Thinking Green Digest 2017



Department of the Environment and Climate Change

HM Government of Gibraltar

GIBRALTAR NATURE RESERVE





Thinking Green Digest 2017

Produced by the Department of the Environment, Heritage and Climate Change (DEHCC).

This document provides an overview of some of the work carried out during 2017 by DEHCC, as well as other information relating to Gibraltar's environment.

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Minister's Foreword

Once again our Green Digest presents a summary of some of the more interesting and important work done by HM Government of Gibraltar's Department of the Environment, Heritage and Climate Change.

The Digest showcases some of the progress made during 2017 in driving the Government's green agenda. These have reflected some of the areas that are a priority, not just for Gibraltar, but also for the Earth as a whole. And so we have moved on issues such as regulating the use of some plastic, on biodiversity conservation, on research, and on education.

I want in this Foreword to highlight the Department's educational work. Initiatives, activities and events such as the live underwater camera, World Environment Day, recycling in schools and beaches, all play an important part in promoting awareness and involvement in the environmental scene. Direct work in the schools is also extensive, and increasingly the schools themselves, both within and outside the curriculum, are moving forward with exciting and stimulating environmental programmes.

Gibraltar's community has come a very long way in accepting the responsibility of environmental stewardship. There is a long way still to go – there will always be – but there can be no doubt that the Department of the Environment, Heritage and Climate Change is playing a leading role in encouraging the citizen to engage and assume the personal responsibility we all have to look after, and improve the Environment, and therefore ourselves, for Gibraltar, and the World.

Best Wishes,

Prof. John Cortes MBE, C.Env

Minister for Education, Heritage, Environment, Energy and Climate Change HM Government of Gibraltar

Our Natural Environment



Bluefin Tuna Fishing Season

The open season for Bluefin Tuna in British Gibraltar Territorial Waters (BGTW) commenced on 16th June 2017 and ended on 14th October 2017. Anglers require a Class K licence to fish for Bluefin tuna in Gibraltar.

A total allowable catch of 13 tonnes was set.

A dedicated office and landing point was also created within the North Mole (No. 1 Jetty). Anglers were advised that all tuna catches have to be reported and weighed at the landing point. Vessels would be able to dock and report any tuna catches between 08:00 and 14:30 (Monday to Saturday). Any catches outside these hours also needed to be reported and weighed, and an oncall landing point service was provided.

Details on minimum weights and sizes are set out in the Tuna Preservation Regulations 2014 and all anglers are required to become familiar with these before fishing for Bluefin Tuna.

DEHCC also reminded anglers who practice sports fishing, as well as recreational boat users, of the need to adhere to the Cetacean Protocol when there are whales nearby. The dolphins Department's or Environmental Protection and Research Unit closely monitored vessel activity during the summer months, particularly sports fishermen employing 'popping' techniques, to ensure that the requirements of the Protocol were met. Anglers targeting Bluefin Tuna were advised that casting any lines close to dolphins could result in their fishing licence being revoked.



Temporary Suspension

Since catches during 2017 were higher than expected during the earlier part of the season, exceeding 9 tonnes after only four weeks, DEHCC implemented a temporary suspension in order to allow for the season to extend into the latter part of the summer.

The suspension ran from the 16th July to the 6th August, both days inclusive. The fishing of Atlantic Bluefin Tuna was prohibited during this time, including catch and release practices. The season reopened on Monday 7th August.

Quota Increase

Locally, the maximum quota (total allowable catch) of Atlantic Bluefin Tuna permitted was reviewed during 2017. This review came about as a result of ICCAT (the International Conservation for the Conservation of Atlantic Tunas) increasing their overall quota by 20%.

Whilst Gibraltar is not a member of ICCAT, regulations locally are, in general, parallel to theirs in order to cooperate in the international conservation methods that have been so successful in recent years.

HM Government of Gibraltar therefore introduced a corresponding increase in quota (total allowable catch) to 15.5 tonnes for the entire season in 2017.



