

GREENING THE BLUE ECONOMY

A collection of case studies showcasing the application of Sustainable Consumption and Production principles and practices to Blue Economy sectors in the Mediterranean



Union for the Mediterranean
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الإتحاد من أجل المتوسط



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Regional Activity Centre
for Sustainable Consumption
and Production



CPMR
CRPM



ABBREVIATIONS

BE	BLUE ECONOMY
CPMR	CONFERENCE OF PERIPHERAL MARITIME REGIONS
EU	EUROPEAN UNION
FAO	FOOD AND AGRICULTURE ORGANIZATION
GE	GREEN ECONOMY
GFCM	GENERAL FISHERIES COMMISSION FOR THE MEDITERRANEAN
IMC	INTERMEDITERRANEAN COMMISSION
IUU	ILLEGAL UNREPORTED AND UNREGULATED
MAP	MEDITERRANEAN ACTION PLAN
MSSD	MEDITERRANEAN STRATEGY FOR SUSTAINABLE DEVELOPMENT
PAP/RAC	PRIORITY ACTIONS PROGRAMME REGIONAL ACTIVITY CENTRE
RAC	REGIONAL ACTIVITY CENTRES
RE	RESOURCE EFFICIENCY
SCP/RAC	SUSTAINABLE CONSUMPTION AND PRODUCTION REGIONAL ACTIVITY CENTRE
SCP	SUSTAINABLE CONSUMPTION AND PRODUCTION
SDG	SUSTAINABLE DEVELOPMENT GOAL
SME	SMALL AND MEDIUM ENTERPRISE
UFM	UNION FOR MEDITERRANEAN
UN	UNITED NATIONS
UNIDO	UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

Disclaimer: This publication collects case studies of Sustainable Consumption and Production principles and practices applied to sectors of the blue economy in the Mediterranean region from various existing initiatives, programmes and projects. The information and views set out in this brochure do not necessarily reflect the official opinion of the organizations and donors involved.

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INTRODUCTION

Oceans, seas and marine and coastal resources represent an essential link between every region of the planet. In various ways, they affect the lives of people all over the globe as they are drivers and enablers of national and regional economies as well as a source of survival.

The Mediterranean countries have engaged in making the best use of the potential of the blue economy associated to their shared sea to promote growth, jobs and investment, while reducing poverty, safeguarding healthy and clean seas, and developing a clear vision for the sustainable and integrated development of marine and maritime sectors.

Maritime and land-based activities in the Mediterranean region, along with the progressively more artificialized coastline, are at the origin of a wide spectrum of pressures affecting marine and coastal ecosystems. Current patterns of economic development in the region are characterised by resource-intensive production processes as well as consumption intensive lifestyles both of which contribute to resource scarcity, pollution, waste generation, and greenhouse gas emissions. A large part of the pollution in the Mediterranean is caused by inefficient industrial processes and unsustainable management of waste.

Cost-effective opportunities for countries to reverse the existing unsustainable production and consumption patterns and develop eco-efficient economies do exist. The way in which goods and services are designed, produced, sold and consumed can and need to be redesigned with the objective to drive the revitalization of industrial and socio-economic development - including blue economy relevant sectors - towards zero-waste, low-carbon, resource efficient and socially inclusive solutions.

To tackle this overall challenge, several international and regional organizations, including the Union for Mediterranean (UfM), the United Nations Industrial Development Organization (UNIDO), the UN Environment / Mediterranean Action Plan (MAP) and its Regional Activity Centres (RACs), namely SCP/RAC, Plan Bleu/RAC and PAP/RAC, the Intermediterranean Commission (IMC) of the Conference of Peripheral Maritime Regions (CPMR), and the General Fisheries Commission for the Mediterranean (GFCM) of the Food and Agriculture Organization (FAO) have closely collaborated, within their respective mandates and ongoing partnerships, to produce this brochure, gathering a collection of case studies showcasing the application of Sustainable Consumption and Production principles and practices towards a sustainable Blue Economy (BE) in the Mediterranean region.

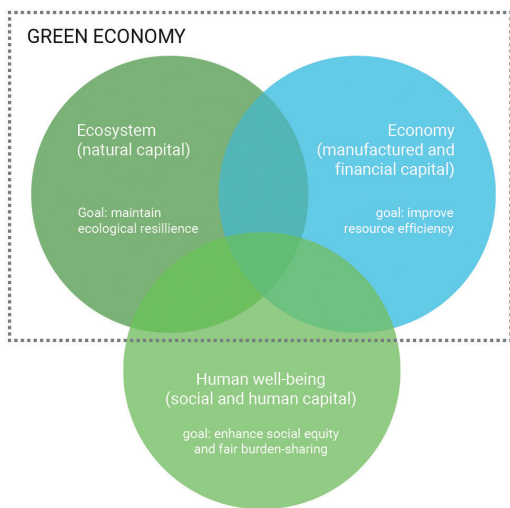
GREENING THE BLUE ECONOMY: A COLLECTION OF CASE STUDIES SHOWCASING
THE APPLICATION OF SUSTAINABLE CONSUMPTION AND PRODUCTION PRINCIPLES
AND PRACTICES TO BLUE ECONOMY SECTORS IN THE MEDITERRANEAN

SHIFTING TO SCP PATTERNS TO ACHIEVE SUSTAINABLE GREEN AND BLUE ECONOMY



GREENING THE BLUE ECONOMY: A COLLECTION OF CASE STUDIES SHOWCASING THE APPLICATION OF SUSTAINABLE CONSUMPTION AND PRODUCTION PRINCIPLES AND PRACTICES TO BLUE ECONOMY SECTORS IN THE MEDITERRANEAN

Twenty years after the Earth Summit on Environment and Development held in Rio de Janeiro in 1992, the UN Rio+20 Conference acknowledged the need to shift towards a Green Economy in order to eradicate poverty and to realise sustainable economic, social and environmental development. The UN developed a working definition of a Green Economy as “one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities”.



Green Economy framework . Source: European Environmental Agency

In parallel, the **Sustainable Blue Economy** concept was further promoted under the UN framework stressing the **vital importance of seas and oceans to food security and livelihoods for people living in coastal areas and incorporating the true value of the natural capital of the seas and oceans into all aspects of human economic activity.**

The adoption of Sustainable Consumption and Production patterns as a means of achieving a Green and Blue economy has been recognized as an integral part of the 2030 Agenda for Sustainable Development. Sustainable Consumption and Production is reflected in Sustainable Development Goal (SDG) 12 (*Responsible consumption and production patterns*) while Oceans and Seas are specifically tackled under SDG 14 (*Life under Water*).

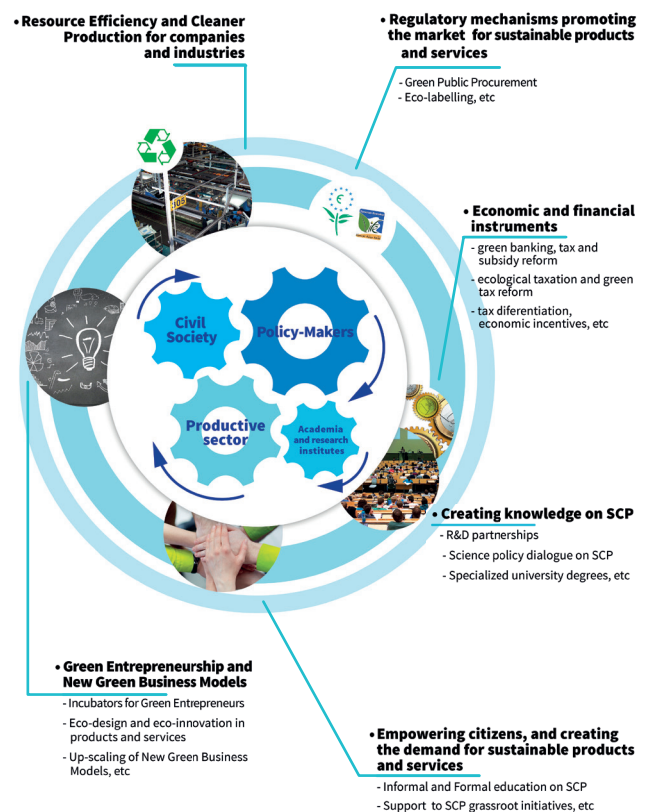


UN Sustainable Development Goals. Source: UN Global Compact

SCP represents one of the approaches which, if applied to the Green and Blue Economy, could constitute a turning point in the way sustainable development is addressed, as it not only considers the question of where and what kind of pollutant emissions and environmental degradation take place but also why they are generated. The SCP approach involves analysing the patterns of producing and consuming goods and services, identifying how and why those patterns contribute to environmental degradation and the generation of environmental and health risks. At the same time, it suggests implementing policy, technical, economic and information measures in order to shift to SCP.

What do we mean by SCP?

Main SCP measures and stakeholders



Main SCP mechanisms and stakeholders. Source: EU funded SwitchMed Project www.switchmed.eu

Whether applied to Green or Blue Economy, SCP is acquired by collectively implementing diverse actions, closely involving policy makers, the business community and civil society to reshape the way in which products and services are produced and utilized and to redirect the renewal of manufacturing and socio-economic expansion towards non-pollutant, no-waste, low-carbon and resource efficient economies.



