

The sea spell is our life.

How to be kind towards it.

Text by Alan Deidun

Photos by Pete Bullen



GentleBooklets

#13. The sea spell is our life.

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GentleBooklets It is a series of long-form articles written by different authors. The booklets, designed for a quick read, feature texts and images. We have kindly asked to the authors to comment on the term “kindness.” Authors and photographers have donated their work.

The motivations behind the project are the same as those of Gentletude, the desire to spread awareness about the need for “kindness” in our society, a society too focused on personal success to remember the basics of everyday living and respect for the environment that hosts us.

Our decision to present these ideas in a series of publications is due to the awareness that, in order to stimulate people to think about these issues, it is necessary to present some concrete examples. In this case, the examples are provided in the texts written by the authors.

Striving to preserve the sea's spell

I've always been interested in everything that is alive, love that has grown when my father used to take me close to the sea for hours. He used to build little boats with pieces of aluminium foil of the cigarette packs and let these boats sail on the surface when it was particularly windy and stormy.

My passion for the marine environment involves all the aspects of my life. In fact I'm a senior lecturer at the university, I'm a researcher and an activist.

Because I'm involved in environmental NGO's, I feel myself engaged in many practical actions.

Every year in Malta we have these so called "Banquettes", accumulations of dead Posidonia on the shore. 7-8 years ago the tourism authority of Malta used to clean the beaches in winter even when there were no tourists.

That would be a great action, if Posidonia weren't so important in the fight against sand erosion.

We began a campaign to ask to the authorities to cancel beach cleaning between October and April, when there were no tourists





on the beach. After our campaign the authorities started to clean the beaches after May, understanding the need of the environment and we won our cause.

Another example can be represented by my research projects.

My research team and I are focusing on different species' behaviour, for instance on jellyfish.

We recorded a large number of jellyfish species that people didn't know about, we came up with practical ways through which people can treat jellyfish stings, we installed anti jellyfish nets in our waters and we used satellites to predict jellyfish movements in our waters.

The most important environmental success that we are achieving in Malta is that we are managing to push the environment on the top of the national political agenda.

Of course we are not winning the war, but for sure a lot of battles, for example we can't stop the artificialisation of our coasts building but of course we can prevent that this construction takes place within some protected areas. People are more courageous now than in the past, when it comes to the

environment, if they see something illegal they report to the authorities.

One of the projects that I care most about is Panacea.

Panacea was built up in order to try to educate people about marine protected areas in particular by involving young people.

Panacea was implemented by two Maltese partners and three Sicilian partners, local authorities and communities with the intention to open a number of marine environmental education centres (one of which was opened in Gozo) and to educate young people and to address them towards a possible marine biology career.

This project is becoming successful because every time we shoot a documentary for Panacea, it is seen by thousands of young people in the theatres and at the university.

We want to involve as many people as possible and to introduce them to ocean literacy. Panacea is also a tool to promote economic development through a proper sea management. What I wish for Malta is that its population begins to respect our sea more than in the past. What I'm referring to is stricter





regulations and rules and more sea enforcement. Right now the safeguard of the sea is very poorly conceived and catered for here in Malta; the first reason is the lack of financial and human resources: the authorities are occupied in dealing with illegal immigration and providing safe areas for swimmers and marine traffic.

So the illegal actions against the marine environment, like fishing with harpoons while scuba diving scuba, are poorly reported to the authorities.

The lack of enforcement and manpower is a very serious problem that is affecting the marine environment.

Even the political will is addressed more towards the protection of terrestrial areas than towards marine areas; probably, this is due to a question of visibility because while on the surface people see what the authorities can do, under the sea enforcement actions remain obscured.

At least, we should strive towards having functional marine protected areas since, to date, the existence of those within Maltese waters are largely unknown to many.

Why the sea is so important

70% of the world is composed by the sea. If we respect the sea we respect the greater part of our planet. Since antiquity, the sea has fascinated men, even some of our greatest leaders, because of its strength and dynamism.