International Garden Photographer of the Year Exhibition arrives in Gibraltar



International Garden Photographer of the Year (IGPOTY) is the world's premier competition and exhibition specialising in garden, plant, flower and botanical photography. It is run in association with the Royal Botanic Gardens, Kew. Their main exhibition is held annually at Kew, with a rolling programme of touring exhibitions in the UK and, for the first time ever, the exhibition came to the Gibraltar Botanic Gardens in commemoration of the Bicentenary of the Alameda Gardens.

To mark the occasion, the Gibraltar Botanic Gardens, IGPOTY and DEHCC teamed up to create a new local award called *Green Gibraltar*. This award aims to highlight the diversity of nature in Gibraltar and showcase the botanical beauty of the Rock. Numerous entries were received and the winners, as well as finalists, were displayed as part of the world-renowned photographic exhibition. Further information on the International Garden Photographer of the Year Exhibition can be found online at www.igpoty.com

Details of the local winners and their corresponding entries are as follows:

1st place: Leslie Linares - East Side Sand Slopes



2nd place: Monica McMahon – 'Cactus'





The exhibition was officially opened by Minister for the Environment, Prof. John Cortes, on Wednesday 5th July at 9.30am. The official opening took place above the Lion's Pond in the Alameda Gardens where the winners were presented with their awards. The exhibition remained open for viewing until the end of October 2017.





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Underwater Photography Presentation

On Friday 31st March 2017, DEHCC hosted an underwater photography presentation together with marine photography giants INON. The presentation was held at the University of Gibraltar with free entry to members of the public. Donations were encouraged though with all proceeds going to the Gibraltar Nautilus Project.

Steven Warren (INON UK) is a co-developer of the INON UK photography underwater a contributing course and author to Martin Edge's The Underwater Photographer, regarded as one of the best underwater text books currently available, and is coproducer of the Visions in the Sea underwater photography festivals. Steven has also been speaker a auest on underwater photography at the London, Birmingham and Irish dive shows.



DEHCC's scientific dive team also took this opportunity to further their data collection capabilities by embarking on a joint underwater photography training programme with INON UK. DEHCC's dive team continue to monitor our underwater environment and their research is being used to support marine protection policy.

Marine Strategy Framework Directive Programme of Measures

DEHCC published Gibraltar's Programme of Measures (PoM) under the Marine Strategy Framework Directive (MSFD). The PoM will help to achieve or maintain Good Environmental Status (GES) as defined in the Initial Assessment and Proposals for Good Environmental Status in British Gibraltar Territorial Waters. In doing so it fulfils the requirement in the MSFD (2008/56/EC; MSFD) for Member States to identify the measures that need to be taken in order to achieve or maintain GES.

The PoM aims to ensure sustainable use of marine waters by protecting the marine environment, preventing its deterioration and restoring it where practical, while using marine resources sustainably. The measures are comprehensive and range from the protection of marine habitats, creation of artificial reefs, and regulations for protecting marine assets. The PoM can be viewed at:

https://www.gibraltar.gov.gi/new/marine-monitoring



Artificial Nests for Ospreys

DEHCC installed artificial nests within the Gibraltar Reserve to help attract Osprey, a spectacular fish-eating bird of prey, back to the Rock. The nests were built in Gibraltar by the Nature Reserve Management Team.



Ospreys were known to nest on Gibraltar's steep eastside cliffs up until the 1930s when the last breeding pair was recorded. Population numbers declined throughout much of Western Europe during this time largely due to the collection of their eggs, hunting and habitat destruction. In Gibraltar, it is likely that quarrying and military activity during the War years also contributed to its disappearance. In the region, a few pairs of Ospreys remained nesting on inaccessible sea cliffs on the coast of north-eastern Morocco. In the last decade, the Osprey population has increased in many places around Europe including Scotland, Germany and Scandinavia. Thanks partly to reintroduction efforts; it has also recolonized places where the species was lost like England and France.