THE BLUE ECONOMY IN THE MEDITERRANEAN

In the Mediterranean context, in **2015**, the **43 countries of the Union for the Mediterranean (UfM)** adopted a **Ministerial Declaration on Blue Economy**. The Declaration stresses the need for the Mediterranean region to make the best use of the potential of the blue economy, and provides the political mandate to improve maritime governance and create an environment conducive to job creation, innovation and knowledge-based business opportunities through the development of key maritime sectors in the Mediterranean. The Declaration highlights **the importance of clean and healthy seas as drivers of sustainable development within national and regional economies**, underlining that maritime sectors must be developed in a coordinated manner, bearing in mind the impacts of uneven economic development, disparities in research and innovation capacity, skills mismatch of the labour force, slow uptake of clustering and networking and limited access to finance.

Ministers recognized the importance of reaching an agreed definition of the blue economy, which may include, inter alia,

“... THE SET OF HUMAN ACTIVITIES DEPENDING ON THE SEA AND/OR UNDERPINNED BY LAND-SEA INTERACTIONS IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT, AND NOTABLY INCLUDING INDUSTRIAL AND SERVICE SECTORS SUCH AS AQUACULTURE, FISHERIES, BLUE BIOTECHNOLOGIES, COASTAL AND MARITIME TOURISM, SHIPPING, SHIP-BUILDING/REPAIR, PORTS, OCEAN ENERGY AND MARINE RENEWABLE ENERGY,

INCLUDING OFFSHORE WIND, WHICH ARE AMONG THE MAIN TRADITIONAL AND EMERGING ECONOMIC MARITIME SECTORS IN THE MEDITERRANEAN SEA BASIN.”

The Declaration further states that “...**sustainable consumption and production (SCP) and resource efficiency (RE) are prerequisites for a blue, sustainable development as they allow economic growth to be decoupled from environmental depletion**”.

UN Environment/MAP and three of its RACs, namely Plan Bleu, SCP/RAC and PAP/RAC proposed the following definition of the Blue Economy: “**a low polluting, resource-efficient and circular economy based on sustainable consumption and production patterns, enhancing human well-being and social equity, generating economic value and employment, and significantly reducing environmental risks and ecological scarcities.**”

The blue economy allows preserving Mediterranean healthy marine and coastal ecosystems and ensures the continuous delivery of goods and services for present and future generations. Progress towards a successful blue economy relies on the sustainable development of key socioeconomic activities: Fisheries and aquaculture; Tourism and recreational activities; Maritime transport and port activities; Bio-prospecting or exploitation of biological resources; Exploitation of renewable energy sources”.

SCP IN THE MEDITERRANEAN

The **UfM Ministerial Declaration on Environment and Climate Change** was adopted in May 2014. One of the pillars of the green economy package addressed by the Declaration was the “**shift towards sustainable consumption and production patterns for a green and low emission economy**” the two other pillars addressed the depollution of the Mediterranean Sea and the impact of climate change in the Mediterranean region. The SCP was further integrated into the **2015 UfM Ministerial Declaration on Blue Economy** which stressed specifically the need to **promote sustainable consumption and production patterns in the Mediterranean region**.

Furthermore, a specific **Regional Action Plan on Sustainable Consumption and Production in the Mediterranean** was officially adopted by the Contracting Parties to the Barcelona Convention at their 19th Ordinary Meeting in February 2016. This strategic framework gives clear guidelines on the actions that should be developed in the region to shift towards sustainable consumption

and production patterns, to long-term sustainability and to new paradigms in the use of resources towards a circular economy approach. The Regional Action Plan is structured around four key priority sectors, of particular importance for the Mediterranean region: 1) food, fisheries and agriculture 2) tourism 3) goods manufacturing and 4) housing and construction.

The SCP Regional Action Plan is aligned with the Mediterranean Strategy for Sustainable Development 2016-2025 (MSSD) vision and objectives, which recommends strategic directions and creates a basis for the application of SCP to Green and Blue Economy in the Mediterranean region.

Based on existing policy frameworks and instruments, the implementation of SCP practices in the Mediterranean is on-going and already showing positive results that have the potential to be replicated and scaled up in Blue Economy sectors.

MSSD Objective	Strategic Direction
Objective 5 Transition towards a Green and Blue Economy	5.1: Create green and decent jobs for all, particularly youth and women, to eradicate poverty and enhance social inclusion 5.2: Review the definitions and measurement of development, progress and well-being 5.3: Promote sustainable consumption and production patterns 5.4: Encourage environmentally-friendly and social innovation 5.5: Promote the integration of sustainability principles and criteria into decision-making on public and private investment 5.6: Ensure a greener and more inclusive market that integrates the true environmental and social cost of products and services to reduce social and environmental externalities

Table 1: MSSD Objective 5: Strategic directions towards a transition to green and blue economies in the Mediterranean.
Source: UN Environment / MAP, MSSD 2016-2025

- *Blue economy for a healthy Mediterranean – Measuring, Monitoring and Promoting an environmentally sustainable economy in the Mediterranean region. Scoping Study. January 2016. Plan Bleu, SCP/RAC, PAP/RAC. Blue Economy project funded by MAVA.*
- *Regional Action Plan on Sustainable Consumption and Production in the Mediterranean.*
<https://www.switchmed.eu/en/e-library/regional-action-plan-on-sustainable-consumption-and-production-in-the-mediterranean>

GREENING THE BLUE ECONOMY: A COLLECTION OF CASE STUDIES SHOWCASING
THE APPLICATION OF SUSTAINABLE CONSUMPTION AND PRODUCTION PRINCIPLES
AND PRACTICES TO BLUE ECONOMY SECTORS IN THE MEDITERRANEAN

APPLICATION OF SCP PRINCIPLES AND PRACTICES TO RELEVANT BLUE ECONOMY SECTORS

(CASE STUDIES IN THE MEDITERRANEAN REGION)



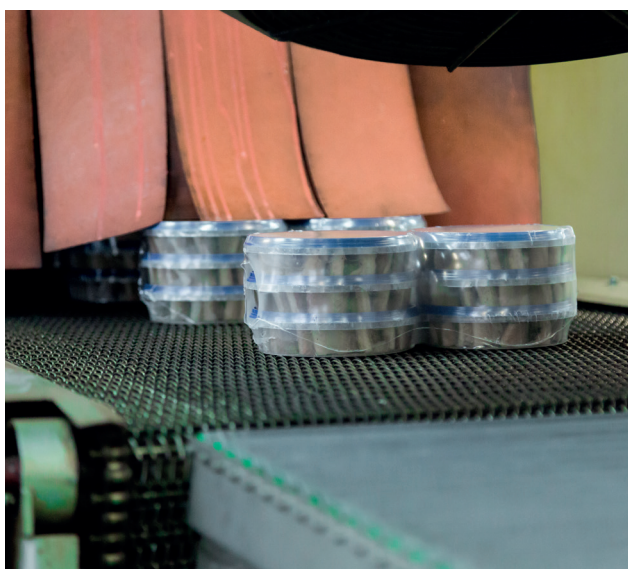
SUSTAINABLE PRODUCTION



SUSTAINABLE PRODUCTION

CUMAREX

FISH CANNING INDUSTRY (MOROCCO)



Cumarex is a Moroccan company operating in the fish canning sector. The main products are canned tuna, mackerel, and melva. The production site, established in 1992, is located in the **industrial area of Martil in Tétouan, employing 320 people and generating a turnover of approximately USD 25M**. The company was supported by the UNIDO Med TEST project in order to identify opportunities to implement an efficient use of resources (water and energy), improve production processes, valorise fish solid waste and minimize liquid effluents, thus reducing the investment and operational costs of the future wastewater treatment plant.

“THANKS TO THE MED TEST EXPERIENCE OUR COMPANY HAS TAKEN A STEP TO IMPLEMENT CLEANER PRODUCTION AND IMPROVE OUR ENVIRONMENTAL PERFORMANCE”,

- Hassan EL BOUZIDI, Director General

At the beginning of the project the company was certified ISO9001, it has obtained the IFS V05 and BRC V05 certifications during the course of the project. Environmental benefits included reductions of the wastewater pollution load, due to minimized material losses entering the drain system, and recovery of edible oils from the cleaning of process equipment.

The implemented actions included: installation of water sub-metering at each process, reduction of overflowing at the level of the fish washing tanks, recovery of steam condensate, use of nozzles and spray guns for floor cleaning, and a leak detection programme for the water softening unit and equipment. The use of chemicals has been reduced by implementing a monitoring system at each workstation. The company decided **to realize a large investment project to extract protein and produce fish meal from fish waste, which roughly represents 60% of the incoming raw material**. A procedure to handle non-conformities and minimize waste generation at source has also been put in place within the existing ISO 9001 and IFS management systems.

Resource efficiency applied to the fish processing industry can contribute to preserving marine resources by enabling companies to cost effectively reduce their discharge of organic pollution (BOD5/COD) to the sea, given that these industries are often located close to the seashore and discharge directly or indirectly to the sea. Moreover, the valorisation of fish waste, which on average represents 50% of raw material inputs to the fish processing industry, offers a concrete example of the implementation of circular economy models in the sector, enabling the recovery of valuable marine resources (fish protein) for the aquaculture industry.

