

Marie Skłodowska-Curie Actions
Research and Innovation Staff Exchange (RISE)
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Green Bubbles

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#GreenBubblesRISE



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This document is a summary of the Green Bubbles RISE project, intended for public use and distribution.

Diving, divers. In the present document, “diving” and “divers” are intended as leisure and recreational SCUBA diving/divers (including technical diving/divers). **Professionals.** In the present document, “diver” is intended as any individual possessing a diving certification ranging from entry-level to top-level instructor while “professionals” are only intended as dive guides and instructors of any level whose primary job is in the diving industry.

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1. EXECUTIVE SUMMARY

Recreational SCUBA diving has become a mass leisure activity engaging millions of divers worldwide.

The diving industry generates large direct and indirect revenues for local communities and Marine Protected Areas (MPAs). Other benefits linked to diving include the promotion of environmental and ocean stewardship, contribution to scientific research, fostering social inclusion and personal development. Yet, diving has also negative impacts, due to damage or disturbance of habitats and organisms and to conflicts with local communities for the access to/ use of the same resources, equity issues, or cultural clashes. These aspects clearly relate to the three pillars of sustainability, covering environmental, economic and social dimensions and can only be addressed by a systemic approach.

The central objective of Green Bubbles is to maximise the benefits associated with diving, whilst minimising its negative impacts, thus achieving the environmental, economic and social sustainability of the system. This will be done by:

1. Carefully assessing and modelling the system itself;
2. Developing innovative products based on the issues and needs highlighted by assessment and modelling;
3. Promoting the uptake of such products by the system designing tailored business models and marketing plans. Direct engagement with selected stakeholders (divers, professionals, operators, certification agencies - CAs, MPAs, NGOs) will ensure relevant feedback throughout the project's lifetime, as well as effective uptake of results at the end of the project.

2. SPECIFIC OBJECTIVES

Green Bubbles is a project about diving and its positive as well as negative potential impacts. It was conceived to support the evolution of the diving system towards sustainability and to be implemented together with stakeholders. The project intends to address the issues mentioned above pursuing the following objectives:

1 Put the European diving system in focus, establishing a dialogue with all stakeholders.

Dedicated research with, about and for the European diving industry, parallel comparative work on (much more studied) coral reef diving industry.

2 Thorough segmentation of 3 key components of the system (divers, professionals and operators).

Baseline assessment of internal and external determinants of behaviour. This will inform all the subsequent research work.

3 Enhance the traditional offer by the diving industry.

Assessment of products, business models, marketing approaches. Case studies to design new products that include cultural components or strengthen the nature-based component. Training modules for operators and professionals that offer the new products. Specific marketing plans. Dialogue with stakeholders throughout the work.

4 Bring innovation to the diving industry by introducing diving and Ocean Literacy principles in school curricula.

Content analysis of diving & school teaching material in the light of Ocean Literacy principles. Creation of school teaching plans linking Ocean Literacy + diving to national curricula, and to diving programmes. Dedicated marketing/business plans.

5 Bring innovation to the diving industry by transforming Citizen Science in an opportunity for operators and MPAs.

Analysis of existing Citizen Science projects. (Re)design of projects with clear scientific, managerial, educational, economic goals. Software and hardware, business models and co-management approaches. Design of dedicated marketing plan.

6 Bring innovation to the diving industry by creating a quality label that considers environmental, social and safety aspects.

Analysis of environmental & safety-related behaviour of divers, professionals, operators (in the water and outside). Definition of environmental/safety-related targets and guidelines, labelling system, business models, co-management approaches. Dedicated marketing plan.

7 Bring innovation to the diving industry by developing IT tools supporting the other objectives.

For enhanced offers: gamification and portals. For Ocean Literacy: gamification. For Citizen Science: u/w geo-data tools; novel sensors; one-point-shop portal. For quality label: u/w dive-team control system; boat count system.

8 Design tailored business models and promotional strategies for the adoption of innovation by the system.

Marketing and business models analysis, market segmentation, tailored strategies. Direct engagement with major stakeholders to elicit meaningful dialogue and feedback, promote participation and awareness, foster the adoption of the project's outcomes.

