch, 5. Turkish, 6. Italian., while the languages that are in the pipeline and are going to be uploaded in the webpage within the end of the project are: German, Portuguese, French, Romanian, Danish, Spanish, Bulgarian, Slovenian.





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## DISSEMINATION OF THE EDUCATIONAL PACK “Know Feel, Act” THROUGH PRINT OUTS AND TRAINING

### 1.1 PRINT OUTS

The Educational Material has been foreseen to be only electronic in the DoW. Even so, partners were advised to raise extra funds to make it in hardcopies. In this context, P16, has printed it for Greece in 1000 copies with funds coming from a private donor. Several other partners are in the process of fund raising to print the material, even after the MARLISCO project ends.

During the last consortium meeting of the MARLISCO project, it has been decided by the consortium to use some of the unspent budget to print the English hardcopies of the Educational material (in 500 copies, by P16) in order to maximise its dissemination of the kit in Europe and beyond. The Educ Pack has been printed in May 2015 and several copies are shared with all NPs for use and dissemination.

### 1.2 AN E-COURSE ON THE MARLISCO EDUCATIONAL PACK “Know, Feel, Act”

Half way through the MARLISCO project we realised that the four foreseen in the DoW face-to-face trainings (one one per regional sea, refer to M 6.4 or D.6.5) were not enough to cover the training needs of the countries. These seminars had the aim of building the capacities of educators on using the MARLISCO Educational Material “Know Feel Act”.

Given the high interest of more NPs to not be deprived of this activity, and further to a proposal of P16, the consortium took the decision to “convert” (flip) the originally foreseen face to face seminars for educators to an e-learning course with the same objective. This way the course would be able to “host” more participants from more countries. This e-course was designed from scratch by MIO-ECSDE (P16) and is tailor made specifically to promote the MARLISCO Educational Material. It is equivalent to 1.5 days face to face training with an estimated 16 hrs workload for the trainees. It was decided to run in two rounds, but eventually its high success led to a third round being undertake.

**ROUND I, 23-30 June 2014:** The course aimed to introduce the newly then produced educational material “Know, Feel, Act” to formal and non formal European educators, that is teachers, NGO and museum staff, scientists, researchers, university students, and anyone with a strong interest on the subject.

For this first pilot round 69 participants from 13 countries were accepted (from Bulgaria, Cyprus, Denmark, France, Germany, Greece, Ireland, Italy, the Netherlands, Portugal, Romania, Turkey and the UK). They were coming from the formal as well as the non-formal education sector but most, if not all of them, had an experience with marine litter issues either as educators, or field practitioners.

Completion rates: 40 of registered participants (58%) successfully completed the course; 15 of them (22%) never signed in, while 14 (20%) completed only parts of it. Taking into account the very the high drop-out rates that are recorded globally in e-courses, the 58% rate of completion is considered a big success for our e-course. Evaluation was done by the University of Plymouth. More results on the course outcomes can be found here: <http://www.marlisco.eu/e-learning-course.tr.html>

**ROUND II, 9-20 January 2015:** In January 2015 the second round of the e-course aiming to introduce the educational material “Know, Feel, Act!” took place. Further to the evaluation of round I, certain changes were made to improve the learning experience of learners (course duration, number of participants, etc).

In this second round the number of accepted registrations was nearly double than the pilot: 122 participants from 18 countries took part, most coming from the Euro-Mediterranean region (i.e. Bulgaria, Croatia,



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Cyprus, Denmark, France, Germany, Greece, Ireland, Ireland, Italy, Netherlands, Portugal, Romania, Spain, Switzerland, Tunisia, Turkey, UK and USA).

Completion rates of round II: As in the pilot round, the rates of completion were once again considerably high (compared to the global average of e-courses). Specifically: 70 (57%) of course registrants successfully completed the course; 32 (26%) completed only parts of it, while 20 (16%) never signed in.

Read more on Round II of the e-course: <http://www.marlisco.eu/e-learning-course-round-ii.en.html> The evaluation is done by the University of Plymouth and described analytically in D.2.5.

This high completion rates in the e-courses certainly motivated P16 to repeat the course, and actually it has been decided by the consortium to use some of the unspent budget to run one more extra round (III) of the e-E-course before the MARLISCO project ends (in M36). The extra **Round III** runs from 19 to 31 May 2015 (with 130 registrations) and its results will be uploaded on the MARLISCO webpage.