Source and contacts: www.unido.org

• MED TEST is a UNIDO green industry initiative to promote sustainability and competitiveness in the private sector in Egypt, Morocco and Tunisia. MED TEST was sponsored by the Global Environment Facility, the Italian Government and the MedPartnership

SUSTAINABLE PRODUCTION

DISTRICT OF FISHERIES AND BLUE GROWTH OF MAZARA DEL VALLO (ITALY)



Over a decade ago the companies engaged in the fishing industry in the Sicilian Fishing District in Mazara del Vallo felt the need to create a network of relationships that favoured communication, collaboration, flexibility and sustainable development, and so created the Production District of Fisheries (COSVAP).

Today, the District represents a cluster of over **122 companies** from shipbuilding, fishing, aquaculture, and seafood processing to fishing facilities and preserving, and distribution to research and innovation institutes. **350 fishing boats, 4 shipyards, 10 fish product processing industries, 36 satellite companies, 16 agencies and cultural centres, 7 universities and research centres, 60 million EUR of export and over 400 million EUR of sales volume** - these are some of the numbers that

make Mazara special in the maritime sector, in a region suited to coastal tradition that is Sicily.

The District has also **associated public bodies and research centres, trade associations and consortia of manufacturers, the Chamber of Commerce of Trapani, the Science and Technology Park of Sicily, Palermo University, as well as financial institutions.** It offers companies in the supply chain services in support of business organisation and management decisions, allowing for a new growth path in harmony with environmental and human needs.

Since 2007 the District, with the support of the Observatory of Mediterranean Fishing, has put the Blue Economy approach at the centre of its work, providing a new trajectory for the Sicilian fishing industry. With the BE vision, which emphasises the central role of the sea in the process of sustainable development, the District has become one of the main protagonists of the BE in the Mediterranean. This is the reason why the **District of Fisheries has expanded its wording to “District of Fisheries and Blue Growth”**, constituting an operational point of reference for operators, companies and organisations, research institutions and fisheries sectors of the riparian countries.

Source and contacts: www.distrettopescaecrescitablui.it



SUSTAINABLE PRODUCTION

TNAGEM

SUSTAINABLE ARTISANAL FISHING AND ECO-TOURISM (TUNISIA)



The unspoiled and picturesque Kerkennah islands are located in the south-eastern coast of Tunisia. Fishing is one of the most important natural and cultural heritages of the archipelago. **TNAGEM**, which was initiated in 2015, **aims to safeguard an artisanal fishing technique called Charfiya.**

This ancestral technique involves fishing with palm leaves that are cut and arranged in water in V-shapes, forming a path. These paths lead the fish to the capture chamber, the traps (named drina in Arabic), where fishermen collect the different types of trapped fish.

Believing that Kerkennah has the potential to become a destination of interest for visitors, the TNAGEM initiative is dedicated to the development and promotion of ecotourism and sustainable artisanal fishing in the archipelago.

"IT IS BY REVITALIZING AND UPGRADING THIS FISHING TECHNIQUE, AS WELL AS OTHER ARTISANAL FISHING TECHNIQUES WHICH ARE RESPECTFUL TO THE ENVIRONMENT, THAT THE KNOW-HOW OF THE LOCAL FISHERMEN AND THE CULTURE OF THE ARCHIPELAGO CAN BE MAINTAINED OVER TIME".

- Mr. Morsi Feki, Project Manager

TNAGEM represents a contribution to the sustainable management of resources and allows a group of artis-

anal fishermen of Ouled Ezzedine in the Kerkennah islands a **better quality of life by means of Ecotourism, responsible management of fishing and better use of natural resources.** The participatory approach of this initiative involves artisanal fishermen and various other stakeholders, and is an example of integrated coastal zone management. TNAGEM contributes to the economic development and the efficient management of the natural resources of the Kerkennah Islands.

Source and contacts: **EU funded SwitchMed Programme**
- www.switchmed.eu - www.theswitchers.eu

Switchers are individuals, enterprises or civil society organizations that have been able to develop eco and social innovative solutions making an impact for sustainable living within the Mediterranean region and contributing to the switch to sustainable consumption and production patterns. These change-makers in the Mediterranean region are active in several sectors including, amongst others, organic food and agriculture, sustainable tourism, renewable energy and energy efficiency. There are already over 200 Switchers that have joined the SwitchMed project and this family is rapidly growing.

The Switchers platform has been developed by the Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC) in the framework of the SwitchMed initiative. SwitchMed is an initiative that supports and connects stakeholders to scale up eco and social innovations in the Mediterranean; the aim is to provide them with tools and connections to supporting partners for eco-innovative businesses, green entrepreneurship, job creation and youth employment, in order to achieve productive, circular and sharing economies in the Mediterranean. SwitchMed supports industry, emerging green entrepreneurs, civil society and policy makers through policy development, demonstration activities and networking playing a key role for development of inclusive green economies and green growth in 8 target countries (Algeria, Egypt, Israel, Jordan, Morocco, Lebanon, Palestine and Tunisia).

SwitchMed is a regional programme funded by the European Union (EU) and collaboratively coordinated by the EU, United Nations Industrial Development Organization (UNIDO), UN Environment Mediterranean Action Plan (MAP), Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC) and UN Environment Economy Division.

Further information: www.theswitchers.eu and www.switchmed.eu

SUSTAINABLE PRODUCTION

THE MARITIME AND MARINE CLUSTER OF ANDALUSIA (SPAIN)



The geographical crossroads that Andalusia represents, acting as a link between the Mediterranean Sea and the Atlantic Ocean, gives a privileged economic position to the region in the global environment. Half a century ago Andalusian companies and institutions decided to group together in order to create an organization to serve the interest of the region's sustainable development, social cohesion and environmental protection. This led to the creation of the **Maritime and Marine Cluster of Andalusia (MMCA)**

The MMCA, which currently operates in the provinces of Huelva, Seville, Cadiz, Malaga, Granada and Almeria, comprises more than **50 innovative companies** with high technological standards that operate in **fishing, aquaculture, shipbuilding, maritime transport, yachting, marine energy, maritime research and training, port activities, as well as in maritime tourism and underwater archeology.**

The objective of this cluster is the **sustainable development and promotion of the Andalusian marine and**

maritime sectors, greater competitiveness of the whole cluster, as well as the creation and development of a legal framework to support the economic activities by ensuring employment creation and environmental sustainability of the region. By closely following the **Blue Economy principles** which conceptualise seas and oceans as “**development spaces**” where spatial planning integrates the sustainable use of marine resources and environmental conservation, the MMCA is advancing with the implementation of its development strategies.

The MMCA also collaborates with several Andalusian universities, including the *University of Malaga* and the *University of Cadiz*, the *Andalusian Technology Park*, the *Campus of Excellence of the Sea (CEI·Mar)*, as well as with other scientific centres of the region. It is also strongly supported by the business community of the region, and particularly, by the **Andalusian Businessmen's Confederation** which according to its president, Mr. Gonzalez de Lara, “**closely cooperates with MMCA to support this key cluster and develop projects that build a more prosperous Andalusia with the sea as the protagonist**”.



One of the centres associated to the Cluster is **Aula del Mar** that has been actively involved in the **conservation of endangered marine species**. Recently, in collaboration with the Ministry of the Environment of the Andalusian Government, the **Centre for the Recovery of Threatened Marine Species** was founded. Having jurisdiction throughout the coast of Andalusia, the organization has **recovered hundreds of sea turtles and cetaceans.**

Source and contacts: www.cmma.eu

SUSTAINABLE PRODUCTION

LEBANESE DEVELOPERS

ABANDONED FISHING NETS & GEAR RECYCLING (LEBANON)



The impact of artisanal and commercial fishing lasts long after the final boat has moored at the end of a day's fishing. Careless fishing can result in the accidental accumulation of discarded nets, hooks, and lines in the sea and on the shore side, waiting to ensnare marine life in the months and weeks to come. The damage caused by discarded nets is so acute it has received an eerie name: **ghost fishing**.

Lebanese Developers inadvertently stumbled on the trouble caused by these discarded nets. The NGO had been operating vocational training sessions across the country since 2006, and by early 2017 had expanded its scope to train women in Northern Lebanon to produce and repair fishing nets.

Dr Roy Abijaoude at Lebanese Developers explains:

"WE SOON REALIZED THAT WHENEVER THERE WAS A PROBLEM, THE FISHERMEN WOULD THROW THE OLD NET INTO THE WATER, OR ONTO THE SHORE."

He recalls seeing old nets washed up and wrapped in the sandy shore. "That was when we said we should be doing something about this."

Dr. Abijaoude is a realist: for a project like theirs to be sustainable, he understood they needed to get buy-in from the fishermen themselves.

Studies suggest that **fishermen in Lebanon and the rest of the Mediterranean Basin** are aware that **ghost nets presented a serious problem**, but they were often less aware of the exact consequences and how to reduce them when going about their daily livelihoods.

The NGO has started a series of awareness sessions with local fishermen, where they reveal the damage caused by nets discarded at shore and sea. "We tell them how the fish can get caught in the abandoned nets, and how the fish can eat the nets and plastic — then you feed your family with that same fish."