3. EXPECTED IMPACT

The European Blue Growth Strategy is “an initiative to harness the untapped potential of Europe’s oceans, seas and coasts for jobs and growth [...]. It represents the maritime dimension of the Europe 2020 strategy. It can contribute to the EU’s international competitiveness, resource efficiency, job creation and new sources of growth whilst safeguarding biodiversity and protecting the marine environment”. Coastal and maritime tourism are pillars of the Blue Growth initiative. Stemming from this, the EU has presented a new strategy to specifically support them in Europe (March 2014) recognising the potential for sustainable growth and job creation in the sector (almost 3.2 million employees, over 183 million Euros in gross value to be added) but also its weaknesses, including “gaps in data and knowledge, volatile demand, high seasonality, lack of adequate skills and innovation”. The sector also suffers from high fragmentation in SMEs that lack innovation and diversification, may be unable to cope with increased world competition and growing environmental pressure and often struggle to match needed skills with available qualifications. Key to the strategy’s success will be actions that “make the sector’s activities sustainable, preserve natural and cultural heritage, reap significant economic and environmental benefits, and help make the sector more competitive globally”. Other actions include “develop a coastal and maritime focus [...] in EU tourism initiatives including promotional and communication campaigns, [...] stimulate innovative management schemes, [...] seek to improve data availability and completeness in the coastal and maritime tourism sector, promote ecotourism and encourage linking to other sustainability actions, promote strategies on waste prevention, management and marine litter to support coastal and maritime tourism, [...] develop new business models as well as innovative and diversified products”.

The systemic approach of Green Bubbles will:

- provide information so far hardly or not available (eg segmentation)
- work as a blueprint well beyond case studies to support conservationists and administrators
- design management measures, taking into account the operators’ needs
- profit operators helping them to appropriately cater to clients in a quickly evolving and increasingly difficult market.

A more successful diving industry is not only desirable from a socio-economic point of view, but also more likely to be sustainable. Thanks to the parallel work on coral reefs diving, the project will pave the way for application outside Europe. This can be done by identifying ways towards sustainability of diving that promote synergies between stakeholders, and structuring effects especially in terms of governance approaches. Green Bubbles will demonstrate that research in sustainability can support the industry, reinforcing collaboration and mutual understanding.

4. WORK PLAN: Approach and timeline

Green Bubbles is built around five Research & Innovation work packages and lasts from January 2015 until December 2018. The first work package sets the baseline to inform the initial work under the following work packages. They focus on developing specific products starting from complementary baseline analysis, following with product development and testing phases, and concluding with the design of tailored business and marketing approaches. The project puts emphasis on the European diving industry, taking advantage of parallel comparative work on the coral reef one. Some activities will also be carried out on a larger scale (European or global). Indeed, while keeping a global or European perspective in most of its assessment tasks, Green Bubbles focuses on two case study locations for most of product development, testing and for

designing strategies for uptake. This double scale is crucial in ensuring that the whole system is assessed and appropriately segmented, while products are effectively developed and tested in real-case scenarios. The two case studies are highly representative of diving systems in an European and in a coral-reefs context, paving the way for future translation to other locations.

Ponta do Ouro. Located in Mozambique, the Ponta do Ouro Partial Marine Reserve (PPMR), established in 2009, stretches for 86 km and links with the iSimangaliso Wetland Park on the South African side of the Mozambique border. It has an all-year round warm climate with an average of 28 degrees Celsius. Currently ranking top 86th diving place in the world, Ponta do Ouro hosts a number of vulnerable species including turtles, birds, and sharks. Further, the reefs there receive as many as 60 thousand dives yearly.

Portofino MPA. Established in 1999, Portofino MPA is a major diving destination in the NW Mediterranean Sea (45-60 thousand divers/year). The Mediterranean represents about 50% of the Gross Added Value for coastal and marine tourism in Europe. Portofino MPA has been the focus of much research on marine habitats and, more recently, on socio-economic aspects.

5. GREEN BUBBLES CONSORTIUM

The following partners are directly engaged in the Green Bubbles project:

- Università Politecnica delle Marche (academic, Italy).
- Studio Associato Gaia snc (non-academic, Italy).
- UBICA srl (non-academic, Italy).
- Bogazici Uluslararası eğitim danışmanlık merkezi ve ticare - INNOVASUB (non-academic, Turkey).
- Divers Alert Network Europe (academic, Malta).
- Stichting NHTV Internationale Hogeschool Breda (academic, Netherlands).
- North West University (academic, South Africa).
- College of Exploration (non-academic, USA).
- Divers Alert Network Southern Africa (non-academic, South Africa).

Additionally, Green Bubbles is supported by an External Advisory Board consisting of experts from the academia, the industry and international bodies:

- Stefano De Cantis (University of Palermo, Italy).
- Ivana Radic Rossi (University of Zadar, Croatia).
- Roberto Raffaelli (formerly PADI EMEA, UK).
- Lauren Weatherdon (UNEP-WCMC, UK)
- Mehemet Baki Yokes (Halic University, Turkey).

6. CONTACTS

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Social media hashtags:

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