# NATIONAL MARINE LITTER FORUM









ACQUARIO ROMANO / Roma

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## ITALIAN MARINE LITTER FORUM REPORT

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Quotes: Kopke, K., Doyle, T. (2014), "Guidelines: preparing for you National Forum on Marine Litter"", MARLISCO Consortium internal document.

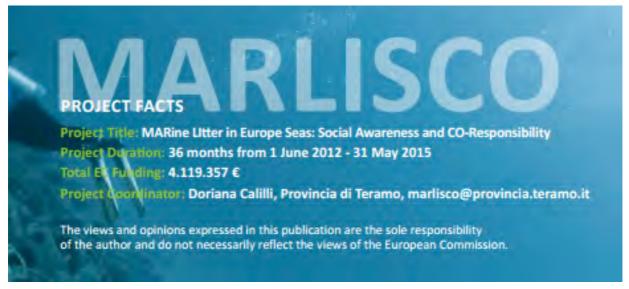






## 1. THE MARLISCO PROJECT

**MARLISCO**, **"MARine Litter in Europe Seas: Social AwarenesS and CO-Responsability"**, is a project co-funded by the European Commission 7h Framework Program, aiming at sensitizing public opinion about the consequences of social behaviours related to waste production and marine socio-ecological management, promoting co-responsibility among the different actors and defining a more sustainable view of marine litter in European waters.



Data excerpt from the MARLISCO Project poster

On a global scale, more than 70% of the planet's surface is covered by seawater, supporting a wide range of habitats and a great diversity of life. The marine environment is unfortunately also extensively used as a convenient dumping ground for domestic and industrial waste, both directly and via river and atmospheric inputs, leading to potential negative ecological and economic impacts. These conflicting pressures are increasing in parallel with economic and population growth, expected to lead to an increase of waste production if society follows a business-as-usual approach. Hence there is an urgent need to better manage and regulate our use of marine environment in a sustainable way, in order to safeguard the maritime economy for future generations. These considerations are central to the development and implementation of the Europe 2020 Strategy to promote



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Smart, Sustainable and Inclusive growth. Understanding human perceptions, choices and behaviours is central to addressing this complex issue.

PROVINCIA DI TERAMC



Excerpt from the MARLISCO Project poster explaining the marine litter problem

Given the intersectoral nature of this problem and the waste producing and managing reflecting our economical and social paradigms, marine litter become a complex problem because responsibilities are often unclear and the expenses duty is unequally shared. This is a clear example of a problem not having a single solution, adapting to each but also requesting an integrated approach and arranged efforts that MARLISCO is trying to support.

The MARLISCO Project is coordinated by the Province of Teramo, which is also responsible of the national activities implementation in Italy.



This project has received funding from the European Union's Seventh Framework, Programme for research, technological development and demonstration under and demonstration under





## THE CONSORTIUM

The MARLISCO project team is a diverse group of 20 entities (local authorities, researchers, NGOs, producers, recyclers and multimedia companies) with a wide geographic coverage:

Provincia di Teramo, Italy (Lead Partner) • Coastal & Marine Union (EUCC), Netherlands • Centre for Environment, Fisheries and Aquaculture Science, United Kingdom • Plymouth University, United Kingdom • European Plastics Converters, Belgium • European Plastics Recyclers, Belgium • MerTerre, France • Regionalni Razvojni Center Koper, Slovenia • University College Cork, National University of Ireland, Ireland • Mare Nostrum, Romania • Die Küsten Union Deutschland, Germany • IsoTech LtD, Cyprus • Union of Bulgarian Black Sea Local Authorities, Bulgaria • Plastics Europe AISBL, Belgium • Universidade Nova de Lisboa, Portugal • Mediterranean Information Office for Environment, Culture and Sustainable Development, Greece • Turkish Marine Research Foundation, Turkey • Kommunernes Internationale Miljøorganisation, Denmark • Honky Tonk Film, France • Media Tools, France









## 2. MARLISCO ITALIAN FORUM

**The MARLISCO Italian forum about Marine Litter** is one of the 12 fora organized by the FP7 project within the Consortium Partners.

Managed by the Province of Teramo, the Italian Forum took place in Rome on the 16<sup>th</sup> of January, 2015, in the prestigious site of the Roman Aquarium, and had a wide participation.



View of the Roman Aquarium central room where the Forum took place

The event objective was to open a debate and exchange views on the theme, thus in order to define actions and strategies aiming at reducing the marine litter impacts. In the specific, the forum aims at:

1. Rising awareness of the marine litter issue and potential long term solutions;







- 2. Providing and opportunity for stakeholders to participate in finding viable solutions to the marine litter issue;
- 3. Providing an opportunity for mutual learning between forum organisers and participants (Kopke, Doyle, 2014).

The MARLISCO forum was an occasion to know the Italian and European research results about marine litter and to elaborate a list of Specific Actions for its reduction. The list of actions will be sent to the Italian Minister of Environment and also to the European Commission, together with the other fora's results, thus in order to insert them into their guidance and planning documents and to support national and European strategies for marine litter reduction.

The forum launched a discussion and opened an important debate, during which main stakeholders from all around the nation had the chance to build a common strategy.

An inclusive approach tried to involve a wide range of stakeholders. Moreover, the selection of the on-site stakeholders tried to keep a proportionality among various representative sectors: policy decision-makers and local bodies administrators, Minister of Environment directors and Regional Agencies for environmental protection referees, university and research experts, waste disposal experts (recycling, waste collection and landfills), environmental associations referees, coastal industries referees (aquaculture, fishing, recreational fishing, coastal tourism), plastic production industries, retail commerce industries, educators and media referees.

The streaming participation was free, instead, but subjected to registration: the invitation was disseminated by e-mail, websites and social networks and participatory guidelines were sent to all the registered users. Participation was possible as single users but also as satellite groups, composed by students and their teachers, friends or colleagues. The on-line Platform was equipped with a Live Chat Box, moderated by two on-line facilitators and allowing to directly ask questions to the Advisory Panel, and with a on-line survey tool to take part to the actions evaluation.

On-site and streaming stakeholders were the real protagonists of the day because, through their work, various positions and interests could be mediated in order to







select the most effective and defined feasible solutions, working in a non conflicting environment. This is the main challenge of participation: reaching a synthesis among various subjects to build a real Action Plan, to implement the National Marine Strategy in this case and to propose measures to reduce litter and launch policies of change.



Virna Venerucci, Expert facilitator, explains the working modality for the day







## 2.1 The launch of the work

## Contribution from the President of The Province of Teramo DOMENICO DI SABATINO





"What we've been doing with recycling on land for some time now should become a model also for all of those who sail the seas, for work or passion."

The Marine Litter phenomenon is as insidious as undervalued by the public. Unlike illegal landfills or rivers degradation, it is not day by day visible but it causes non-repairable damage to the marine ecosystem. MARLISCO and its dissemination activities and information made people aware of this significant form of pollution. The Province of Teramo is particularly interested in opposing to those human activities causing marine litter, since Giulianova, one of our seven coastal resorts, seems to be having a negative record in the amount of marine litter.

The datum emerged after the monitoring performed by Green Schooner, a Legambiente's boat that measures the health of water and coasts which, in summer 2014, stopped over Giulianova. Green Schooner' monitoring confirmed a known fact: 90% of the waste found in the Adriatic Sea is of made of plastic, bags and waste due to fishing activities, with an average of 27 pieces of plastic per square kilometre. The situation in Giulianova is, however, more serious, since the waste amounts to about 115 per square kilometre.

MARLISCO, by combining research and information activities, has therefore provided a range of tools and possible answers to what undoubtedly represents a



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very insidious danger for both water, and, hence, environmental quality and for our coastal cities economy, basing a large part of their tourist success on Adriatic good fishing.

This project should be treasured and a work with fishermen trade associations should be made as they must become our main allies. A dialogue with them should be launched in order to create a virtuous chain: waste could be collected on boats and then carried on the land in order to be properly disposed. What we've been doing for some time now with recycling on land should become a model also for all of those who sail the seas, for work or passion. It's time to change direction, with the right combination of incentives and penalties.

## MARLISCO Project Coordinator DORIANA CALILLI, Province of Teramo



"What you're doing today will be part of a document to be sent to the Minister of Environment and to the European Commission. Your contribution and the coming out document will be of support to apply the National Marine Strategy".







The MARLISCO. "MARine Litter in Europe Seas: Social AwarenesS and CO-Responsibility". Project. launched on June 2012 and going towards its conclusion in May 2015, is funded by the European Commission' Seventh Framework Program, within the Science-In-Society-2011-1 call. subprogramme SiS.2011.1.01 - Mobilisation



Tessa Gelisio,  $\ensuremath{\mathsf{Project}}$  Ambassador, welcome and explains the aim of the forum

and Mutual Learning (MML) Action Plans on societal challenges.

MARLISCO is coordinated by the Province of Teramo and involves a 20 Partners Consortium across 15 European Countries. Its main objective is raising social awareness about marine litter by promoting co-responsibility and facilitating dialogue among various sectors and actors.

Among the various tools developed from 2012, the on-line database of 72 best practices aiming at containing the marine litter problem, a European video-contest involving over 2.000 youngsters in 15 Countries, researches about the state-of-theart and surveys to collect stakeholders public opinion about marine litter, an educational itinerant exhibition contemporarily developed by various national partners, and many other educational activities, such us beach cleaning, lessons in schools, participation to conferences and festivals as speakers and/or informative desks, can be highlighted.