Abijaoude says:

"TOGETHER WITH A FISHERMEN COOPERATIVE, THEY HAVE SET UP A SPACE WHERE FISHERMEN CAN DISPOSE OF THEIR OLD NETS, KNOWING THEY WILL BE COLLECTED FOR RECYCLING, RATHER THAN END UP AS MARINE LITTER. THESE COLLECTION POINTS CAN PLAY A KEY ROLE IN FRONTLINE PREVENTION SINCE A MAIN REASON NETS ARE DISCARDED IS BECAUSE IT IS A SIMPLER SOLUTION."



The goal of Lebanese Developers is to make it easier to recycle than to pollute. The lack of inherent motivation to recycle is where incentivisation comes into play. Currently, old nets are either collected from the fishermen's cooperative or plucked off the shore by Lebanese Developers' Outreach Coordinator. After collection, the nets are cleaned and shredded using a machine bought and imported by the NGO for the project. Once shredded, the old net is put into bags and given to factories that produce nylon pellets which can be used for electrical wiring, food containers, and other items.

Lebanese Developers makes a small amount of money from the shredded net it sells, and this is where the NGO has the flexibility to incentivise the collection and recycling of old nets.

Abijaoude says:

"WE WOULD PREFER NOT TO PAY FISHERMEN CASH, BUT WE HAVE BEEN LOOKING AT SOME SORT OF IN-KIND INCENTIVES LIKE FISHING NETS AND OTHER EQUIPMENT... WE NEED TO SEE WHAT THEIR REACTION WOULD BE SO THAT THEY ACTUALLY CONTINUE TO RECYCLE."

While this project of Lebanese Developers is the first

of its kind in Northern Lebanon, there are plenty of examples worldwide of recycled fishing nets yielding creative results. From skateboards and sunglasses to high fashion, entrepreneurs have proven that one industry's waste is another's treasure.

A key area of growth for the project is to expand net collection beyond shores.

Abijaoude says:

"THE SECOND PART OF OUR PROJECT WOULD BE FINDING A WAY TO CLEAN AND REMOVE THE OLD NETS FROM THE OCEAN FLOOR. NOTING THE LARGER FINANCIAL COMMITMENT THAT WOULD COME WITH THE USE OF BOATS AND SCUBA DIVERS. UNTIL WE CAN DO THAT, WE ARE FOCUSED ON PREVENTION."

For Abijaoude, this is what it takes — **one mindset shift**, whether it is for a young person or a fisherman. **One net collected, one piece of trash picked off the shore, is one less present to pollute the Mediterranean.**

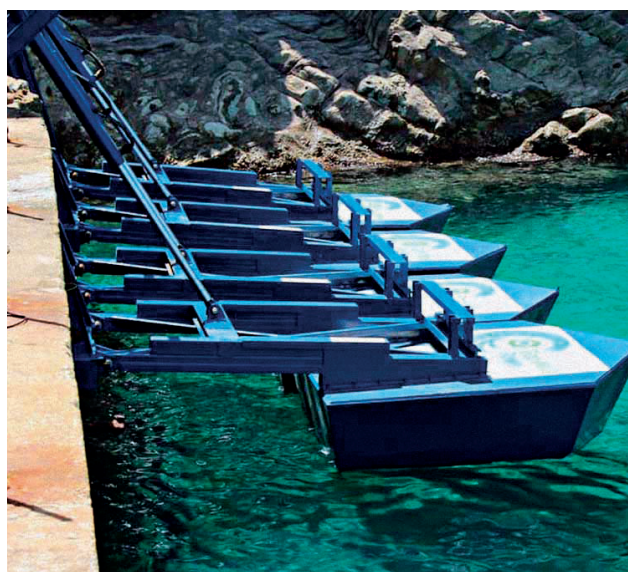
Source and contacts: **EU funded SwitchMed Programme**
– www.switchmed.eu – www.theswitchers.eu

SUSTAINABLE PRODUCTION

ECO WAVE POWER

RENEWABLE MARINE ENERGY

(ISRAEL)



While the solar and wind energy industries around the globe have flourished over the past few decades, large-scale wave energy technology solutions have not yet realised their full potential in bringing clean renewable energy to people living in coastal areas.

One of the pioneers in the field is the company Eco Wave Power. The company developed patents that are capable of producing large amounts of affordable **zero-emission renewable power**. One of company's first pilot plants is in the Israeli port of Jaffa which serves as a 10kW research and development power station. The floating systems are built on existing breakwaters and sea walls. The rise and fall of the waves create pressure, causing a generator to spin and produce clean electricity.

"EVERYONE SHOULD DO THEIR PART. IF YOU HAVE AN IDEA AND IT'S YOUR TRUE PASSION, THEN YOU SHOULD GO FOR IT. PASSION IS THE GREATEST RENEWABLE ENERGY SOURCE."

- Inna Braverman, Co-founder & CEO

In May 2016, Eco Wave Power launched its first full-scale project, a wave energy plant in Gibraltar. **A 5MW capacity plant currently provides the initial 100kW of electricity for communities, businesses, and homes in Gibraltar.** This is the first commercial wave energy array in Europe that is selling electricity to the electrical grid through a PPA (Power Purchase Agreement). **Upon completion of the whole 5MW, this site will provide Gibraltar 15% of its overall consumption of electricity,** putting the territory well in line with the EU Renewable Energy Directive target of 20% renewable energy by 2020. The government of Gibraltar hopes that wave energy will reduce their CO2 emissions long-term and help the peninsula reach its goals of carbon neutrality.

"IF WAVE ENERGY TECHNOLOGY COULD BE DEVELOPED AND SCALED-UP INTO A SUCCESSFUL GLOBAL BUSINESS, THEN HUNDREDS OF THOUSANDS OF HOMES COULD BE POWERED THROUGH RENEWABLE ENERGY."

- Inna Braverman, Co-founder & CEO

Eco Wave Power is exploring opportunities to expand their Jaffa wave energy plant to provide more electricity for homes and businesses within Israel. **The company currently has projects of more than 111MW in the pipeline** and is looking to develop projects in other parts of the Mediterranean, as well as beyond the sea borders.

Source and contacts: **EU funded SwitchMed Programme**
- www.switchmed.eu - www.theswitchers.eu

SUSTAINABLE PRODUCTION

AGRIMATIC

SUSTAINABLE AGRICULTURE AND AQUACULTURE (AQUAPONICS)

(EGYPT)



Having survived droughts and with a fast-growing population in the highly fertile Nile Delta, while almost 95% of the country is desert, Egypt is facing a growing scarcity of freshwater resources. To this end, some **entrepreneurs are using technology as a platform for change in the agricultural industry** while solving some of these problems.

One local company that has proved successful is Agrimatic, established in 2014. The start-up **developed a soil-less agriculture system**, substituting soil with a water-based environment and **saving up to 85% of the water** used in traditional agriculture.

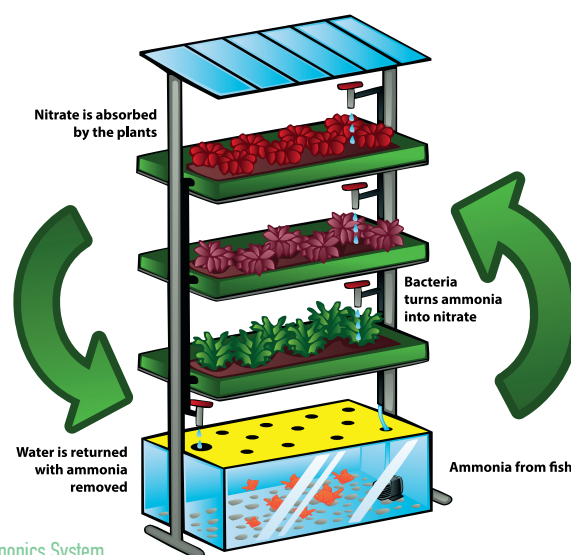
The above method is known as **Hydroponics**, and when merged with **Aquaculture** (farming of fish), as **Aquaponics** – a true example of circular economy in practice.

The **method uses a “clean and green” approach of growing fish and plants together in a closed system that**

mimics nature, where plants get their nutrition from the treated waste of the fish. The cycle starts at water tanks, where fish are bred and mechanical filters turn their waste into nutrition for pre-seeded plants. Plants float on water inside greenhouses with their roots submerged in the nutrient solution that after being sterilized returns clean to the fish tanks to close the cycle.

Increasingly automated, the production process developed by the company involves **0% chemicals, antibiotics, pesticides and fertilizers**. Its **crops grow 250% faster** and **yield all-year-round 7-10 times more** compared to regular farming.

Source and contacts: **EU funded SwitchMed Programme** – www.switchmed.eu - www.theswitchers.eu



Aquaponics System

SUSTAINABLE PRODUCTION

ASSOCIATION DE GESTION INTÉGRÉE DES RESSOURCES (AGIR) INTEGRATED RESOURCE MANAGEMENT ASSOCIATION (MOROCCO)



The Mediterranean marine and coastal ecosystems are unique and rich in biodiversity. At the same time, they are finite and fragile. The Moroccan Integrated Resource Management Association (AGIR) contributes to the conservation of marine ecosystems, making local fishing socially and environmentally sustainable.