A reintroduction programme is underway in Cadiz and scientists from DEHCC have joined the regional efforts to increase population numbers in consultation with the Gibraltar Ornithological and Natural History Society (GONHS) as well as regional experts from Andalucía.

Partly as a result of the reintroduction in Cadiz, where some pairs can be seen nesting, Ospreys are now found all year round in the Bay of Gibraltar and are regularly seen on migration. The installation of artificial nests with decoys is aimed at attracting the interest of passing Ospreys that may be enticed to stay. With other conservation measures carried our within the reserve, this initiative forms part of the Department's wider efforts to re-wild the Gibraltar Nature Reserve and help bring back an iconic bird of prey.

On the following pages, pictures highlight the work undertaken to create these artificial nests.

Below we can see the initial stage of constructing an artificial Osprey nest.



Below, works are well underway with natural insulation being fitted into a nest.



A nearly completed nest with its general appearance made to resemble that of an actual nest as if an Osprey had constructed it.



Gibraltar Macaques feature in International Scientific Research

The results of a wide-ranging international research project on disease in free-ranging and captive macaques were published in April 2017 in the Journal of Emerging Infectious Diseases. The paper, Survey of Treponemal Infections in Free-Ranging and Captive Macaques, 1999-2012, of which the Minister for the Environment was a co-author, analyses data from around the world in studying the prevalence of Yaws. Yaws is an endemic tropical disease distinguished by bone and skin lesions caused by infection with Treponema pallidum.

The overseas research bodies involved in this project include the University of Washington, Udayana University (Bali), University of Kent (Canterbury), the London School of Hygiene and Tropical Medicine, University of Toronto (Scarborough), and the German Primate Centre (Gottingen). The Gibraltar part of the research was carried out under the auspices of the Gibraltar Macaque Team, which is made up of GONHS, the Gibraltar Veterinary Clinic and DEHCC. Samples from no fewer than 124 Gibraltar macaques were analysed, out of a total of 734 from different locations including Bali, Sulawesi, Nepal, Singapore, Bangladesh, Thailand and Cambodia. The Gibraltar Macaques were all free from infection.

The full paper is available online at the following link:

https://wwwnc.cdc.gov/eid/article/23/5/16-1838_article

Alderney Conference of UK's Biodiversity hotspots

Minister for the Environment and Climate Change, Prof. John Cortes, co-chaired a conference on the environment in the UK Overseas Territories (UKOT) in June. He was accompanied by DEHCC's Chief Executive Officer, Dr. Liesl Mesilio-Torres, and Senior Environment Officer, Stephen Warr.

In total, representatives from 11 UKOTs and Crown Dependencies (CDs) from as far afield as Bermuda, Pitcairn and the British Virgin Islands travelled to Alderney to discuss the future of the environment in their jurisdictions. The meeting tackled a diverse range of issues including the potential impacts of Brexit and the subsequent changes to UK laws, through to climate change and the need to share the limited resources available to these often isolated territories. The event was hosted by the Government of Alderney; one of the smallest of the UK's Crown Dependencies and coordinated by the non-governmental organisation, the UK Overseas Territories Conservation Forum (UKOTCF). All delegates were formally greeted by the Island's president Stuart Trought.

The UKOTs and CDs all have their own identity and governing structure, with no representation in the UK Parliament. The exact relationship between the OTs and the UK differs for each, although, as in the case of Gibraltar, the UK is generally responsible for defence and international relations including international conventions. Combined, the UKOTs and CDs are home to a far greater concentration of endemic (found nowhere else) and endangered species than any other part of the UK, with a 2016 paper estimating they might contain as many as 100,000 native species, of which 300 might be endemic species restricted to a single location.

This is only the second meeting of its kind, the first having been hosted by the Government of Gibraltar in 2015. The aim of these meetings is to develop the benefits of joint and collaborative working, and discuss common priorities and approaches to discussions with the UK Government.