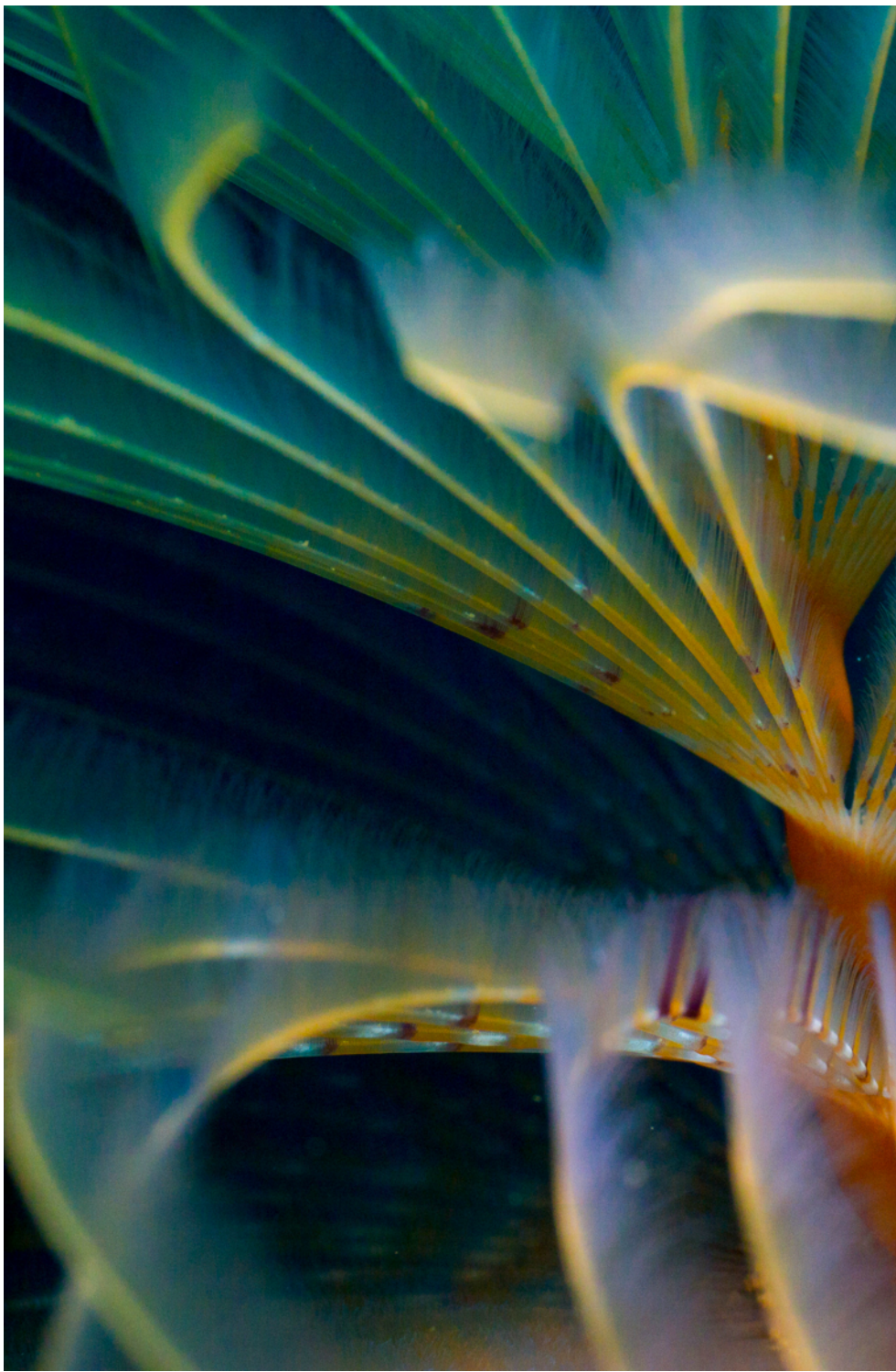
Oceans and seas in general have a very fundamental role and power in everybody's life and they influence many aspects of planet's mechanisms.

First our oceans contain the vast majority of the species on the planet, even if we know relatively little about marine life.