*"FISHERMEN UNDERSTAND NATURE, AND TOGETHER
WE WILL FIND SOLUTIONS TO PRESERVE IT AND TO ENSURE
ITS AND OUR FUTURE."*

- Mr. Nibani Houssine, President of AGIR

AGIR has developed and is implementing **multidisciplinary awareness and training programmes for nearly 3000 fishermen** who were able to raise their voice against illegal fishing and contribute to the restoration of marine ecosystems and the sustainability upon which the entire local community depends.

The training teaches and promotes **sustainable management of marine resources, as well as explaining the advantages and providing practical support to fishermen** who want to organise themselves in cooperatives, as a means of management and promotion of artisanal fishery products.

The association's decision-making process takes into consideration the environment, financial viability and the social dimension. Over the years, this approach has clearly proven its power, as the cooperative's members **enjoy increased fish catches without increasing fishing effort, realise the benefits of professional marketing of artisanal fishery products and generate more income for themselves and their families.**

Fishing activities supported by AGIR show a clear path towards sustainability for the entire sector. The initiative provides high potential for scaling and replication in other regions of the country and beyond its borders.

Source and contacts: **EU funded SwitchMed Programme**
- www.switchmed.eu - www.theswitchers.eu

SUSTAINABLE PRODUCTION

DAR ZAGHOUAN

SUSTAINABLE ECOTOURISM (TUNISIA)



Not far from Tunis is the city of Zaghouan, famous for its springs and fresh water. This is where Dar Zaghouan, the first farm and ecological holiday accommodation in Tunisia, was established back in 2006. The company seeks to put the concept of the circular economy for the efficient management of energy, water and waste into practice, aiming to raise awareness among visitors and contribute to spreading the circular economy model throughout the country and beyond its borders.

"SINCE I FIRST LAUNCHED MY ECOTOURISM PROJECT, I HAVE ALWAYS THOUGHT ABOUT THE ENVIRONMENT AND HOW TO RAISE AWARENESS AMONG TUNISIAN AND FOREIGN CUSTOMERS ABOUT SUSTAINABILITY AND THE SAFEGUARDING OF FLORA AND FAUNA. THE WORLD HAS CHANGED IN RECENT YEARS; CUSTOMERS ARE INCREASINGLY DEMANDING WITH REGARDS TO WASTE RECOVERY, RENEWABLE ENERGY AND THE CIRCULAR ECONOMY."

- Mr. Skander

Mr. Skander engaged local artisans, who worked on recycled wood, olive pomace and used tiles that were entirely reintegrated into the construction site of the eco-chalet. **Waste water from showers and sinks is redirected, after treatment, to the organic vegetable garden.**

The project contributes to one of the axes (tourism and agri-food industry) of the newly developed Tunisian SCP National Action Plan. Since 2016, the SwitchMed programme has been supporting Mr. Skander's efforts with a technical study on the efficiency of resources in his establishment, and by strengthening his international reach through international ecotourism certification. As reported by SwitchMed, thanks to an eco-audit and technical support to build the touristic Eco-chalet, **Dar Zaghouane has already achieved a 30% reduction in consumption of resources (water, electricity) and created 11 green jobs which represent 50% of income for the concerned households.**

Source and contacts: **EU funded SwitchMed Programme**
- www.switchmed.eu - www.theswitchers.eu

SUSTAINABLE PRODUCTION

ECONCRETE

MARINE INFRASTRUCTURES

(ISRAEL)



Marine infrastructure, such as coastal defence structures, marinas, and ports, create severe stress on natural ecosystems through habitat degradation, pollution and coastal erosion near urbanised shorelines. Coastal and marine infrastructure based on prevalent surface designs and concrete compositions, typically lead to reduced biodiversity. In light of the current state of coastal zones and in the face of predictions of further coastal development in future years, many **countries are enacting and enforcing regulations aimed at mitigating human-induced environmental damage, calling for solutions that will decrease the ecological footprint of coastal projects.**

An Israeli company EONcrete has developed a series of **innovative concrete products designed to enhance the biological and ecological value of coastal and marine infrastructure**, while increasing their operational life span and stability. By integrating environmentally sensitive technologies into the design and construction of coastal and marine infrastructure, the company aims to harness natural processes for **ecological enhancement** [habitat addition by designed bio-habitats, nursing grounds, etc.] and **reduce the structures' ecological footprint** [30-46% reduction in GHG emissions, integration of recycled materials and carbon sequestration by enhanced floral activity].

The application of the company's technology and products is diverse: from ecological armouring units for coastal defence to enhanced seawalls and bio-active walls.

EONcrete's project in the port of Haifa where the company deployed nearly 40 tons of ecological **cube-shaped armouring units, demonstrates the ability to create bio-diverse habitats** in an environment that incorporates massive use of concrete armouring units.

EONcrete's terrestrial **bio-active wall tiles that induce rapid plant wall coverage** were chosen to cover the courtyard walls of the new state comptroller building in Jerusalem.

*Source and contacts: EU funded SwitchMed Programme
– www.switchmed.eu – www.theswitchers.eu*

GREENING THE BLUE ECONOMY: A COLLECTION OF CASE STUDIES SHOWCASING
THE APPLICATION OF SUSTAINABLE CONSUMPTION AND PRODUCTION PRINCIPLES
AND PRACTICES TO BLUE ECONOMY SECTORS IN THE MEDITERRANEAN

SUSTAINABLE PRODUCTION

SOLVAY ALEXANDRIA

SODIUM CARBONATE (SASC)

(EGYPT)



SASC is a large size, chemical company owned by the multinational Solvay Belgium. The company produces light and dense sodium carbonate, pure sodium bicarbonate and calcium oxide. In 2011, the company decided, with the support of UNIDO, **to identify opportunities for increasing resource efficiency by solving some existing problems** which mainly include: **high water consumption**, and **materials & energy losses**. At the start of the project the company was already certified ISO 9001 and had plans to establish a management system for environment and safety according to ISO14001/ OSHAS 18001 standards.

"PARTICIPATING IN THE MED TEST PROJECT HAS ALLOWED SEVERAL DEPARTMENTS OF OUR COMPANY TO LOOK IN A DIFFERENT WAY AT THE ENVIRONMENTAL ASPECTS LINKED TO OUR ACTIVITY, GENERATING IMPORTANT OPTIMIZATION OF SEVERAL PROCESSES AND IMPRESSIVE SAVINGS, FINALLY DECREASING THE NON PRODUCT OUTPUT COSTS."

- Eng. Laila El GHAZALY, Managing Director

Benefits: The **MED TEST project identified annual total savings of USD 491,793** in **water, raw materials, fuel and electricity** with an estimated investment of USD 55,383. The average **simple payback period is less than 2 months**.

The implementation of cleaner production measures identified by MED TEST helped the company to improve its performance, **reducing consumption** by almost **10% for electricity, 15% (steam) and 10% (raw materials)**. **Water costs decrease by almost 20%** through segregation and recycling of compressors cooling water and CO2 gas washer effluent, and implementation of water consumption monitoring and controlling system.

New environmental management accounting (EMA) protocols have been introduced into the existing internal accounting system to track and monitor the most important environmental costs, including those related to non-product output costs.

In the case of the **chemical industry**, which is one of **largest consumers of water**, predominantly in specific sub-sectors, **introducing water recycling/reuse techniques** and **resource efficient technology** into the processes can lead to the **prevention of large amount of water pollution**, particularly COD, TSS, TDS and **toxic chemicals** that harm water quality and have a negative **impact on key sectors** such as **fishery** and tourism whose development is directly related to the quality of sea water.

Source and contacts: www.unido.org

The greening of industries is fast becoming a core determinant of economic competitiveness and sustainable growth, with fundamental changes that lead to decoupling of economic growth and revenues from excessive and increasing resource use and pollution. The production goals must be higher resource and energy efficiency, lower carbon and other waste emissions, as well as products that can be safely manufactured and responsibly managed throughout their life cycle. Adopting environmentally sound manufacturing technologies and practices by industry greatly contributes towards these goals, while at the same time helping it to remain a major factor for economic growth. Industries that choose to go forward with sustainable production models directly benefit the environment, including the sea, and can benefit in return, among others, from the following:

- Improved productivity and reduced operational costs
- Minimized environmental compliance costs and environmental footprint
- Compliance with international environmental standards to access new markets (global supply chains and export markets, new green markets and public procurement, etc.)
- Secured long term supply of production inputs: the adoption of a resource efficiency strategy can mitigate the effects of disruptions and price volatility in the raw material supply chain
- Improved relationship with stakeholders (investors, banks, regulatory body, local communities, consumer associations, etc.)

Source: www.unido.org, UNIDO MED TEST Programme

A green-tinted photograph of a woven basket containing several potatoes. The basket is made of a dense, intricate weave of light-colored fibers. Several potatoes of various sizes are scattered throughout the basket, some resting on the sides and others in the center. The overall image has a monochromatic green color scheme.

SUSTAINABLE CONSUMPTION

SUSTAINABLE CONSUMPTION

THAU BASKETS AND PCEI OF THAU (FRANCE)



It all started with a “**Seafood Basket**” project that was initiated by the Permanent Centre for Environmental Initiatives (PCEI) of Thau in 2008 with the aim of setting up the direct sale of the Thau lagoon products to the inhabitants of several municipalities of the region.