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Other MARLISCO products are ongoing, such as the European web-documentary, the serious game for youngsters, guides for stakeholders and targeted informative brochures. They will be shortly disseminated, also through the project website, <u>www.marlisco.eu</u>, and I would like to invite you to visit it and the various MARLISCO social channels, which are all very active in terms of dissemination.

The Italian Forum about Marine Litter, ongoing today here in Rome, is under execution in other 11 European countries: it will analyze the most recent facts about marine litter and give a valid contest to the participants for discussing marine litter and its impact by expressing their opinion on how facing and managing such an important theme of environmental, educative, health, economic and social interest.

Actions to contrast marine litter will come out from the forum, after their evaluation in terms of effectiveness and feasibility, and they will then be inserted into an overall European report with other project national fora actions. At a national level, what you do today will be part of a document to be sent to the Minister of Environment and to the European Commission. Your contribution and the coming out document will be of support to apply the National Marine Strategy.

I would therefore thank you for the interest you showed in a surely thorny theme such us the marine litter one and for your will to take part to the event: I am sure that this experience will be of deep value for all of us and will give outcomes going beyond today.

Good luck with your job!







## Contributo World Water Assessment Programme (WWAP) Contribution ANGELA RENATA CORDEIRO ORTIGARA - MICHELA MILETTO



"We hope that the MARLISCO project will continue to raise public awareness and promote co-responsibility, so that a sustainable management of marine litter management in all European Seas can be reached in a not too distant future."

The WWAP UNESCO secretariat offers the MARLISCO Project her congratulations for its public awareness raising activity about the need of sustainable management of natural resources and, in particular, of fresh waters and marine environment.

WWAP accepted the invitation to take part to the MARLISCO forum with interest, a forum where experts in the field, representatives of civil society organisations, and young students especially, can discuss and define proposals to mitigate the marine litter impact and to minimize such waste production. The waste reduction is directly linked to our consumption habits, but also to current legislation, which should seek to promote progress toward this direction.

MARLISCO comes at the right time: that is the beginning of a year during which the international community will discuss the post 2015 Agenda objetives. "Conservation and sustainable use of oceans, seas and marine resources for sustainable development" has been included into the Open Working Group proposals as one of the sustainable potential Development objectives (target number 14) to be discussed during the next UN General Assembly. The 14.1 target, referred to the above objective, suggests that "by 2025, we need to prevent and reduce marine pollution of all kinds, especially from land-based activities, including marine litter and pollution of nutrients". It is an ambitious objective, which requires actions by all of us.



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UNESCO, through the International Oceanographic Commission (IOC), is actively engaged in the mission to reduce the presence of man-made debris in the seas. The IOC believes that science in support of sustainable management is fundamental to the preservation of our sea and its resources. According to studies, land based sources, such as agricultural run-off, discharge of nutrients and pesticides and raw sewage including plastics, globally represent about 80% of marine pollution.

That's the area where WWAP plays a very punctual role. WWAP, among other priorities, has a mandate to inform the international community about present and future status and problems of world water resources. In 2017, with the support of UN-Water members and partners, it will publish the World Water Development Report about the specific issue of sewage water and its implications on a global scale.

The main contact point between this report and the MARLISCO Forum is represented by the fact that about 38% of the world population lives in coastal areas and that 70% of megacities, or cities with a population of over 8 million, are in coastal areas. Furthermore, the tendency to live nearby the coasts is increasing.

The discharge of untreated sewage water from these cities undermines the biological diversity of rivers and seas, threatens the planet's ability to provide essential ecosystem services, has a strong impact on key areas, such as health, industry, agriculture, fishing and tourism, and has a direct impact on coastal populations life quality. WWAP' work, although focused on continental waters (freshwater, rivers) when addressing the treatment of sewage water issue, contributes therefore to reduce the marine environment pollution.

Different technologies to reduce the amount of sewage water discharged without treatment are already available. The key to success for sewage water, and so for the issue of waste discharged into the sea, is represented non only by immediate actions, which are undoubtedly needed, but also by long-term strategies.

For what above, we hope that the MARLISCO Project will continue to sensitize public opinion









and to promote co-responsibility, so that we shall get to a sustainable management of marine litter in all European Seas in a not too distant future.

Thanks and good luck with your work.

Lo scarico di acque reflue non trattate di queste città mina la diversità biologica di fiumi e mari, minaccia la capacità del pianeta di fornire servizi ecosistemici fondamentali, ha un forte impatto su settori chiave quali sanità, industria, agricoltura, pesca e turismo e influisce direttamente sulla qualità della vita delle popolazioni costiere. Quindi il lavoro del WWAP, sebbene sia focalizzato sulle acque continentali (acque dolci, fiumi), quando affronta il tema del trattamento delle acque reflue, contribuisce alla riduzione dell'inquinamento dell'ambiente marino.

Diverse tecnologie sono già disponibili per ridurre la quantità di acque reflue scaricate senza trattamento. Per il refluo, come per la questione dei rifiuti scaricati nel mare, la chiave del successo è rappresentata non soltanto da azioni immediate, che sono senza dubbio necessarie, ma anche da strategie di lungo termine.

Per questo, ci auguriamo che il progetto MARLISCO possa continuare a sensibilizzare l'opinione pubblica e promuovere la co-responsabilità, perché in un futuro non troppo lontano si possa arrivare ad una gestione sostenibile dei rifiuti marini in tutti i mari europei.

Grazie e buon lavoro.







## 3. PARTICIPANTS

81 subjets (Advisory Panel and PROVTE staff included) took part to the on-site MARLISCO Italian Forum about Marine Litter, together with 292 on-line users, online but on-site moderators included. On-site stakeholders were experts of the theme, decision-makers, artists, students and general people particularly interested in marine litter. Users participating in streaming were single experts or citizens in general and virtual groups, such as universities, with groups representing environmental projects, representatives of Municipality Departments and teachers in classrooms displaying the forum, accepting the invitation to organize working groups with students and actively participating to the proposals elaboration.



View of the participants working tables during the Forum

An important aspect within the forum organization was the multi-stakeholder composition of the working tables, to relate various components and elaborate actions aiming at reducing marine litter flows towards the sea in a shared way. The







only mono-sector tables were the school ones, who had already worked together from the beginning of the MARLISCO Project by taking part to the video-contest and the educational activities.

The invitation model to participate to the MARLISCO Forum can be found following:









## 3.1 Key Figures

The MARLISCO Italian Forum organization involved various subjects: besides the stakeholders, also the project staff, the direction and the Advisory Panel of Experts supported the success of the event.

Subjects	N.	Disposition	Description, role and function
Stakeholders	64	10 Round Tables	<b>The 64 participants</b> were invited to sit at 10 tables numbered from 2 to 11. During the reception phase, attention was given to the representativeness of various sectors of interest in each table. A spokesperson selection was requested to each table.
Ambassador	1	Table 1	<b>Tessa Gelisio</b> Environmental journalist, MARLISCO Project ambassador for Italy, she managed the Forum launch and the first part of the event.
Facilitator	1	Table 1	<b>Virna Venerucci</b> Facilitator of the day, she managed the on-site discussion, the proposals elaboration and selection, coordinating timing and working steps during the second part of the forum
Coordinator	1	Central Table and Table 1	<b>Doriana Calilli</b> MARLISCO Project Coordinator for the Province of Teramo (PROVTE), she managed and coordinated the forum organization.
Advisory Panel	5	Central Table	Luigi Alcaro ISPRA Researcher/MARLISCO Project Expert. Massimo Bastiani River and Coast Contract National Table Scientific Coordinator. Pierpaolo Campostrini JPI Executive Committee/MARLISCO Advisory Panel member. Massimo Di Molfetta CoRePla Consortium. Giorgio Zampetti Legambiente Association Scientific referee.



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Subjects	N.	Disposition	Description, role and function
Streaming	3	Designated post / remote	Mara Di BerardoMARLISCO Project technical Secretariat and on-linefacilitator for the forum streaming.Fulvia di FortunatoMind in Action Consultant and on-line facilitator for theforum streaming.Alessandro TesiSkymeeting, Technical Support.
Reception and Secretariat	3	Designated post / remote	Daniela Mascitti Consulente Mind in Action. Maria Rita De Santis Collaboratore PROVTE per MARLISCO. Roberta Capuani Collaboratore PROVTE per MARLISCO.
Audio Direction and Shoting	6	Designated post	Paolo SpinelliMind in Action CEO.Duilio CarboniMind in Action Consultant, CD Video ServiziDaniele De SantisDeSaTech Sole Administrator.Roberto MiccinilliDeSaTech, Audio Direction.Gabriele BagnuloDeSaTech, Video Direction.Tiziano MiccinilliDeSaTech, Informatic Support.







## 3.2 Advisory Panel

An essential contribution to the forum was given by the Advisory panel composed by experts who launched and supported the discussion, with in-depth analysis on specific themes. The Advisory Panel was composed by:

## Advisory Panel Forum Italiano MARLISCO



Luigi Alcaro Researcher/MARLISCO Project Expert



Massimo Bastiani

River and Coast Contract National Table Scientific Coordinator



Pierpaolo Campostrini

JPI Executive Committee and MARLISCO Advisory Panel member



Massimo Di Molfetta CoRePla Consortium



Giorgio Zampetti Legambiente Association Scientific referee







The highly qualified Advisory Panel, to whom asking questions and proposing solutions, allowed the working groups to face the complex marine litter problem with success and to pursue the forum objectives with effectiveness. The experts answered to the questions from the on-site and on-line stakeholders.