Biodiversity is one of the most important aspects that characterizes our waters.

There are still many species that are waiting to be discovered; some are never even discovered before they go extinct.

Secondly the sea influences our climate. The sea is like a giant conveyor belt that transports heats from one point of the ocean to another. If this conveyor belt shuts off, the North and South Pole will become much colder and the tropics will become much warmer. This is already happening in many areas of the planet, for example in the UK,





battered by extreme weather because the Gulf Stream is weakening.

Third, culture and tradition should solicit us to be respectful and grateful for the resources that the sea has given to us.

Especially the Mediterranean populations, in particular, should protect their source of life, in a Basin whose coastline has been colonised by human settlements since antiquity.

What is threatening our seas?

A problem that the scientific community is worried about and which I believe is not being tackled, is the acidification of the sea.

This is a very real phenomenon that is called the evil twin of climate change because it is caused by climate change but it is poorly understood. When people think about climate change they always think about emissions, less or more precipitation and disrupted, weather patterns but much less about its impact on the sea.

What is happening is that the sea is becoming more acidic, causing serious problems to a large number of organisms such as for example marine snails, starfishes, coral and

corals, and in places where this acidification is faster than in others some changes are already been observed.

Secondly, we have to discuss about the problem of overfishing. 3-4 years ago a paper that was published by Nature, the leading scientific world nature journal, included a map of all the world oceans to show where the impact of trawling is; this map mesmerized the public because it showed that there are no oceanic zones where there is not absolutely impact of man.

Even the farthest ocean close to Antarctica is, damaged with these industrial trawlers, that spend 3-4 months out at the sea catching hundreds of thousands of tons of fishes. Overfishing is a very big problem especially in the high seas, which are not under the jurisdiction of any country and where international maritime law has little influence if any. Another problem that regards fishes is the so called Lessepsian Migration.

Last November in Lampedusa a fisherman has found for the first time in the Mediterranean Sea a venomous species of puffer fish, which is one of the most toxic tropical fish. It comes from the Pacific Ocean and it is com-





ing like many other tropical fishes from the Suez Canal to the Mediterranean Sea.

This migration is bringing from the Indian and Pacific Ocean into the Mediterranean Sea more than 1000 different marine species.

Not all of these species are dangerous or invasive and these migrants are adapting faster to the Mediterranean whose temperature is fast approaching that of their native range in the Pacific Ocean. Before the Suez Canal was opened, the species which tried to cross over from the Red Sea died as a result of highly salty lakes in Egypt; now with the opening of the Suez Canal, there is no longer a barrier to their spread in the Mediterranean.

There are other species that are damaging the Mediterranean ecosystem, such as *Caulerpa*, a group of invasive green algae which are competing for space with the native seagrass *Posidonia*, that as we know, is essential for the marine environment.

All of the marine areas around the world are changing because of this phenomenon of alien species, but the Mediterranean in particular because of the Suez Canal.

The Panama Canal did not create this situation because it is located in a very rainy zone and alien species trying to make the cross are killed as they seek to transit through fresh water.

What the marine biologists are suggesting is not to close the Suez Canal but to create a salinity barrier, an artificial lake in which tropical species, trying to cross over, die, to reproduce two natural salt lakes in Egypt which existed prior the opening of the Suez Canal.

In Malta one of the most widespread environmental problems facing the marine environment is represented by uncontrolled construction.

That has 2 major impacts on the marine environment.

First In Malta there is a place out at sea where it is legal to dump construction wastes, which is put on a barge and dumped in deep water.

That has caused a messy situation because of the many years of dumping, there is now a large underwater mound of construction waste which is smothering vulnerable marine species.





Secondly the fine particles emanating from the construction and demolition waste of from dredging activities make the water murky and does not let the light of the sun to penetrate the water, light that is vital for many organisms under the sea.

In addition, runoff from land into the sea after heavy rainfall contains traces of pesticides, fertilisers, used oil and other hazardous chemicals.

However the Mediterranean Sea is better than other seas in terms of water quality, in particular in terms of eutrophication, when the water becomes green and stagnant, with such a phenomenon not being that diffused so far within the Basin as in other regions such as Baltic and North Seas.