The project obtained initial funding from European funds, local authorities and private partners who saw in this initiative a way to value the terroir and the men who shape it, as well as an example of a “citizens’ project”. The idea of the initiative was to create a **strong social link between producers and consumers, to value local products and to educate on food sustainable consumption practices.**

To develop a supply of local and seasonal seafood, the PCEI of Thau initiated a seafood basket distribution scheme. It evolved into a distribution network active in four villages

backed up by a website enabling customers to register for the scheme, place orders and select their pick-up point.

Each village has its buying group, made up of consumers and citizen volunteers. They are the link between producers and consumers, who put products online and certify each producer to ensure “confidence assurance” which is the core of the shift towards the region’s new mode of consumption based on **trust, flexibility, freedom of purchase, social connection and quality of products.**

A network of actors ...

Each purchasing group chooses the producers it wishes to involve in its circle, as well as the modes of delivery. The CPIE Bassin de Thau and its members support these groups by linking them with the Centre’s members - fishermen and shellfish farmers providing the coordination mechanisms.

Today, the Thau Baskets groups together **4 buying groups** in Montbazin, Marseillan, Poussan and Frontignan; **40 producers** including **5 fish and shellfish producers** and near **2000 direct consumers** ...and the **figures are growing!**

Connecting local fishermen and aquaculture producers with consumers through a seafood basket scheme helped increase the profile and consumption of local fish, oysters and other seafood in the area, contributing to region’s sustainability. The project also helped to train a group of “ambassador” customers, giving a strong sense of local ownership and entrepreneurship.

Source and contacts: www.paniersdethau.fr
www.cpiebassindethau.fr

SUSTAINABLE CONSUMPTION

EL PEIX AL PLAT (SPAIN)



El Peix al Plat is a **social business dedicated to responsible fish consumption**. To tackle the problem of over-exploitation of marine resources, the company promotes and encourages the consumption of local and less well known species of fish by developing a **direct supply chain between fishermen and consumers**. El Peix al Plat also organizes awareness-raising campaigns and information sessions on the themes of sustainable fisheries and responsible fish consumption.

Even in coastal cities such as Barcelona, consumers have very limited knowledge of marine resources. That's why El Peix al Plat is working closely with local fishermen to make their work known to visitors and tourists – a way to encourage tourism based on sustainable natural resources and also to create a dialogue between fishermen and consumers.

Eating “less common” or “forgotten” fish, is the key to supporting sustainable consumption of fish and is the

goal of Giuliano Petroni and Anna Bozzano, the two founders of El Peix al Plat. A Catalan based company, it dedicates its activities to responsible fish consumption where **consumers play a key role by determining and steering the market**. El Peix al Plat promotes the consumption of forgotten species and reintroduces them into our kitchens.

Thanks to a direct supply chain developed by the company, fish is distributed directly to consumers in recyclable cardboard boxes, only 12 hours after its arrival to harbor. This initiative creates a direct link between fishermen and consumers, but above all it enhances local fishery by offering fresh and local fish, whereas most species sold in stores are imported from other countries.

“WE ENCOURAGE A RESPONSIBLE APPROACH TO FISH CONSUMPTION BY PROMOTING LOCAL AND LESSER KNOWN SPECIES FISHED BY TRADITIONAL METHODS.”

- El Peix al Plat

Consuming local fish enables the continuation of a traditional local culinary culture that has been passed on from generation to generation. Through activities promoting responsible consumption that, in case of Peix al Plat, include **education, awareness raising and connecting the supply and demand sides**, the practice could be replicated and scaled up considerably throughout the Mediterranean region. Nevertheless, further support in developing a sustainable business model for such initiatives is a must for achieving continuity and sustainability of the action.

Source and contacts: **EU funded SwitchMed Programme**
– www.switchmed.eu – www.theswitchers.eu

SUSTAINABLE CONSUMPTION

GOOD4TRUST (TURKEY)



Based in Turkey, Good4Trust is a social network that connects people committed to a responsible approach to consumption. **The company is contributing to creating a new type of consumer whom it calls the “prosumer”.** Unlike the passive consumer who only chooses a product for his own consumption, **the prosumer is committed to a responsible approach.** Purchases benefit the community and participate in the development of a circular economy, keen to prevent environmental pollution and waste. An inspirational and ethical trading tool, **this web platform allows users to buy responsibly products that are produced with ecological and social considerations.**

Environmental specialist and social entrepreneur, Uygur Ozemsi is the founder of Good4Trust, a web platform launched in Turkey in 2014. The main concept is to cre-

ate an **ethical platform based** on trust where everyone can act in solidarity and support sustainable production through **making a responsible choice when buying products and services**, thus **increasing demand for a and services** which can substantially contribute to the real shift towards SCP.

“GOOD4TRUST HELPS PEOPLE TO BUILD AN ECOLOGICALLY AND SOCIALLY JUST LIFESTYLE, AND BUILDS COMMUNITY FOR PEOPLE WHO CHOOSE TO COMMIT TO SUSTAINABILITY”

- Uygur Özemesi, founder of Good4Trust

Based on ethical responsibility, Good4Trust offers a meeting point between producers and prosumers. We find all kinds of products on the platform: ecological detergents, agricultural products, handicrafts etc. To offer their products, producers are selected by the Council of Seven, the governing body of the website consisting of members rated according to a seven level scale.

Good 4Trust is operational thanks to the **work of volunteers.** At the same time, for **every transaction made via the platform, Good4Trust charges a small commission to maintain the system.** For both producers and consumers, it is a valuable tool that allows each to have direct contact with counterparts who share the same values. The replicability of such tool is high: many countries already have consumer associations that provide advice on safety, durability, and value for money, etc. of consumer goods, based on feedback from their members and their own tests. This could be extended to include information on the sustainability of the consumption and production of those consumer goods. However, support would be needed to assist countries without a consumer association to develop such an organisation and associated site.

Source and contacts: **EU funded SwitchMed Programme**
- www.switchmed.eu - www.theswitchers.eu

SUSTAINABLE PRODUCTION

PAPPAFISH EAT WELL, GROW HEALTHY! MARCHE REGION (ITALY)

“Pappa Fish” is a food educational campaign promoted by the Marche Region (Italy) since 2013. It aims to introduce fresh local fish into regional school canteens and educate **new generations** to the **ethical consumption of fish**. The “Pappa Fish” project is 80% co-funded by the European Maritime and Fisheries Fund (EMFF) and 20% is financed by the Municipality, which applies for the project.

This is a **unique** project in Italy, born within the previous European programming period 2007-2011, with the support of the European Fisheries Fund (EFF) and now co-funded by the new fund EMFF. For the **first time**, **local fishery products** are the **centre of a comprehensive strategy** involving primary and secondary **public schools** across the whole region, **governments, operators, food technologists and the whole fishing industry** in the Marche region.





"THE GOAL WAS TO GET CHILDREN USED TO EATING OILY FISH AND SEAFOOD AND TO MAKE THEM DISCOVER THAT IS NOT ONLY WONDERFUL AND HEALTHY, BUT IT'S GREAT FUN AS WELL. AT THE SAME TIME, WE WANTED TO EDUCATE NEW GENERATIONS TO ETHICAL CONSUMPTION, TO RESPECT FOR THE ENVIRONMENT AND CULTURAL IDENTITY. FOR THE FIRST TIME, THANKS TO "PAPPA FISH", FRESH, LOCAL AND SEASONAL FISH HAS REPLACED FROZEN FISH IN SCHOOL CANTEENS, THUS SIGNIFICANTLY IMPROVING THE QUALITY OF SCHOOL CATERING"

- Manuela Bora / Council member of Marche Region

The project featured two simultaneous phases. During the first technical-experimental stage, fish courses were periodically included in school canteen menus making them especially tasty and creative (e.g. risotto topped with oily fish sauce) with the help of chefs and canteen committees. The second phase took place in classrooms, with educational tours, storytelling and creative games, practical lab, artistic and other pedagogical activities.

"Pappa Fish" recipes have been created and distributed, with the aim of raising awareness among families and children about the sustainable consumption of Adriatic fish of high nutritional value, according to the season and consequently to a lower price.

As part of the Educational Campaign, pupils were trained

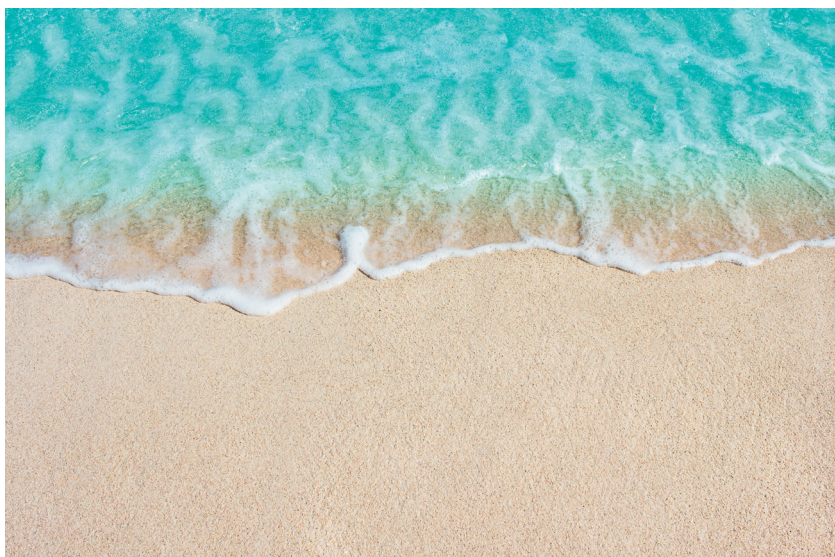
and guided to get to know fresh local fish coming from the Adriatic Sea. A total of 30,000 children, 300 schools based in 52 municipalities of the Marche Region experienced the benefits of the healthy diet featuring fresh fish and sea products from the Adriatic.