The Advisory Panel table with Dr. Calilli, MARLISCO Project Coordinator







## 3.3 On-site participants

The on-site participation was possible only under invitation or specific request because the limited number of seats. The 64 on-site participants, key figures not included, are following listed:

Research and Education				
ORGANIZATION	PARTICIPANTS			
University of Siena	Mariacristina Fossi – Professor			
University of Siena	Ilaria Caliani – Researcher			
University of Siena	Tommaso Campani - PhD Student			
UNISALENTO (University of Salento)	Stefano Aliani – Researcher			
CIRPS - La Sapienza University of Rome	Daniele Pulcini – Researcher			
Anton Dohrn Napoli Zoological Station of Naples	Flegra Bentivegna - RAC-SPA UNEP Consultant/ IUCN Marine turtles Specialist Group Member / former Aquarium Director			
Anton Dohrn Zoological Station - Naples	Sandra Hochscheid - Researcher and Tecnical Support			
University of Roma 3	Gianluca Poeta - Marine Biodiversity Impact PhD Student			
Association of Geologists of Rome	Giuseppe Gisotti – Councillor			
MEDSHARK	Simona Clò - IUNN Representative for the Mediterranean Sea			
MEDSHARK	Eleonora De Sabata - Journalist and Sea Supporter			
C.I.R.S.PE. s.c.ar.I.	Alessandra Nasti - Planner			
CNR IAMC Oristano	G. Andrea De Lucia – Researcher			
UniVerde Foundation	Giuseppe Di Duca – Administrator			
LIFE Caretta Calabria	Valeria Pulieri - Life Project Coordinator			
Architect	Giuseppe Caruti - Environmental Architect			
Leading	Tanja Poli - Environmental, Development and Sustainability Sociologist, Consultant			
University Student	Arianna Bellingeri – Student			
University Student	Manuele Bazzichetto - Student			
Largo Cocconi CS	Maria Moschetta – Professor			
Largo Cocconi CS	Francesco Colecchia – Student			
Largo Cocconi CS	Raffaele Romeo – Student			
Largo Cocconi CS	Aiyoub Mirko Guidoum Infante – Student			



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F	Research and Education
ORGANIZATION	PARTICIPANTS
Largo Cocconi CS	Riccardo Sonaglia – Student
Largo Cocconi CS	Loris Brateanu – Student
Largo Cocconi CS	Ilaria Falciatori – Student
Melchiorre Delfico CS	Anna Di Ottavio – Professor
Melchiorre Delfico CS	Teresa De Simone – Student
Melchiorre Delfico CS	Samanta Porrini – Student
Melchiorre Delfico CS	Simone Trentacarlini – Student
Melchiorre Delfico CS	Pierpaolo Preziuso – Student
Melchiorre Delfico High School	Sara Lolli – Student
Maritime	e Activities: Ports, Coast Guard
ORGANIZATION CNA (National Artisans confederation) - beach resorts managers	PARTICIPANTS Lorenzo Marchetti - President
Environmental Minister, Marine Environment Department	Santo Altavilla - Vessel lieutenant
Environmental Minister, Marine Environment Department	Vincenzo VENTRA - Marine Environment 3° Department Office supervisor, lieutenant junior grade
	Commerce
ORGANIZATION	PARTICIPANTS
Green Evolution Cooperative Society	Marco Benedetti - Researcher, inventor
GOGREEN	Enrico Palacino - Sell Manager
Blu Marine Service Cooperative Society	Emanuele Troli - Managing director
Ambiente Italia srl	Giuseppe Dodaro - Natural Resources area supervisor
	Fourism and Recreation
ORGANIZATION	PARTICIPANTS
RiscArti festival	Marlene Scalise - President
RiscArti festival	Maurizio Bucchi - Set-up expert
RISCALITESTIVAL	



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Plastic Industry			
ORGANIZATION	PARTICIPANTS		
CoRePla Consortium	Eleonora Brionne		
	Government Agencies		
ORGANIZATION	PARTICIPANTS		
ENEA - Province of Roma	Gaetano Borrelli – Sociologist		
ENEA - Province of Roma	Vincenza Di Malta – Researcher		
ARPA Tuscany	Fabrizio Serena - Functionary		
ARPA Emilia Romagna	Cristina Mazziotti - Marine Sector Technical Coordination Officer		
ISPRA	Andrea Bianco - Environment and territory Engineer		
ISPRA	Marco Matiddi – Researcher		
ISPRA	Stefano Di Muccio – Researcher		
Tevere Basin Authority	Gianni Colatosti - Hydrogeomorphologic asset operative unit		
Local Authorities			
ORGANIZATION	PARTICIPANTS		
Region of Lazio	Eugenio Maria Monaco - Environment Infrastructure Regional Polluted sites recovery Department Supervisor		
Region of Lazio	Federico Silvestri - Environment Infrastructure Regional, Environmental Quality area and environmental impact evaluation officer		
Region of Liguria	Ilaria Fasce - Ecosystem and Water Cycle Sector Director		
Region of Veneto Council	Giuseppe Sartori - Biologist		
Province of Roma	Corrado Battisti - Environment Sector Naturalist Officer		
Province of Roma	Fabrizio Piemontese – Environmental Protection Department Officer		
Capital of Rome Big City (Municipality)	Patrizia Giancotti - Department 4, Environment protection and v development services Architect Director		
Capital of Rome Big City (Municipality)	Andrea Ferraretto – Officer		
National Agenda 21 Coordination	Daniela Luise – Director		



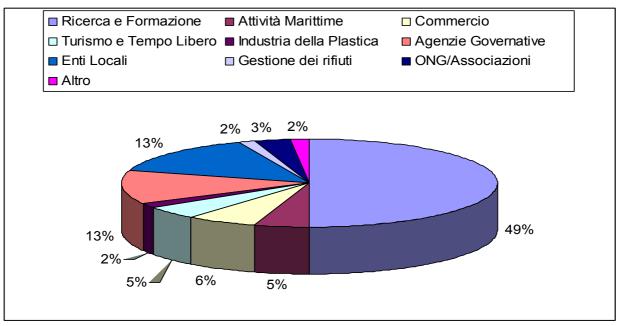
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Waste Management			
ORGANIZATION	PARTICIPANTS		
Waste Recycling spa / Scart	Cristina Sagliocco – Communication Supervisor		
NGO / Associations			
ORGANIZATION	PARTICIPANTS		
WWAP UNESCO	Angela Renata Cordeiro Ortigara - Junior Programme Officer, Environmental Engineering PhD		
Federpesca (Fisherman Federation)	Giacomo Ottonello – Press		
Other			
ORGANIZATION	PARTICIPANTS		
Rete Ferroviaria Italiana SPA	Federico Boccalaro – Engineer		

The following graph shows the participants composition:



Graph of the forum participants composition by sector







## 3.4 Streaming participants

Users could participate to the MARLISCO Italian forum also without being physically present in the room, by using an on-line streaming platform. 292 users took part to the forum, 14 of which were single users, 271 were organized in satellite groups (7 users were Province of Teramo, Skymeeting or Mind in Action' staff).

Partecipanti Streaming		
N. Single users	n.	14
N. Satellite Groups	n.	12
N. Group users	n.	271
N. Staff	n.	7
Tot.	n.	292

In order to take part to the streaming activities, a registration was needed to access a link automatically sent by the skymeeting system soon after the registration. Connection was made by using a simple browser for Internet (such as, Google Chrome or Firefox), a broadband connection and a laptop/PC or IMac to visualize the streaming and take part to the event. In order to make the streaming more effective, the PROVTE staff suggested to display the live recording on a wall or screen.

The system allowed the contemporary management of over 250 single and group users. The Satellite Groups operated as small virtual communities interacting on common themes. Both registered single users and satellite groups received guidelines for participation from the PROVTE staff. The Satellite Group, in the specific, received supporting documents to work with their public and the forum experts and facilitators. A "Live Chat Box" was used to interact with all participants and to ask questions to the experts and to share comments with the on-site public.