How do I see the future of our beloved sea? It all depends on the political will, how much successive Maltese governments and the EU will invest on the welfare and integrity of the Mediterranean coastal and marine areas. We need more funds for researches in the Mediterranean Basin, to identify, where the hot spots of pollution are and what the real problems are.

The so called Barcelona Convention, signed

in the 70's and to, in which all the Mediterranean countries are party, contains a series of agreements that legislate against pollution and other environmental problems.

It is also depends on how much countries will stick to their commitments, especially in countries in which there is political instability like Egypt, Libya, Syria, Lebanon.

How to be kind towards the marine environment

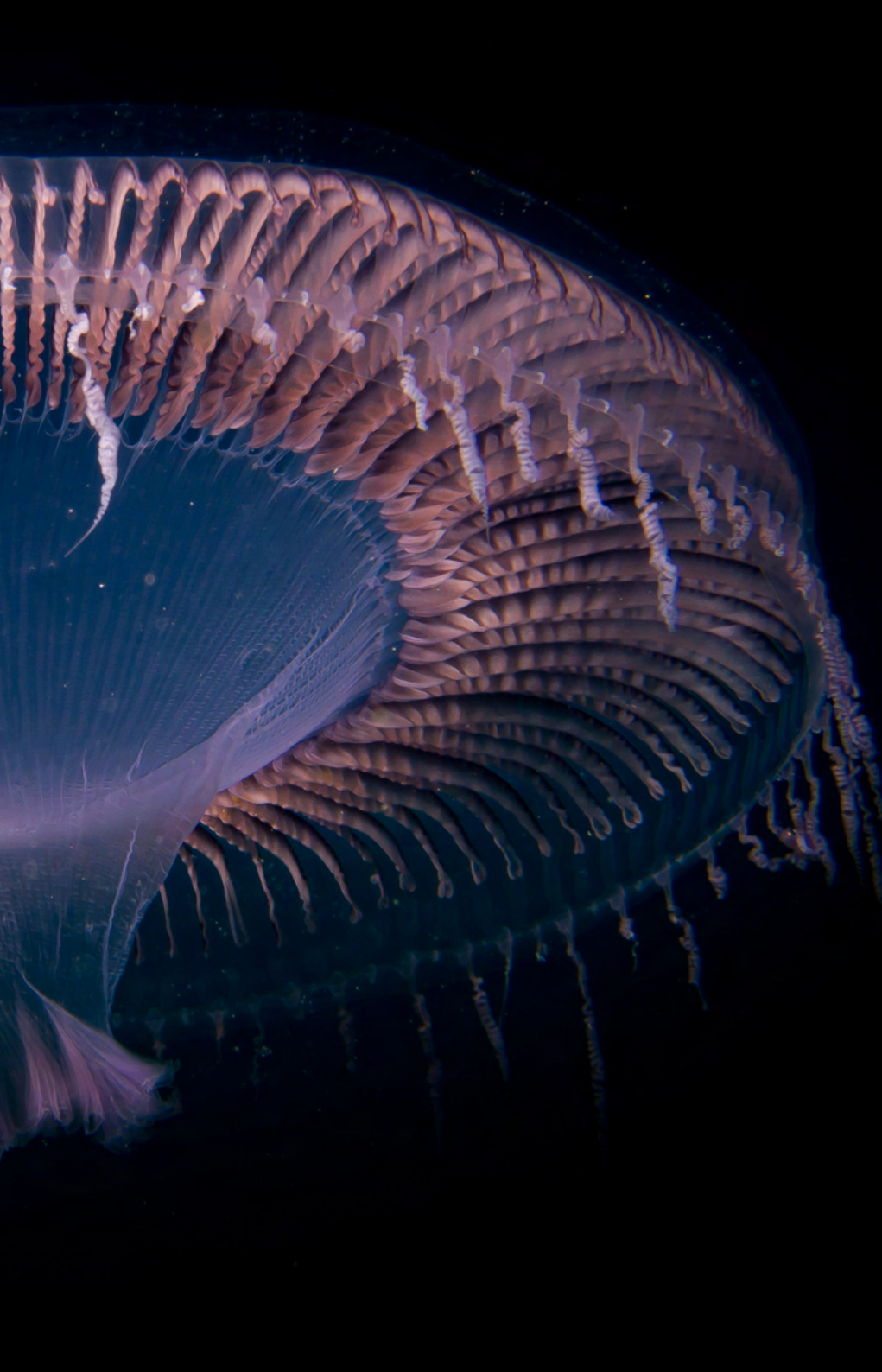
Normally the advice that I give to people is to stick to the basics and try to go for realistic and visible targets.