From the economic and environmental perspective increased purchasing of local fresh fish reduces the procurement of intensively fished species from heavily exploited fisheries outside Italy and boosts the local economy, as the regional fishing industry commits to meeting the increased demand by the public sector. Among suppliers of fresh seasonal fish a number of small and larger fishing associations, as well as fishermen and ship owners were involved.

It worth mentioning, that procurement of fresh rather than frozen fish avoids the freezing process along the supply chain which is responsible for a very large expenditure of energy.

The success of Pappa Fish is due to the cooperation of many people: administrators, school cafeteria workers, nutrition technologists, parents and teacher committees, school directors and fishing industry workers.

Source and contacts: www.regione.marche.it



CONCLUSIONS

Numerous initiatives applying Sustainable Consumption and Production (SCP) principles and practices to Blue Economy sectors are emerging across the Mediterranean. While their scope and size might vary from young start-ups and grass root initiatives to large-scale industrial SCP strategies, the common aim is to accelerate economic, social and environmental progress.

At the same time, more work needs to be done. This collection of good practices is not meant to be comprehensive: it aims to inspire and trigger the interest of all actors in the Blue Economy, to fully embrace the SCP principles as an overarching objective of sustainable development in the Mediterranean region and to promote the critical mass of experiences and changes needed to foster the societal shift towards a green, circular and low carbon economy.

Now more than ever, the governments of countries and heads of regional and international institutions are taking

an interest in the Blue Economy. That calls for the reinforcement of regional cooperation between the various international organisations towards a better implementation of existing international commitments at regional and national level, transforming the later into concrete actions in the field.

All organisations, including the Union for Mediterranean (UfM) and its Secretariat, the United Nations Industrial Development Organization (UNIDO), the UN Environment/Mediterranean Action Plan (MAP) and its Regional Activity Centres (RACs), the Intermediterranean Commission (IMC) of the Conference of Peripheral Maritime Regions (CPMR), as well as the General Fisheries Commission for the Mediterranean (GFCM) of the Food and Agriculture Organization (FAO), involved in this publication, are committed to further support the development of new SCP initiatives towards the spreading of a Sustainable Blue Economy across the Mediterranean.



ANNEX

SUMMARY - ORGANIZATIONS AND RELATED POLICY AND OPERATIONAL FRAMEWORK

In the Mediterranean, several intergovernmental and regional organizations play important, active and complementary roles in moving the regional Green and Blue Economy agenda forward.

UNION FOR THE MEDITERRANEAN (UFM) and its Secretariat

The Union for the Mediterranean (UfM) is an intergovernmental organization bringing together the 28 European Union Member States and 15 countries from the Southern and Eastern shores of the Mediterranean. It provides a unique forum to enhance regional cooperation and dialogue in the Euro-Mediterranean region. The Secretariat of the Union for the Mediterranean is the operational institution that empowers this regional dialogue between the UfM Member States and stakeholders, fostering synergies among them and promoting cooperation projects and initiatives.

To tackle issues related to sustainable development in the Mediterranean and create a framework for action, two relevant UfM Ministerial Declarations were adopted:

a) The UfM Ministerial Declaration on Environment and Climate Change, adopted on 13 May 2014, which acknowledged the urgent need to continue joining forces for depollution efforts, to shift towards sustainable con-

sumption and production patterns for a green and low emission economy and to address the impact of climate change in the Mediterranean region. The Declaration highlighted the cross-sectorial nature of environment and climate change challenges and the importance of fostering growth and job creation while ensuring a better quality of life and a sustainable future;

b) On 17th November 2015, the 43 countries of the UfM adopted a Ministerial Declaration on Blue Economy (more precisely described in the brochure). The Declaration specifically calls for the establishment of an UfM Forum on the Blue Economy, the mechanism agreed by the UfM countries to ensure a regular dialogue on blue economy related themes, defining a common BE agenda and translating it into action. It is made up of four components: 1) The UfM Blue Economy Working Group 2) The Regional Technical Seminars 3) The UfM Stakeholder Conference 4) The Virtual Knowledge Centre as a stakeholder register and networking platform.

In order to help find practical solutions to complex regional matters, UfM brings support of 43 countries through labelling projects attributed to regional cooperation. One of the UfM labelled projects is the "MED RESCP – POST RIO+20: Supporting the adoption of Sustainable Consumption and Production and Resource Efficiency in the Mediterranean region". The project aims to promote the adoption of sustainable consumption and production patterns in the Mediter-

anean region through a comprehensive regional approach addressing different realities and challenges faced by countries. Through its two components the project objectives are as follows: i) provide financing access for Small and Medium Enterprises (SMEs) adopting Sustainable Consumption and Production (SCP) models in Egypt, Jordan, Morocco and Tunisia and ii) stimulate the development of green industries and entrepreneurship in the Western Balkans and Turkey through technical assistance and pilot projects.

Further information: www.ufmsecretariat.org

UN ENVIRONMENT MEDITERRANEAN ACTION PLAN (MAP)

The UN Environment/MAP represents the only set of legally-binding policies for addressing common issues and challenges of environmental degradation and protecting marine and coastal ecosystems of the Mediterranean Sea. As the first Regional Seas Programme under UN Environment's auspices, this governance framework gathers the 21 riparian states and the European Union (EU), as Contracting Parties of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention). After four decades of experiences in terms of environmental cooperation at the regional level, the MAP system is still ambitious and relevant towards a peaceful, prosperous and sustainable Mediterranean region, in which societies enjoy a high quality of life within healthy marine and coastal ecosystems.

Among the policies promoted by the MAP system, the Mediterranean Strategy for Sustainable Development (MSSD) 2016-2025, adopted in February 2016, is an integrative policy framework and a strategic guiding document for all stakeholders and partners to translate the 2030 Agenda for Sustainable Development at the regional, sub-regional and national levels. The blue economy is addressed by the MSSD Objective 1 "Ensuring sustainable development in marine and coastal areas" and Objective 5 "Transition towards a green and blue economy", which integrate two other MAP instruments particularly relevant with regard to the blue economy, namely the Protocol on Integrated Coastal Zone Management (ICZM Protocol) and the Regional

Action Plan on SCP respectively.

Further information: www.unep.org/uneppmap

REGIONAL ACTIVITY CENTRE for SUSTAINABLE CONSUMPTION AND PRODUCTION (SCP/RAC)

The Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC) is a centre for regional cooperation with Mediterranean countries on development and innovation in the production sector and civil society, based on sustainable consumption and production models.

The Centre operates in support of two international treaties: the Barcelona Convention and Protocols, under which 22 Contracting Parties agree to protect the Mediterranean marine and coastal environment while promoting sustainable development; and the Stockholm Convention, an international agreement involving 180 countries to fight persistent organic pollutants, highly polluting and toxic substances.

Under the institutional framework of UN Environment MAP, SCP/RAC provides assistance to Contracting Parties in fulfilling their commitments under the Barcelona Convention and related LBS, Hazardous Wastes, and Offshore Protocols, particularly through the integration of SCP in the MAP policy and governance framework and technical support tools and guidelines. SCP/RAC also provides knowledge, training, advice and networking opportunities to businesses, entrepreneurs, financial agents, civil society organizations and governments that work to provide our society with services and products that are good for people and good for the planet.

Further information: www.cprac.org

PLAN BLEU

Plan Bleu is one the Regional Activity Centres of the UN Environment/Mediterranean Action Plan (MAP) located in France since 1977.

Its objective is to contribute to raising awareness of

Mediterranean stakeholders and decision makers concerning environment and sustainable development issues in the region, by providing future scenarios to assist in decision-making.

The Plan Bleu aims are:

- Observing environment and development to enlighten decision makers
- Shaping possible futures for sustainable development
- Monitoring the implementation of the Mediterranean Strategy for Sustainable Development
- Integrating climate change as a priority
- Supporting the transition towards a green and blue economy
- Shedding socio-economic light for the appropriate management of Mediterranean resources

In this respect and through its dual functions as an observatory of the environment and sustainable development and a centre for systemic and prospective analysis, the BP/RAC aims to provide the Contracting Parties with assessments of the state of the environment and development of the Mediterranean and a solid basis of environmental and sustainable development data, statistics, and indicators to support their action and decision making process.

Further information: www.planbleu.org

UNITED NATIONS INDUSTRIAL DEVELOPMENT PROGRAMME (UNIDO)

UNIDO helps developing countries to secure resource-efficient and low-carbon growth. This contributes to the creation of new jobs while protecting the environment. The organization helps countries move to clean technologies and implement environmental agreements. UNIDO also provides technical assistance to introduce best practice methodologies and software systems to monitor and assess productivity performance by industry and use it as a guide for policy-making. In the southern Mediterranean UNIDO supports the development of green industry and sustainable production through a comprehensive approach that both presents the business case of resource efficiency to industries, and helps service providers create their capacity to deliver sustainable production services matching the

industry needs. Moreover, UNIDO is cooperating with a number of national institutions to address policies related to sustainable production.