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The list of streaming participants, mainly related to the Research and Education sector, is following listed per typology:

Satellite Groups			
ORGANIZATION / INSTITUTION	N.	PARTICIPANT	
University of Molise, Bioscience and Territory Department	20	Professionals, students, port captaincy, council members from the Municipality of Termoli, Coast Municipalities representatives.	
Bellante Comprehensive School (CS)	22	Students	
Atri CS	44	Students (20+24, 2 classes)	
Atri CS	14	Students	
G. Pascoli High School in Silvi	40	Students (17+23, 2 classes)	
Pagliaccetti CS	24	Students	
Peano Rosa CS of Nereto	18	Students	
Acquapendente Scientific High School	21	Students	
Largo Cocconi CS	16	Students (1 class)	
TE4 San Nicolò a Tordino CS – Teramo	10	Students	
D'Alessandro CS	16	Students	
Ardea 1 CS	26	Students	
S	ingle us	ser	
ORGANIZATION / INSTITUTION	N.	PARTICIPANT	
Ardea 1 CS	1	Teacher	
Software engineer	1	Professional	
University (not specified)	1	Ecotoxicology and environmental sustainability student, Degree in Marine Science	
Liguria Ricerche spa	1	Professional	
Gran Sasso Laga Mountain National Park	1	Professional	
CNR (National Research Centre)	1	Professional	



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Single user				
ORGANIZATION / INSTITUTION	N.	PARTICIPANT		
Liguria Ricerche corporation	1	Employee		
Gran Sasso CS	1	Dean		
Maritime Law	1	Professional		
Single user (not specified)	1	Student		
Single user (not specified)	1	Student		
Single user (not specified)	1	Student		
Single user (not specified)	1	Teacher		
Single user (not specified)	1	Student		
	Staff			
ORGANIZATION / INSTITUTION	N.	PARTICIPANT		
Skymeeting	1	PROVTE Collaborator		
Skymeeting	1	PROVTE Collaborator		
Mind in Action	1	PROVTE Collaborator		
Skymeeting	1	PROVTE Collaborator		
Skymeeting	1	PROVTE Collaborator		
Direction, Mind in Action	1	PROVTE Collaborator		
Province of Teramo	1	PROVTE Collaborator		

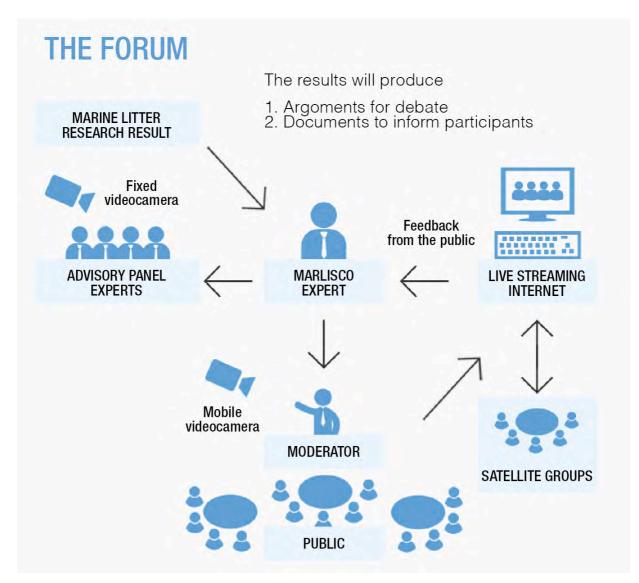






## 4. IL FORMAT

In order to guarantee a compared reading of the results, the 12 National MARLISCO For a managed a similar methodologic structure (Kopke, Doyle, 2014): the format was developed by the University College Cork, National University of Ireland (Work Package 4 Leader for MARLISCO), but each national partner could adapt it to the number of participants, the organization and stakeholders characteristics and the most appropriate working methods.



Forum organizational Plan







The Italian MARLISCO forum about marine litter was articulated in two phases: the first introductory one, during which the marine litter theme was debated (Mini-Quiz + Questions to experts and debate), the second operative one, during which the Proposals of action were defined and evaluated. The first phase was coordinated by Tessa Gelisio while the second one by Virna Venerucci, with a designated post for the direction. The on-line facilitators, Mara Di Berardo and Fulvia Di Fortunato, managed the various forum phases directly through the Skymeeting platform, supporting the integration with the on-site activities.

Find the Italian Agenda following:



This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement n. 289042











## NATIONAL MARINE LITTER FORUM

ROMA / 16 Gennaio 2015 ACQUARIO ROMANO / Sala Centrale

#### **AGENDA DEI LAVORI**

ITALIA

#### - 9,30 Accoglienza

Registrazione ospiti

Vi informiamo che questa è una trasmissione in diretta! Vi chiediamo gentilmente di spegnere i telefoni cellullari, di non muovervi durante la diretta dell'evento e di assicurarvi di essere al tavolo corretto. Grazie.

- 10,00	Apertura Forum	TESSA GELISIO	Presentatrice e Ambassador MARLISCO
	Apertura lavori Interventi	RENZO DI SABATINO SILVIA VELO MICHELA MILETTO DINO PEPE	Presidente della Provincia di Teramo Sottosegretario di Stato al Ministero dell'Ambiente (MATTM) World Water Assessment Programme Unesco Assessore al Demanio Marittimo e Contratti di Fiume della Regione Abruzzo

#### - 10,30 Introduzione

Presentazione Panel esperti	SILVESTRO GRECO MASSIMO BASTIANI LUIGI ALCARO GIORGIO ZAMPETTI ETTORE IANÌ MASSIMO DI MOLFETTA PIERPAOLO CAMPOSTRINI	Ministero dell'Ambiente / ISPRA Coordinatore Tavolo Nazionale Contratti di Fiume e Costa Ricercatore ISPRA / Esperto Progetto MARLISCO Responsabile Scientifico Legambiente Presidente Legapesca Consorzio CoRePla JPI Healty and Productive Seas and Oceans Membro del Comitato Esecutivo
- 10,45 Inizio lavori / Prima parte	VIRNA VENERUCCI	Facilitatore esperto

Mini quiz da tavolo	Attività tra i gruppi di lavoro
Contributo video	Fonti e impatti dei Rifiuti Marini - Animazione di Jane Lee
Domande agli esperti	Dibattito in Sala e in Streaming

#### - 11,30 Pausa caffè

#### - 11,45 Ripresa lavori / Seconda parte

Lavoro dei gruppi	Proposte ed azioni per la riduzione dei Rifiuti Marini
Votazione finale	Selezione delle Azioni da proporre per la Strategia Marina Nazionale
Questionario ex-post	Valutazione dell'impatto del Forum
Contributo video	Proiezione video vincitore del Video Contest MARLISCO sui rifiuti marini
	S.O.S. Mare diamoci da fare - Istituto Virgo Lauretana - Grottammare (Ap)

CO RE PLA

Supporter

#### - 13,30 Lunch

Questo Forum è uno dei 12 organizzati in tutta Europa nell'ambito del progetto MARLISCO. I punti di vista e le opinioni espresse in questa pubblicazione sono di esclusiva responsabilità degli autori e non riflettono necessariamente le opinioni della Commissione Europea.







## 5. FIRST PART OF THE FORUM

## 5.1 Mini Quiz



"We don't want to test your knowledge. This is not a test. We are here to generate and promote the dialogue among all of as, therefore this is just a warm-up activity".

During the first part of the forum, hosted by the anchorwoman Tessa Gelisio, in the picture, a table mini-quiz, aiming at generating and promoting dialogue among the working groups components. The quiz was based on a container with sand and litter located on each table of the room, such as plastic and glass bottles, can, wood, seaweed, cotton buds, plastic bags, cigarette butts, fishing net, tetra pak, straws, plastic cutlery, bottle tops, candy wrappers.

The virtual groups attending via streaming proposed the same activity to the class of students or professional groups in their location by using the documents received by the MARLISCO staff and by copying then the answers in the platform Chat Box managed by the on-line facilitators. Single subjects directly answered via chat.



Table n. 3 group discusses the questions made by Tessa Gelisio, Forum Ambassador



This project has received funding from the European. Union's Seventh Framework, Programme for research, technological development and demonstration under grant agreement n. 280.02





DOMANDE	
First Question	Identify litter n.1 in the middle of the tray with sand.
Second Question	How long does a bottle of plastic take to biodegrate?
Third Question	What is the plastic made of? Which rough substance is used to make the plastic?
Fourth Question	There is a tray with sand and objects in the middle of each table, such as: wood, marine algae and marine litter. Nothing you don't already know! How many elements are litter?

## ANSWERS AND KEY MESSAGES



The Marine Litter kit on the participants tables for the mini-quiz activity

### 1. Answer to the first question:

The key message is that cotton-fioc is usually located in toilettes, therefore it gets to the beaches through the drainage system. The debate helps demonstrating that every small personal choice, even if taken far from the sea, can often generate marine litter, as, for instance, a person choosing to throw a cotton-fioc away into the WC drain.







## 2. Answer to the second question:

The key message is that plastic needs so much time to decompose itself and remains in the environment for over 450 years.

## **3.** Answer to the third question:

Plastic is composed by petroleum. The key message is that we give a big value to petroleum, but we don't to the plastic, directly deriving from petroleum, and we are superficial discharging it after using (see plastic bottles).

## 4. Answer to the fourth question:

Answer is "14". The key message here is that many of us do not consider small objects, such as micro plastics mixed with sand.

## 5.2 Video Contribution



Sources and impacts of marine litter by Jane Lee/ Marlisco

The video animation displayed during the first part of the forum, "Sources and Impacts of Marine Litter", was especially developed for MARLISCO by the Irish artist Jane Lee in collaboration with the University College Cork, University of Ireland.

The video shows main sources and impacts of marine litter in few minutes. After the video display, Advisory Panel launched a discussion with the public and opened a confrontation about some themes:

- Main types of litter on the beaches and their sources;
- Marine litter impacts on marine environment and also on our country economy;
- Micro Plastics, their sources and impacts, their transport through the food chain and possible risks they involve for human health;







- Actions launched by the plastic industry to face the litter theme;
- Biodegradable plastics and oxo plastics.