There is this motto that I always repeat "Think global, act local"; for example, in Malta, what can I actually do is to educate children that the beach and the shore line are not only a fun areas but are also an habitat for many animal and plant species. Boat owners have a big responsibility too: they do not have to throw things from the boat or by emptying their bilge tanks out at sea.

This is a rule for everybody: do not throw non-biodegradable elements, such as plastic, discarded fishing lines and cigarette butts, in our waters.

We have to be responsible for our actions





and think before doing things that can damage the environment.

This is what it means to be kind to the marine environment and especially to the living species that are part of it.

Make some connections: I'm in the supermarket and I buy some vegetables, I have to decide if buy the ones that comes from an organic farm or which comes from a conventional non-organic farm.

The vegetables which comes from the non-organic farm are grown using a a lot of pesticides and fertilizers.

These fertilizers, after heavy rainfall, flow into the nearest river which flows in the sea. All this shows that something which seems to be unrelated is closely related; what I want to communicate is that there are connections between things, everything is linked with one another, no component is in isolation.

Of course you don't need to be a scuba diver to be aware of this; obviously we all appreciate the sea in our own way.

The most responsible behaviour when you get in contact with the sea is not to leave anything behind you except for footprints in

the sand and not to damage the marine environment in all of its aspects.

Then if you want to appreciate more the sea you need goggles and a snorkel in order to be able to observe the marine species.

There are also different tools to increase your knowledge, such as documentaries, aquariums and marine centres all over the world.

The scientific community is trying to spread the Ocean Literacy paradigm and the best way to do this is through interactive experiences.

We can also make responsible choices as a consumer, for example eating different fish species only when they are in season.

Blue tuna has its own season when it enters in the Mediterranean Sea and this is normally between May and July.

So if we eat a tuna between October and May it is probably coming from another part of the world, frozen and very expensive, and with a large carbon footprint in terms of emissions from a long-haul transport.

We can make right choices all the time.



Be kind to the environment

Be kind to the environment personally means dedicating all the time I can, all the sources I have to assure a better marine environment for the future generations.

I'm very much aware of the power of media, I know that I have to show them our development in this research field, with new and updated tools because they influence the public opinion and all the strata of society I want to appeal to.

Many scientists despise the media, but I personally believe that the only way to achieve our scientific and management goals is to let people meet and understand science, even because they are the only way to spread worldwide the importance of marine and environmental protection.

Being kind means to be proactive, being an activist that passes on the right information to the broadest possible audience.

Perseverance is also important, things have to be repeated many times and in different ways.

A common axiom is that the public does not care about the environment. I think that is not true, the problem that we have to face is

the lack of awareness. Most environmental documentaries take place on the land because of the costs and the accessibility, but very few documentaries are shot under the sea.

Of course there has been an explosion of people doing scuba diving but this still represents a minor fraction of the populace at large.

This lack of awareness is brought about mainly by wrong prioritisation, we give importance only to problems that we can see, touch and hear.

The sea is something too detached from human perception and of course is too expensive to study.

We need a greater effort in making people aware of marine problems, we have to spend more money in related researches efforts. 20 years ago our challenge was to educate people about the environment in general (Green Revolution, Rio Summit); people are now generally aware about such issues.

Marine dynamics are so difficult to understand and for this reason we have to translate the rigorous scientific lingo to a language the layman can easily understand and re-

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lated to. Be kind to the environment means also help and teach the generations that will make decisions for our world in 10/20 years. For me to be kind means to think about a bright future for the marine environment and the human populations which inherently depend upon it for their sustenance.