**Results:** With these 3 rounds of the e-courses, some 150 - 200 people will have been intensively trained on the educational material and be able to use it in their professions! Moreover, as these people create informal networks of communication (e.g. MARLISCO f/b webpage, or MEdIES network of P16, or through creating their own groups) the messages of the educational material and MARLISCO will keep being widely disseminated long after the project has ended.



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## **THE SERIOUS GAME “SEA DREAM TEAM”**

Within MARLISCO's the “serious game” that is entitled 'Sea Dream Team' has been developed for teenagers and adult players. Serious games are simulations of real-world events or processes designed for the purpose of solving a problem and/or raise awareness. The conception and realisation is undertaken by Mediatools (P20).

With the “Serious Game”, the conception and development of an Educational Resource goes further by becoming a Multimedia Communication Tool: the information produced on Task 6.1 have been integrated into multimedia “serious game”, which is an innovative teaching tool along the lines of Edutainment - modern forms (of communication tools) which use entertainment to attract and maintain an audience, while incorporating deliberate educational environmental messages.

The particular serious game offers the opportunity to discover marine litter threats through "playing" eight (8) different characters from various sectors. The characters specifically are Beach visitor, Beach cafeteria owner, Marina Manager, Packaging designer, Off shore oil platform worker, landfill manager. The serious game player is asked to help them to choose the most responsible behaviour to specific situations, in which marine litter can be generated or prevented.

This interactive web-game has been translated in the MARLISCO languages, namely English (for UK and Ireland), Spanish (expected as of 31/05), French, Italian, Dutch, Portuguese, Romanian, Greek (for Greece & for Cyprus) Bulgarian, Turkish, Danish and Slovenian

The scenaria for the 8 characters have been developed by P 19 Mediatools with input from all partners that are contributing to WP6, especially P2, P12, P15, P16, P18.

The serious game is online in the MARLISCO webpage in the respective MARLISCO languages. LINK: <http://www.marlisco.eu/serious-game-start.html>



## CONCLUSION

Both materials presented here “Know Feel Act” as well as the “serious game” have been developed using a participatory approach. This is a long process that required building trust and a lot of interaction between the partners. But this is the only way that high ownership on behalf of the partners can be ensured. Both products are multilingual, meant to serve the Europe-wide educational community as well as the wider public.

Teachers, students, young people and the wider public are invited to use these educational materials as a tool to develop observation, curiosity, imagination, creativity and action skills to young learners, on the topic of marine litter, and not only: in line with the principles of Education for Sustainable Development (ESD), both of these materials view marine litter as a piece of the wider picture of today's environment and sustainability challenges. In this context, using as a “vehicle” the tangible issue of marine litter the creators aspire that the material will prove useful in talking about more subtle issues having to do with the prevailing production and consumption models of our modern societies, and ultimately help in shaping the informed, critical thinker, and active citizen of the future.

Instead of concluding remarks we close this document with some quotes from the participants of the e-course rounds I and II:

*“I understood that I have to start from myself believing that my life style can be changed and that this can influence positively my students too” (Gianluca)*

*“An insight I had during this lesson was that I hadn't before thought of how important it is to make sure students don't feel helpless in the face of the huge dilemma of marine litter. It is vital to keep positive and motivated!” (Eadin)*

*“I'm ready to start thinking what can I do in my life and what can I organize in my city in order to help solving marine litter problem!” (Joana)*

*“I'm definitely bringing a bag whenever I go for walks in the future and picking up trash on my way.” (Denise)*

*“With all those activities I feel very well equipped for my next beach cleanup session with the young surfers; I think I could even start a weekly marine litter workshop session for the surf-tourist which are interested...” (Eva)*

*“There is a lot we can learn from others work and campaigns targeting marine litter. While we each do a lot for our own areas, as a group we have a lot more knowledge that can be shared and applied to do even more.” (David)*

*“For every item of litter I take off the beach, that's one less item in the sea and I've made it my rule never to walk by a plastic can holder - instead they get taken home, cut up and binned properly. Everyone can play their part!” (Sita)*

*“This lesson has made me consider what it would take to engage the public and provide them with enough information to make changes to their current practices. As a result of this program I also have a desire to expand my own personal litter practices and arrange volunteer beach cleanings in my local area.” (Domenico)*