The three MARLISCO Italian video-contest winning videos were also displayed during the forum:

- Virgo Lauretana Comprehensive Institute, Grottammare
  "SOS mare diamoci da fare" (a.t. "SOS Sea Let's play the field");
- Largo Cocconi Comprehensive Institute, Roma "Inquinamente" (a.t. "Pollutingly");
- M. Delfico Comprehensive Institute, Teramo "La catena alimentare" (a.t.: "The food chain").

## Video Contest MARLISCO: i 3 finalisti

13 video vincitori del Video Contest MARLISCO, elencati in base alla posizione di classifica.



SOS Mare diamoci da fare -IST Virgo Lauretana... di MARLISCO 884 visualizzazioni • 1 anno fa



InquinaMente - IST Largo Cocconi Roma di MARLISCO 1.059 visualizzazioni • 1 anno fa



La catena alimentare - L. Classico M. Delfico Teramo di MARLISCO 1.005 visualizzazioni • 1 anno fa

## 5.3 Experts analysis

At the end of the mini-quiz, the host asked several questions to the experts, default by the staff or directly submitted by the on-site and on-line stakeholders. Participants via streaming could ask questions through the Live Chat Box, displayed on the monitors of the venue.







# LUIGI ALCARO

**Q** – What is marine litter and which are the main categories of litter found in the sea and the most affected marine organisms?

A – It is well known that plastic is the most represented material: in constitutes, in fact, the 75% of marine litter. Due to its characteristics of resistance, it very difficultly degrades and it floats. This litter is transported from the sources of pollution to the sea, covering long distances. Moreover, there are tires, plastic, glass, etc.. Most of the sources, about 80%, comes from the land and the 20% comes from the sea, mainly constituted by lost or abandoned fishermen's nets; the so-called "ghost nets" problem, abandoned in the sea because no longer used but still causing marine organisms deaths mainly because caught by them, seems to be really relevant nowadays.

The most affected organism are often protected species in danger of extinction, like marine reptiles (turtles), marine mammals and also several species of fish and shellfish remaining entangled.

## GIORGIO ZAMPETTI

Q – Sometimes one does not consider cigarette butts as marine litter. What has to be done to reduce this type of litter in the future? Are there information and awareness campaigns? One of the hypotheses is to ban smoking from the beach, could it be a solution or could alternatives be found?

A – We believe that implementing good awareness campaigns, like Legambiente', is important. The visual datum about cigarette butts as litter is







emblematic and always present. We have carried out a monitoring activity about marine litter on beaches this year, about 130,000 square meters of beach. Plastic was the first and most diffused litter. Plastic bottles and small containers abandonment states a visitors malpractice on the beaches. Such a high datum is a symptom of lack of sensibility and respect towards the environment from beaches and sea users.

Cigarette butts on the beach, besides of being unpleasant to the eye, are a bad example for children, quickly realizing the heavy impact they cause. They are also extremely polluting for two reasons. The first one is that they have a physical impact on the fauna, causing ingestion phenomena – they are like small polluted pills. The second reason is that they release all their inner toxic and harmful substances on the beaches while degrading. This bad habit is unfortunately found on the street within our cities and, especially during summer, on our beaches. The prohibition could be an applicable measure, but free beaches could have no control. I think we should be better when intervening with awareness campaigns about risks and give supporting tools, such as portable ashtrays. An interesting requirement to be applied to seaside resorts is providing such portable ashtray on each resort entrance, maybe colorful and pleasant ones.

# **Q** – How is the complex relationship between the world of fishing and waste?

A - From one hand, fishermen can cause large impacts on fish and marine life, generally through ghost nets. From another hand, they are also victims for the big quantity of waste captured by the nets, especially when applying some specific fishing techniques, such as the fishing trail one. A legislation anomaly forces fishermen to discard litter in the sea because they can't carry them on land and ports.

We made and important monitoring activity on floating litter in the sea, together with Legambiente's Green Schooner, and main part of litter found was, again, plastic material and other coming from fishing activities, such as polystyrene boxes. Fishing plays an important role among the causes but is the first victim of lost litter







in the sea at the same time. The other interesting datum I would like to communicate is that over 70% of marine debris we observe, ends up on the seabed, only 15% of it floats on the surface of the sea and the remaining part is transported towards the beach. An important research of the University of Genoa talks about kg of litter for each square kilometer of seabed: these are important data to understand the impact of submerged waste.

The other fishing element we are working on, especially in Puglia where we have a recovery center for turtles, is fishermen sensitization. Fishermen are often the first ones carrying wounded fishes or turtles and they are often the ones who want to do something for the marine fauna. It would be important to define objectives within it for a post-MARLISCO Project, that is launching awareness campaigns to acknowledge fishermen as "sea sentinels". Fishing is paradoxically one of the first marine litter victim economies for the great impact it has on it to date, but fishermen awareness could be a real resource from one hand, and a norm change could allow them to deposit litter collected in the sea the ports, on the other hand.

## MASSIMO BASTIANI

 $\mathbf{Q}$  – Various types of waste can be found on our beaches, such as plastic bottles, paper packages, polystyrene, buts, plastic ropes and fisheries, besides of domestic waste. Having a large experience on river and coast governance, could you give us some ideas to understand where such marine litter come from and how they can be reduced?

**A** – First of all, it should be considered that marine litter is certainly a problem, exponentially growing worse in years. In 2013, marine litter has grown of 647% if compared to 1975. A recent study from the American University of Georgia brings out an extremely alarming aspect: 13 million tons of waste ends up in the seas every year, with alarming projections for the future, because solid waste in the seas will be more than 155 millions in 10 years if we go on this way. This is therefore a problem



PROVINCIA DI TERAMO Medaglia FOre di Minis Carle



strictly tied to waste management and to a yet insufficient ability to recover and recycle in most states. Much of this waste is transported by rivers or through minor water supply networks at a local level: such phenomenon becomes evident with floods, when a big amount of litter thickens on the coasts for an extremely reduced period of time. The problem must evidently be addressed both from a market point of view, through, for instance, a packaging reduction of final products, and also improving governance tools.

River, Coast and Lake Contracts are tools aiming at creating agreements among various local actors for a global protection of collective goods, such as rivers, coasts and lakes. These tools relates to policies and also to behaviors improvement, varying in Italy from Region to Region.

Waste production per year (Source: ISPRA, 2013) goes, in fact from 625 kg per capita/ year in the Emilia-Romagna, up to 359 kg per capita/year in the Basilicata. Recycling data amounted to 42,3% of the total waste production, instead. Such data is still far, in the overall, from the objective that should have been reached already in 2012, that is a 65% recycling of the total produced waste. An extremely differentiation between North and South of Italy emerges, with a South in large delay, especially in Calabria and Sicily.

The waste issue and its presence in rivers and seas is an emerging problem in river/coast contracts and integrated strategies are always needed to face it. The first preliminary step to reach any result is above all related to systematizing the available knowledge, through information and communication campaigns. Only after having created the conditions to integrate various subjects' knowledge and increase their awareness, an active participation can be launched, both in the strategy elaboration and in the action execution. River and coast contracts demonstrate to be an effective tool in the matter.







### MASSIMO DI MOLFETTA

**Q** – Basing on the quoted examples, marine litter are in some cases particularly small and we saw some negative effects that plastic produces in the marine environment. Which strategies could be launched to reduce such phenomenon?

**A** – The packaging issue is central to the waste debate, even if great strides have been made in the last years. From one side, more enterprises are reducing the packaging, also because the crises, and from the other side, more sensibility is taking shape in the production and distribution world. I would like to specify that I work for the CoRePla consortium and I mainly manage plastic packaging.

Consider that 75% of packaging in Italy today are head towards recovery. There are problems, as we watched in the displayed movies, coming from men behaviors and services functioning.

If we consider that 40% of waste goes in landfill or is abandoned and it is not recovered and neither recycled, this becomes a cultural and social problem. And we should therefore ask to ourselves why such material ends up in wrong places. The society we're living in is made of plastics, chairs are of plastic, and so tables and furniture, cars, games for our children, food packaging, dishes.

We can't live without plastic anymore. We pretend that our purchase, as for instance cold cuts, can be preserved in fridges for two weeks, but this is only possible by using plastic and often vacuum-sealed packaging.

Our habits have changed during the last 50 years and lifestyle depends on plastic products use. A study from FAO tells us that thousands of tons of food are thrown away because they can't be well preserved in plastic or vacuum-sealed containers. My consideration doesn't want to justify plastic use, but wants to underline the important role some types of materials and packaging have today. Research is working to optimize it but we can't think about eliminating it. The process must be correctly managed. CoRePla recovers about 75% of plastic packaging and a big







effort is made with communication and information activities, both in schools and municipalities, in order to support them with a correct recycling procedure.

Another aspect is production of new products made with recycled plastic. For instance, the world of plastic recycling goes towards textile production as well. The "pile" texture is needed to tailor blankets, sweatshirts, hats and gloves. Modern recycling technologies allows to transform common mineral water PET into quality polyester fibers. Even some soccer teams uniforms are produced with recycled plastic material, allowing us to launch some big awareness campaigns to make understand that it's not only a world of waste and plastic can be a resource.

I noticed with pleasure that environmental education has become obligatory in schools this year. Such activity should launch a change of generational behavior in each citizens, starting from the youngest, but change comes from two fundamental choices: one related to well precise political choices, a second one to efficient services, no matter if from the north, the south or the middle of Italy. All communities should be put in condition to reach the same recycling level, uniformly and with guaranty of real product recovery.