AUTHOR

Alan Deidun

Maltese, is Senior Lecturer at the Physical Oceanography Unit of the IOI-Malta Operational Centre of the University of Malta. He held a Phd in biology and he is registered at the bar of the Biology Institute of London. He has published over 45 peer-reviewed papers in several high-profile academic journals and has coordinated the marine ecology section of numerous recent Environmental Baseline Study (EBS), Environmental Impact Assessment (EIA) and Appropriate Assessment (AA) studies. The main thematic which interest him are coastal and marine ecology, ecological modeling, remote sensing monitoring of water quality, ecology of islands, ecology of invasive species, Marine Protected Areas (MPA's), Marine Spatial Planning (MSP) and dynamics of jellyfish outbreaks. He is scientific advisor to a number of environmental NGO's and also member of the Marine Biological Association (MBA) and of the Estuarine, Coastal and Shelf Science Association (ECSA) of the UK, and of the Società di Biologia Marina of Italy (SIBM).

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PHOTOGRAPHER

Pete Bullen

Pete Bullen took his 1st photograph when he was six years old and has been taking photographs ever since and always for the same reason. To capture a moment of beauty and share it with others. After a successful career as an IT consultant with photography and diving as passionate pass times 5 years ago Pete left the world of IT largely behind and now lives on Gozo, sister island to Malta where he makes his living coaching and guiding underwater and landscape photography enthusiasts. Pete's work is regularly featured in magazines around the world and this year should see the publication of 2 books of his photographs by Olympus and a German language co-authored book on the dive sites of Gozo. Pete lives with his partner Sue and canine companion Bob and has 2 grown up daughters back in the UK.

www.oceanfoto.co.uk

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MORE INFO

Stunning galaxy of marine wildlife - PANACEA (Video 1)

<https://www.youtube.com/watch?v=ArJOWrwwz98>

Stunning galaxy of marine wildlife - PANACEA (Video 2)

<https://www.youtube.com/watch?v=xzpPK1pAILA>

Stunning galaxy of marine wildlife - PANACEA (Video 3)

<https://www.youtube.com/watch?v=x3tVoY4hlts>

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TO DOWNLOAD



MED-JELLYRISK JELLYFISH ENVENOMATION FIRST AID HANDOUT



Recommendations on treatment of Mediterranean jellyfish envenomations

(after Cegolon et al. 2013. Jellyfish sting and their management: a review. *Marine Drugs*)

Generalities

Some jellyfish species may sting humans, determining local reactions and occasional systemic effects. Treatment of jellyfish envenomation aims to attenuate venom effects, prevent further envenomation from residual jellyfish pieces, and keep in check occasional systemic reactions, including shock.

Depending on the jellyfish species, there is evidence and consensus on oral/topical analgesics, hot water and ice packs as effective painkillers. For a few species (see below), a short application of domestic vinegar may prevent further discharge of unfired jellyfish stinging cells left on the skin.

Most treatment approaches are presently founded on relatively weak evidence and further research is strongly recommended. Dissemination of appropriate treatment modalities is deployed in the framework of MED-JELLYRISK to better inform and educate those at risk. Adequate signage will be placed at beaches to notify beach goers of the jellyfish risk.

WARNING: seek immediate medical attention if shock or breathing difficulties occur.



MED-JELLYRISK
info@jellyrisk.eu
www.jellyrisk.eu



<http://jellyrisk.eu/it/area-download/>

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GENTLETUDE

Gentletude is a neologism composed of the words “gentilezza” (gentleness/kindness) and “attitudine” (attitude). It pursues the aims for a better world without violence, arrogance and rudeness. A world where caring and paying attention to others, common sense and balanced competitiveness are the most important things. The production provided by the association was completely free, based on the Commons Creative Criteria. Gentletude in Italy is a non-profit organization (NPO), and in Switzerland is a non-profit association.

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For me to be kind
means to think about
a bright future
for the marine environment
and
the human populations
which inherently
depend upon it
for their sustenance.