The business case of sustainable production in the Southern Mediterranean context was demonstrated within the framework of the UNIDO MED TEST I pilot initiative implemented in Egypt, Morocco and Tunisia. Between 2009 and 2012, a pool of 43 manufacturing industries across seven industrial sectors was provided with technical assistance to identify and implement improvement measures. Based on win-win strategies for successful resource efficient and sustainable production, the implementation results amounted to 17 million USD economic savings per year, with additional 9.7 million m³ of water and 263 GWh of energy saved in the course of a year, or more than 20% compared to baseline. These are significant results in developing economies with scarce water and energy resources, obtained by applying measures with very short return on investment: on average, more than 50% of the identified measures had a RoI of less than 0.5 years.

Substantial savings opportunities for energy, water and raw materials were revealed, along with huge and untapped potential to upscale TEST in the Region.

Further information: www.unido.org

CONFERENCE of PERIPHERAL MARITIME REGIONS (CPMR) Intermediterranean Commission (IMC)

The Conference of Peripheral Maritime Regions (CPMR) brings together 160 Regions from 25 States from the EU and its Neighbours and is organized in 6 Geographical Commissions (Mediterranean, Balkans & Black Sea, Islands, Atlantic Arc, Baltic Sea, North Sea). Representing about 200 million people, the CPMR has, since its creation in 1973, been targeting its action towards ensuring that the needs and interests of its Member Regions are taken into account in policies with a high territorial impact. It focuses - mainly via think tanks, and advocacy and project activities on social, economic and territorial cohesion, maritime policies and accessibility. EU governance, energy & climate change, neighbourhood, migration and development also represent important areas of activity for the association.

The CPMR Intermediterranean Commission (IMC), works as a technical and political platform of cooperation for more than 40 Member Regions belonging to 9 Mediterranean countries (Albania, Cyprus, France, Greece, Italy, Malta, Morocco, Spain and Tunisia). It focuses on the development of the Euro-Mediterranean dialogue, territorial cooperation & emerging macro-regional and sea basin strategies, concentrating its efforts on sectoral policies such as transports & integrated maritime policy, economic & social cohesion, water & energy. In this perspective, the IMC develops specific collaboration with several Institutions, public and private stakeholders and cooperation networks of the whole Mediterranean.

The CPMR and its IMC have strongly contributed to the creation of the European Integrated Maritime Policy (IMP) established in 2007. Since then, the organization has been supporting efforts to strengthen the governance of the IMP and the “blue growth” approach at European level, as well as in sea-basins via its Geographical Commissions. At the same time, the CPRM IMC undertakes with its regions, strategic and pilot cooperation projects on key themes with a forceful sustainability and territorial impact.

*Further information: www.cpmr.org
and www.cpmr-intermed.org*

GENERAL FISHERIES COMMITTEE FOR THE MEDITERRANEAN (GFCM)

The GFCM is the regional fisheries management organization (RFMO) established under the provisions of Article XIV of the FAO Constitution to ensure the conservation and the sustainable use, at the biological, social, economic and environmental level, of living marine resources as well as the sustainable development of aquaculture in the Mediterranean and in the Black Sea. The GFCM is currently composed of 24 members (23 member countries and the European Union) and 3 cooperating non Contracting Parties (Bosnia and Herzegovina, Georgia and Ukraine) and it implements its policy and activities through a Secretariat based at the headquarters of the GFCM, in Rome. The GFCM has the authority to adopt binding recommendations for fisheries conservation and management in its area of

application and plays a critical role in fisheries governance in the region. In particular, its measures can relate to the regulation of fishing methods, fishing gear and minimum landing size, the establishment of open and closed fishing seasons and areas and fishing effort control, the fight against IUU fishing and the control of fishing activities. The GFCM also makes significant efforts at the regional and sub regional level in order to enhance scientific cooperation and capacity-building among its Contracting Parties.

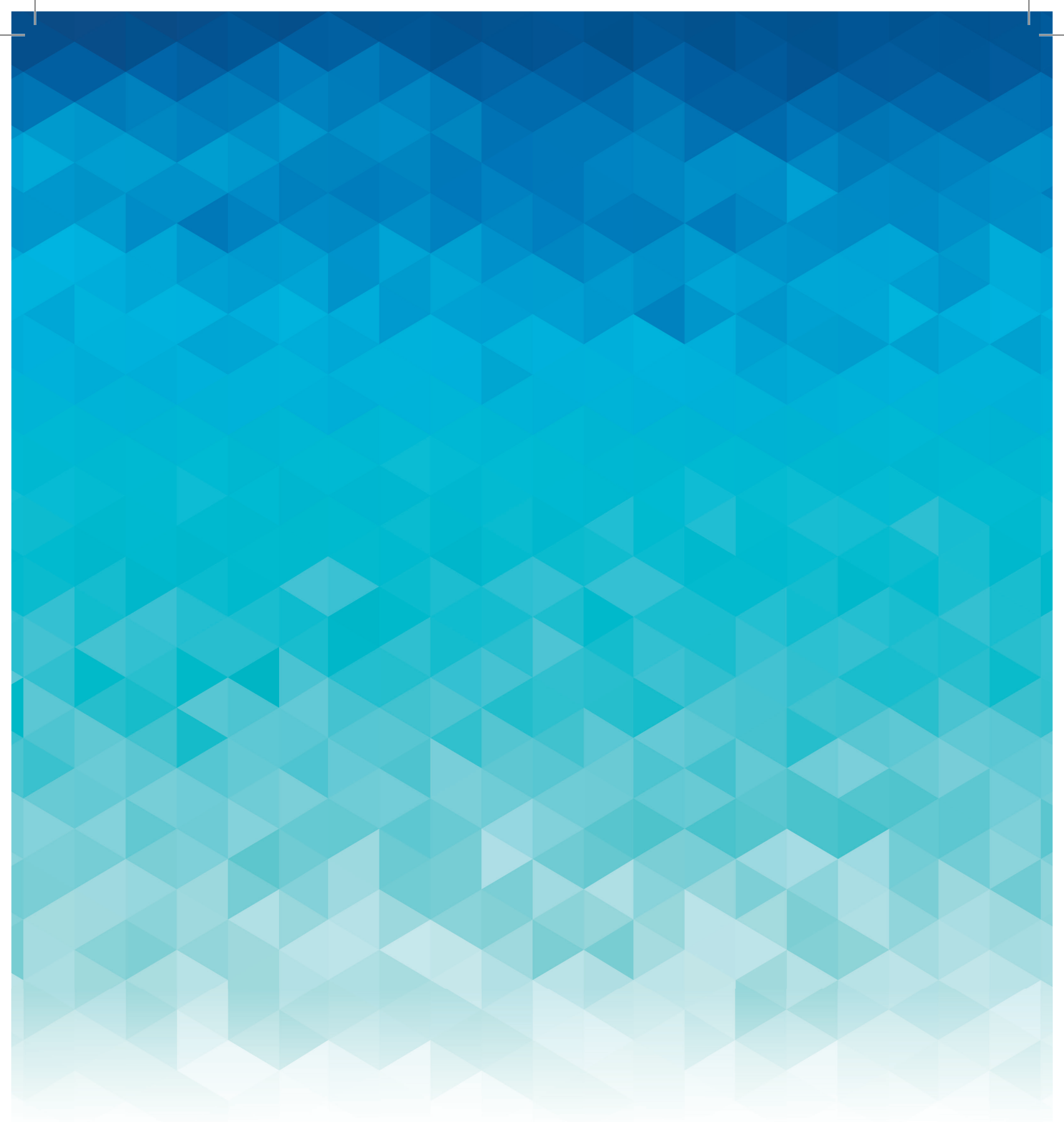
In 2016, the GFCM adopted the Mid-term Strategy (2017-2020) towards the sustainability of Mediterranean and Black Sea fisheries. It includes 5 targets, each focusing on different activities undertaken by the GFCM :

(1) Reverse the declining trend of fish stocks through strengthened scientific advice in support of management; (2) Support livelihoods for coastal communities through sustainable small-scale fisheries; (3) Curb illegal unreported and unregulated (IUU) fishing, through a regional plan of action; (4) Minimize and mitigate unwanted interactions between fisheries and marine ecosystems and environment, and (5) Enhance capacity-building and cooperation. The aim of this Strategy is to improve the sustainability of fisheries in the Mediterranean and in the Black Sea through the launching of different actions and projects.

Likewise, in 2017 the GFCM adopted the Mid-term Strategy (2017-2020) for the sustainable development of Mediterranean and Black Sea aquaculture. It comprises 3 targets, with related outputs and activities, relating to: i) building an efficient regulatory and administrative framework to secure sustainable aquaculture growth; ii) enhancing interactions between aquaculture and the environment while ensuring animal health and welfare; iii) facilitating market-oriented aquaculture and enhance public perception. The Aquaculture Strategy aims to unlock the potential of the sector in the region to be globally competitive, sustainable, productive, profitable, and equitable, so as to meet the growing need for aquaculture products and contributes to food security.

These instruments are a direct follow-up of the United Nations Sustainable Development Goal (SDG 14).

Further information: www.fao.org/gfcm



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