Bioplastic, often describe as alternative to plastic nowadays, is making inroads in some sectors, in substitution of polystyrene or plastic bottles: they still have higher costs than plastic's, but they could surely be one of the biotechnologies to be promoted in the future.

One last consideration is related to the packaging world, where many producers starts using different materials for packaging and, above all, mono-materials. Think about the whole food sector, for instance, already working for a correct information: some food distribution enterprises write the materials characteristics on the packaging, thus helping citizens with a correct recycling.







#### PIERPAOLO CAMPOSTRINI

**Q** – Being consumers of fishes which in turn eat micro-plastic, should we be worried? Which effects could micro-plastic have on the human organism?

**A** – The micro-plastic problem is very diffused and addressed by the European directive, reminding that a good Environmental status is given when the micro-plastic level makes no damage. The real problem is that the damage notion is not well defined, that is we don't know all the effects yet, thus in order to insert and code parameters and thresholds.

First of all, I would like to say that micro-plastics have a very small dimension, between 0,3 - 5 mm, and have therefore an important physical effect because they can obstruct the marine fauna digestive system and sometimes move the smallest components to the invertebrates, going from the stomach to the blood, or 'getting in circle' as vulgarly said, and to the whole animals food chain, reaching men.

The micro-plastic issue is complex just because it puts human health at risk as well, without completely understanding the consequences. The micro-plastic issue is quite new and research needs to study the effects more, mainly related to biotoxicity: studies are still missing but I would say that Europe is trying to analyze these themes developing environmental impact and human health tests also, improving the knowledge chain.

I would moreover recall that micro-plastic have two sources: they are produced in a small size sometimes, such as components for abrasives having a dimension under 5 mm, or they are created by the plastic fragmentation, through some degradation processes of the plastic itself.

Living is a good experiment and, as such, it is important that research and knowledge go on: it is a continuously evolving process, also through monitoring processes pointing out the best applicable solutions. States must be active and operate to apply those actions.







#### STREAMING CONNECTION WITH THE UNIVERSITY OF MOLISE AND TERMOLI QUESTION TO THE EXPERTS

**Q** – The Punta Aderci Natural Reserve in the Vasto (Province of Chieti) territory has about 6 kilometres of beach and is mainly cleaned of all the washed up material by hand. The most insidious and present waste is constituted by polystyrene boxes used by the fish catch. The main damage, besides of the removal by hand cost, is its crumbling into small pieces, transported everywhere in the Sea and the Reserve by the wind. Moreover, polystyrene in our municipality is not recycled, but given to the landfill together with the undifferentiated waste.

Many fishermen complain about those boxes, both for the cost, around 0,70 cents each reaching  $700 \notin$  per fishing boat, and for the inadequate practicality and lightness (around 200 gr). Realising into the sea is not voluntary, but exclusively due to the wind. They would therefore prefer to get back to plastic boxes.

In order to solve the problem, an optimal solution would be substituting polystyrene disposable boxes with reusable boxes made of other materials. Is suggesting institutions to introduce norms banning polystyrene boxes an accessible path?

A similar ban was applied to cotton-fioc plastic sticks some years ago: after the devastating environmental problems related to the accumulation of enormous quantities of sticks nearby water courses and beaches, the cotton plastic (non biodegradable) sticks use is declining from the XX century, insomuch as various occidental countries banned the plastic model (as, for instance, Italy in 2001).

**A** – Alcaro – The polystyrene disposable boxes are a good example of habit imposed by the market but leading to more waste production and, consequently, accidentally or voluntary release in the sea. Another typical example could be practicing pic-nic in natural environment by using disposable plastic (dishes, glasses, cutlery): this material can be inadvertently lost in the environment and ruin it. The use of ceramic dishes and glasses then we can then wash when at home and reuse again, is a possible change of habit with a big environmental advantage.







In conclusion, fishermen are right when they ask to get back to the plastic boxes they can reuse and this is a practice that fishing policies should get forward.

## QUESTIONS FROM THE CHAT

# **Q** – Institute of San Nicolò a Tordino, Provincia di Teramo. *How much is our diet affected by sea pollution?*

**A** – Campostrini – It is evident that all that causes environmental pollution or damage can be avoided. The European directive about the Good Environmental Status of the Sea is related to a more complex system of pollution indicators, and not only to solid litter.

As for the fishing pollution and their good health, we can say there are direct and indirect measures. Consumers are however protected enough on a nutrition point of view, processes and tests are well known, moreover, and there are very sever rules and heavy penalties.

What unites the nutrition aspect is consumers and big enterprises collective responsibility: norms, which are quickly evolving, should avoid waste emission in the environment more and more.

**Q** – Where is more polluted, the North or the South of Italy?

**A** – Zampetti – I'll be answering, of course, basing on our experience and on the monitoring activities carried out with the Green Schooner in the Tyrrhenian, Ionic and Adriatic Seas during the last year. The floating solid litter density is equal between the Adriatic and the Tyrrhenian, around 26/27 litter per square kilometre, while the Ionic datum is 7 litter per square kilometres.

As for the litter danger, I would like to add that main quantity is related to plastic.







**Q** – Why aren't controls of ships and fishing boats intensified?

A – Gelisio – As for my experience, I confirm that there are many controls by all port authorities and coastal guards. A capillary activity along the sea is of course very complex. I just want to point the "cruise ship" theme out, for the big quantity of litter and the control difficulties.

#### **ON-SITE DISCUSSION**

# Q — Question from the public

Is there a danger gradient in the various marine litter typologies – just to understand from where we start?

**A** – Bastiani – The danger is also related to the quantity of litter we have. An aspect I want to highlight is that we must refer to a directive giving precise indicationS on what is polluting and on



A table n. 10 member makes a question to Dr. Bastiani

various toxicity levels. There is a big quantity of norms on this regard, problems are in their implementation and in the levels of control. The disquieting data recently distributing by Legambiente say that a big quantity of biodegradable bags, around 54%, is not accorded to the law in large retailers. If this is the large retailers situation, let's think about small shops, where we can probably find traditional plastic bags, banned by law from the 1<sup>st</sup> of January 2011. There is the norm, the environmental danger levels are known: understanding the solutions is probably what is missing.

We must define single and collective responsibilities. I'll give and example: when citizens prefer to abandon old fridges along river banks risking heavy penalties, instead of bringing them to specific ecological island, why do they do it? I want to







think it's misinformation and lack of information about municipality services at their disposal.

### On-site contribution - Fabrizio Serena, ARPA Tuscany

We shouldn't forget that there are also other things in the sea, sinking ships, cans and containers with a non clear situations to be examined. The second thing I want to say is that, being from ARPA Tuscany, I am coordinating a working team of the Minister of Agricultural Policies evaluating solid litter lying on the seabed.

At the end of this work, we will have a punctual monitoring and certain data about quantity and typology of litter found in the sea. Today, we are able to georeference both the fishing biomasses and the litter biomasses today.







## 6. SECOND PART OF THE FORUM



"You will be absolute protagonists of this session, aiming at defining actions for marine litter reduction and contribute to the Marine Strategy implementation".

After the first part of the MARLISCO Italian forum, composed by an informative and educative phase sharing knowledge and questions, the second part was launched, moderated by Virna Venerucci, in the picture.

The on-site groups were asked to work together on a specific argument, defining two proposals of action to be discussed during the forum. In the meantime, the online single users and satellite groups executed the same activity, the first ones directly writing into the Chat Live box and the second ones by replicating the activity in their own rooms/classes, using the supporting documents previously sent by the MARLISCO staff and then drafting their Actions into the chat.

The real participatory process to build the planning actions was launched with this phase. The groups were asked to express their vision, working together towards common actions aiming at reducing marine litter.







Some key words were defined in order to define the proposals of actions within them, giving a support to the stakeholders work during the forum:

# GOVERNANCE TRAINING AND INFORMATION AWARENESS AND RESPONSIBILITY RECOVERY, RECYCLE AND REUSE NORMS PRODUCTION AND CONSUMPTION

Participants were asked to propose clear and really feasible actions, also individuating subjects responsible for their implementation. The challenge was finding a common synthesis among the multi-stakeholders tables participants within a specific timing and the defined grid of proposed thematic areas.



On-site participants exchange views about the key words defined to synthetize the proposals







On-site tables started the elaboration phase supported by the Advisory Panel experts and the MARLISCO staff. On-line single users and groups in streaming were supported by the two on-line facilitators, Di Berardo and Di Fortunato, by interacting through the Live Chat Box and on-line surveys, through which then voting the proposals.



On-site participants exchange views about the key words defined to synthetize the proposals

At the end of the discussion, the spokesperson for each table was asked to illustrate the proposals, while the on-line ones were displayed on the monitors. The proposals from the streaming public were inserted into the general list of proposal.

Soon after, an evaluation procedure for the proposals was launched both on-site and via streaming: participants were asked to select from the overall list of proposals, this time as individuals and no longer as a team, the ones that, in their opinion, are the most effective at reducing marine litter, and the ones that, in their opinion, are the most feasible actions, by listing 3 actions in terms of preference in two minutes for each. The evaluation procedure generated specific classifications for the on-site and on-line working groups, then flew into the final classification specified in the following paragraphs.







## 6.1 List of Actions

The working groups defined 39 Proposals of Actions in the overall, 8 of which coming from the streaming users.

The proposals are the following:

PROPOSALS OF ACTION				
N.	GROUP	TITLE	DESCRIPTION	
1	TABLE 2	Education activities in schools	Children awareness from preschools through class cleaning, recycling of rubbish, symbolic financial penalties or prizes for excellences.	
2 TABLE 2 Recycled material purchase		material	Stimulating recycled material purchase in place of first production purchase, thus by making the choice of the recycled one economically convenient. Implementing water, detergents and unpackaged food distributors to reduce bottles and containers use.	
3	3 TABLE 2 Paying for recycling		Converting plastics and other recyclable material into money or services. Reuse and recovery principles.	
4	4 TABLE 3 Governance, education and information		Implementing fast and effective communication policies, such as visuals or citizens campaigns on posters. Intervening on citizens conscience through training processes.	
5	5 TABLE 3 Floating litter removal		Launch of a selection platform through social enterprises, also with fishermen contribution in order to arise awareness of floating litter collection.	
6	6 TABLE 3 Norms, production a consumptior		Favouring the use of biodegradable products by simplifying the norms through incentives and disincentives actions.	







PROPOSALS OF ACTION				
N.	GROUP	TITLE	DESCRIPTION	
7	TABLE 4	Passive waste collection	Promotion of preventive (passive) marine litter collection systems, such as barriers and grills nearby rivers and channels.	
8	TABLE 4	Active garbage collectin	Promotion of active systems for marine litter collection: collection in ports through special containers to facilitate collection for fishermen (fishing for litter), direct collection on the beaches through protocols for beachfront resorts.	
9	TABLE 4	Education and research	Activities in schools and on the beaches with continuous monitoring protocols for acquisition of knowledge.	
10	TABLE 5	Governance and norms	Governance and norms to simplify competences and delegate cleaning to Municipalities trough interventions/inter- municipal structures.	
11	TABLE 5 Recovery and recycle		Re-coding litter basing on the commodity characteristics.	
12	TABLE 5	Production reduction and materials reusing	Increasing of Production reduction and products reusing.	
13	TABLE 5 Litter removal from beaches		Committing maintenance and cleaning to the ones receives beach licenses.	
14	TABLE 6	Norms	Norms unifying and simplifying.	
15	TABLE 6	Communication and information	Informative campaign promotion.	
16	TABLE 6	Recovery from fishermen	Marine litter recovery by professional fishermen.	







PROPOSALS OF ACTION				
N.	GROUP	TITLE	DESCRIPTION	
17	TABLE 7	Education and Information	Capillary diffusion of Information on marine species involved into litter ingestion: reinforcing of the educative policy modulating it on the categories of reference.	
18	TABLE 7	Litter removal by beachfront resorts managers	All year long duty of systematic removal of litter from the beaches for beachfront resorts managers.	
19	TABLE 7	Norms application	Existing norms monitoring and application.	
20	TABLE 8	Training	Environmental training in compulsory education schools.	
21	TABLE 8	Differentiation and depuration	Increasing of litter differentiation; increasing of depuration effectiveness; improving of depuration systems.	
22	TABLE 8	Biodegradable material	Incentivizing biodegradable materials production.	
23	TABLE 9 Circular economy		Circular economy to facilitate dialogue among parties.	
24	TABLE 9 Norms		Norm intervention.	
25	TABLE 9	Communication and information	Communication and sensitization campaigns capillary launch on the territories.	
26	26 TABLE 10 Communication and information		Making information about dangers for health coming for marine litter more incisive, also through strong advertising actions; making environmental education at school obligatory.	
27	TABLE 10	Compulsory re cycling	Making recycling compulsory anywhere under law and applying a control in order to have it done.	







PROPOSALS OF ACTION				
N.	GROUP	TITLE	DESCRIPTION	
28	TABLE 10	Packaging reduction	Packaging reduction, widest possible use of recycling material.	
29	TABLE 11	Governance	Governance activities sustaining and developing, also at a local level.	
30	TABLE 11	Norms about the plastic production chain	Adopting strategic normative framework in order to significantly influence the plastic production chain.	
31	TABLE 11	Information about plastic	Raising awareness of the plastic life cycle economic value.	
32	STREAMING	Beach volunteers	Organization of voluntary groups in the province for periodic beach cleaning.	
33	STREAMING	Inhibiting billboards on the beaches	Raising beach users awareness to avoid litter dropping on the beach, also through inhibiting billboards.	
34	STREAMING	Eco-fishing	Fishing chain analysis and data diffusion. Disposable materials substitution with mainly reusable or biocompatibile ones.	
35	STREAMING	Eco pack	Diffusion of shops selling product refilling. Reduction of plastic containers by installing self-service distributors.	
36	STREAMING	Clining exam	Two points bonus at the State Certification Exams for students involved into effective environmental protection activities.	







	PROPOSALS OF ACTION				
N.	GROUP	TITLE	DESCRIPTION		
37	STREAMING	Total environmental education	Increasing penalties and improving safety norms by sensitizing population of pollution risks – promotion of environmental, reuse, recycle and recovery education. More investments for waters and soil recovery are needed. Making people aware that sea pollutions gets back to our tables through nutrition.		
38	STREAMING	Producers training and responsibility	Promotion of training and information actions about waste management (reduce- reuse-recycle). Launching more synergic controls by institutions, bodies, associations and schools.		
39	STREAMING	Research	Research funding and new biodegradable materials production to substitute plastics and its derivates; polystirol cases substitution with non disposable packaging.		

The proposals were classified under the 7 thematic areas defined by the MARLISCO project. (Education/Awareness, Appropriate disposal of waste, Reduce, Reuse, Recycle, Redesign, Norms and Governance), even if some actions can be inserted into more than one thematic area. These results will flow into an overall analysis of all the European fora carried out under MARLISCO.

The classification per thematic area is the following:

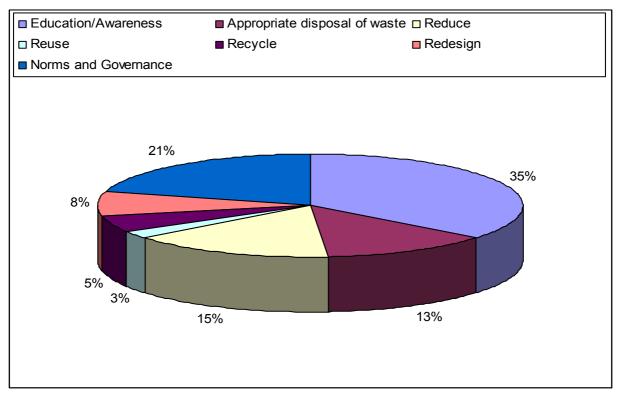
- Education/Awareness: n. 14 (Actions 1, 4, 9, 15, 17, 20, 25, 26, 31, 33, 34, 35, 36, 36, 39);
- Appropriate disposal of waste: n. 5 (Actions 5, 8, 16, 21, 27);
- Reduce: n. 6 (Actions 7, 12, 13, 18, 28, 32);
- Reuse: n.1 (Action 3);
- Recycle: n. 2 (Actions 2, 11);
- Redesign: n. 3 (Actions 22, 37, 38);

Norms and Governance: n. 8 (Actions 6, 10, 14, 19, 23, 24, 29, 30).









Graph of the proposed actions thematic areas

As displayed by the graph, the education and awareness thematic area is clearly the most chosen (35%) one, considering that it includes actions related to communication, education and general sensitization. The Norms and Governance area follows (21%), showing the big interest participants have in interventions aiming at integrating norms and governance processes. The Appropriate disposal of waste closely follows the previous areas (15%), with actions aiming at limiting litter impacts, followed by the Appropriate disposal of waste area (13%).







# 5.2 Most effective and feasible actions

The 39 actions proposed by the on-site and on-line stakeholders were evaluated in terms of effectiveness and feasibility by both the participant typology, who could express multiple preferences<sup>1</sup>.

The on-site participants evaluated 6 effective actions (2 votes each):

- Action 4. Governance, education and information,
- Action 6. Norms, production and consumption,
- Action 7. Passive waste collection,
- Action. 17. Education and Information,
- Action 18. Litter removal by beachfront resors managers,
- Action 20. Training.

11 actions follow with a single vote each.

As for feasible actions, on-site participants voted 4 actions (2 votes each):

- Action 20. Training,
- Action 22. Biodegradable material,
- Action 25. Communication and information,
- Action 31. Information about plastic.

9 actions voted with a single vote by the on-site participants follows in the classification.

As for the streaming participants evaluation of effectiveness, first place is reached by Action 1., Education activities in schools, with 5 votes. 9 actions with 3 votes each follows in the classification:

The on-site participants evaluated 6 effective actions (2 votes each):

- Action 4. Governance, education and information,
- Action 6. Norms, production and consumption,
- Action 9. Education and research,
- Action 11. Recovery and recycle,
- Action 13. Litter removal from beaches,

<sup>&</sup>lt;sup>1</sup> Actions 37. Total environmental education, 38. Producers training and responsibility 39. Research, haven't unfortunately been evaluated by participants because, during the real time event, inserting them in the general list of actions has not been possible.







- Action 22. Biodegradable material,
- Action 28. Packaging reduction,
- Action 32. Beach voluteers,
- Action 36. Cleaning exam.

12 actions reach the third place with 2 votes each, followed by 11 actions with 1 vote each.

The most feasible actions by the streaming participants are the following 3, with 2 votes each:

- Action 1. Education activities in schools,
- Action 11. Recovery and recycle,
- Action 32. Beach volunteers.
- 2 actions, with a single vote each, follow:
- Action 23. Circular economy,
- Action 36. Cleaning exam.

The on-line users abandon of the final evaluation procedure is probably due to the closing time of the forum, protracting to the didactic activity closing for many virtual groups composed by students.

The overall classification of the first 3 most effective actions for both the participants typology has the 3 following actions, with 5 votes each:







La classifica complessiva delle prime 3 azioni più votate in termini di efficacia da entrambe le tipologie di partecipanti vede al primo posto, con 5 voti ognuna, le seguenti 3:

	MOST EFFECTIVE ACTIONS – OVERALL EVALUATION			
N.	TITLE	DESCRIPTION		
1	Education activities in schools	Children awareness from preschools through class cleaning, recycling of rubbish, symbolic financial penalties or prizes for excellences.		
4 education and a		Implementing fast and effective communication policies, such as visuals or citizens campaigns on posters. Intervening on citizens conscience through training processes.		
6 Norms, production F and consumption r		Favouring the use of biodegradable products by simplifying the norms through incentives and disincentives actions.		

Five actions with 4 votes each follow the previous first 3 ones:

- Action 13. Litter removal from beaches,
- Action 17. Education and information,
- Action 18. Litter removal by beachfront resorts managers,
- Action 20. Training,
- Action 28. Packaging reduction.

9 actions are in closing listed at the third place with 3 votes.

The classification shows that the most effective actions for the forum stakeholders are related to the education and awareness area, even if much importance is given to norms and governance and to the collaboration of various subjects for litter removal and reduction as well.







The overall classification of the first 3 most feasible actions for both the participants typology has Action 1. Education activities in schools at the first position with 5 overall votes, followed by 6 actions with 2 votes each, as listed in the table:

	MOST FEASIBLE ACTIONS – OVERALL EVALUATION				
N.	TITLE	DESCRIPTION			
1	Education activities in schools	Children awareness from preschools through class cleaning, recycling of rubbish, symbolic financial penalties or prizes for excellences.			
11	11 Recovery and Re-coding litter basing on the commodity characteristi				
20 Training Environmental trai		Environmental training in compulsory education schools.			
22 Biodegradable Incentivizing biodegradable materials production		Incentivizing biodegradable materials production.			
25	Communication and Communication and sensitization campaigns capillary I on the territories.				
		Raising awareness of the plastic life cycle economic value.			
		Organization of voluntary groups in the province for periodic beach cleaning.			

Third position is reached by 12 actions with one single vote each.

The overall classifications show that most feasible actions for the forum stakeholders are related to the education and awareness area, even if actions for recovery, recycle and redesign are feasible as well.

Putting the votes of the action on abscissa (effective ranking) and ordinate (feasible ranking), as in the following graph, the 4 quarters will correspond to:

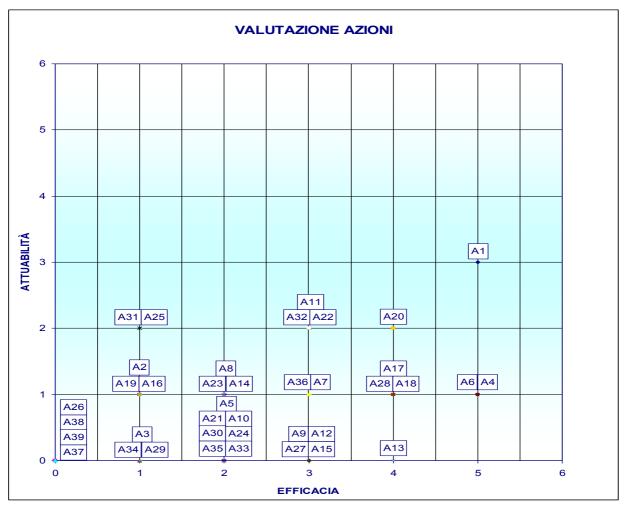
- high feasibility and effectiveness – high right of the graph;







- high effectiveness, low feasibility low right of the graph;
- low effectiveness, high feasibility high right of the graph;
- low effectiveness, low feasibility low left of the graph.



Graph highlighting the proposed actions feasibilty compared with their efficacy

The graph evidently show that just one single action is considered both effective and feasible, that is Action 1. Education activities in schools, because placed on the high right part of the graph. Action 20. follows in second position because considered highly effective and sufficiently feasible.

Considerable evaluations are the ones reached by Action 6. and Action 4., reaching the third position of the classification because sufficiently effective and







feasible. In closing, the group of actions in the high left of the graph, Action 11., Action 22., Action 32., and the group of actions in the low right of the graph, Action 17., Action 28. and Action 18., are sufficiently feasible and effective as well and can be put in the third position of the classification, as in the following table.

	AZIONI PIÙ VOTATE				
POSIZ.	N.	TITOLO	DESCRIZIONE		
1	A1.	Education activities in schools	Children awareness from preschools through class cleaning, recycling of rubbish, symbolic financial penalties or prizes for excellences.		
2	A20.	Training	Environmental training in compulsory education schools.		
3	A6.	Norms, production and consumption	Favouring the use of biodegradable products by simplifying the norms through incentives and disincentives actions.		
3	A4.	Governance, education and information	Implementing fast and effective communication policies, such as visuals or citizens campaigns on posters. Intervening on citizens conscience through training processes.		
3	A11.	Recovery and Recycle	Re-coding litter basing on the commodity characteristics.		
4	A22.	Biodegradable material	Incentivizing biodegradable materials production.		
4	A32.	Beach volunteers	Organization of voluntary groups in the province for periodic beach cleaning.		



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4	A17.	Education and Information	Capillary diffusion of Information on marine species involved into litter ingestion: reinforcing of the educative policy modulating it on the categories of reference.
4	A28.	Packaging reduction	Packaging reduction, widest possible use of recycling material.
4	A18.	Litter removal by beachfront resorts managers	All year long duty of systematic removal of litter from the beaches for beachfront resorts managers.







## CONCLUSIONS

Seas and oceans have a very important role for economic development and the planet' environmental equilibrium. Promoting and developing a sustainable growth is crucial for improving the activities basing their existence on the sea, such as tourism, fishing, aquaculture, navigation, raw material extraction and energy production, but also for guaranteeing a good product quality and marine litter reduction.

Summer 2014 was marked by the enactment of the **Barcelona Convention** for marine environment and coastal areas protection Action Plan, first regional level plan envisaging "legally binding measures on marine litter", as announced by UNEP/MAP. The plan, having a timetable with deadlines within 2020, aims at reaching a "good environmental status" of the sea, starting from prevention, reduction, reuse and recycle, besides of an integrated management of marine and solid litter, which means involving thousands of small countries and cities in coastal areas.

**European Union** has given particular attention to the theme with the Marine Strategy for the Environmental Status of EU Marine Waters (2008/56/EC), the "Blue Growth opportunities for maritime sustainable Growth" [COM/2012/0494 e COM (2014) 254 def.] and the Strategy for Maritime Spatial Planning Directive EU Directive (2014/89/EU). Italy is applying these European Directives turning to all the involved actors: The Livorno Chart adoption in 2014, a document including the Marine Strategy guidelines, is an important step forward towards the Marine Strategy in the Mediterranean.

The **MARLISCO National Forum in Italy** carried out deep works and was leaded by a timetable aiming at developing all the phases, remaining within the timeline and avoiding personal and dispersive considerations. The methodology put everyone on the same interlocution level and eliminated typical conference or workshoplike mono-directional institutional barriers. During coffee and lunch breaks, subjects had the change to know each other, evaluating the reciprocal positions and launching "networks" about marine litter. These networks should be implemented and kept alive to reach concrete results and give answers to the binding themes and problems.







What stands out from this forum could be a useful support both at a European and at a National level as for the implementation of sustainability policies aiming at overcoming the problem and opening to a civil and democratic responsibility, starting from the schools.

Norms, Governance and Education are the key words leading the proposals definition and then the effectiveness and feasibility choice the most. Those actions, produced and elaborated by the Italian National Forum, will be shared with all the participants and also with:

- **European Commission** through a overall report containing the other MARLISCO national fora results, thus because MARLISCO is a European project and therefore directly followed by the EC and the project Consortium composed by 20 partners;
- **Minister of Environment**, because Italy is promoting its own Marine Strategy drafting and the MARLISCO Italian forum could be a useful support to the Minister' policies and technical initiatives and to the expert groups constituted by the Minister and working on the theme;
- UNESCO WWAP, taking part to the forum and aiming at adopting its results with great pleasure because useful contribution to the international community, which will discuss the Post 2015 Agenda objectives.
  "Conservation and sustainable use of oceans, seas and marine resources for sustainable development", included into the Open Working Group proposals as one of the sustainable possible Development objectives (target number 14) to be discussed during the next UN General Assembly.

Ultimately, the **MARLISCO Italian Forum** was a moment of big confrontation among the participants in various forms, and allowed a general awareness increasing about a complex theme, such us marine litter.







# Thanks everyone for your work and contributions!







# PHOTOS OF THE FORUM





















































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## Thank you all!

National Marine Litter Forum / Italian Forum Report

MARLISCO "MARine Litter in Europe Seas: Social AwarenesS and CO-Responsibility"

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