Alderney, a community of just 1900 residents, offered to host the meeting in recognition of the need to improve communication between the UK's remote outlying communities. The island played host to the Ministers and their staff at its 'Island Hall' and laid an informal dinner in the grounds of a Roman Fort just eight miles away. The event was coordinated on the island by the Alderney Wildlife Trust, the 47th member of the British Wildlife Trust partnership.





Wildlife Cameras

During May 2017, DEHCC launched the second phase of its Gibraltar Nature Cameras Project with the installation of two live-feed cameras showing the nests of one of Gibraltar's most well-known summer resident birds, the Pallid Swift. These fast moving, sickle-shaped, birds signal the start of spring and are a characteristic feature of the spring and summer skies of Gibraltar.

Following the earlier deployment of the areatly successful live marine camera, the initiative will be used as part of the Department's wider Environmental Education Programme aiming to increase knowledge and protection of both our natural and urban environments. It is hoped that the live-feed Swift Cameras will help raise awareness of the fascinating lives of these birds, as well as encourage the wider public to protect them and their nest sites. Swifts fly all the way down to tropical Africa and back every single year, and once they leave the nest as youngsters, they are known to spend several years continuously on the wing.

Two species of swifts have historically nested in built-up areas in Gibraltar; the Common Swift characterised by its dark, almost black colour and the Pallid Swift, which is paler brown. Older buildings in Gibraltar were constructed using traditional methods, leaving gaps under the eaves and gables. These have long been used by swifts for nesting. However, modern building styles and techniques have had an adverse effect on the local swift population by decreasing the habitat that these birds use for nesting. Government is placing nests around Gibraltar and it is the policy of the Development and Planning Commission to require the installation of swift nests in all new construction. There is a third species, the larger and much rarer Alpine Swift, which nests in crags on the east side of the Rock.

The Swift Cameras can be viewed online from DEHCC's Thinking Green Website: <u>www.thinkinggreen.gov.gi</u>



Sea Shepherd Visit



Minister for the Environment and Climate Change, Prof. John Cortes, accompanied by Senior and Environmental Protection Staff from DEHCC paid a courtesy call to the Sea Shepherd vessel Sam Simon when it called at the Port of Gibraltar.

Sea Shepherd is an international organisation dedicated to the protection of marine life.

The Minister and DEHCC officials were able to discuss marine conservation and wildlife protection methods and the possibility of collaboration in providing training and exchange of expertise with the Sea Shepherd team.





World Oceans Day



On Saturday 10th June Gibraltar celebrated World Oceans Day. A marine litter cleanup was organised between DEHCC, The Nautilus Project, MMIRC, GONHS, GSAC 888 Dive Club, Rock Bottom Diver's dive club, Dive Charters, The Gibraltar Spearfishing Association, and small boat owners and volunteers who turned up on the day to lend a hand.

The Day started off with a brief on procedures, areas and safety delivered by Clive Crisp from DEHCC, followed by a talk by Lewis Stagnetto from The Nautilus Project on marine plastic pollution and the dangers to marine flora and fauna.



Divers, spear-fishermen and snorkelers took to the sea to remove litter from the seabed, whilst volunteers on land picked up coastal marine litter, boat owners took to collect floating litter and collect nets filled with litter hauled up by the divers. The litter extracted from the seabed was taken to a 'critter station' where volunteers picked through it extracting limpets, small octopus, worms and any other living creatures which had come up as by-catch. These were returned to the sea.





Over 60 volunteers turned up for the cleanup, in which chairs, shoes, dog toys, engine parts, plastic tubes, a child's scooter, cans, plastic and glass bottles were extracted from the sea. The land team segregated the litter and placed what they could in the recycling bins provided by the Department of the Environments Cleansing Section. Two ghost nets were also extracted from the seabed. Well done to GSAC 888 and The Gibraltar Spearfishing Association for achieving the extraction! The collaboration group have called themselves 'The Neptunian Network' and will be working together in future projects and clean ups of British Gibraltar Territorial Waters.





Please remember to reduce the amount of waste you produce, Reuse as much as you can, and Recycle! Together we can make a difference!

Photo credits: Sean Matthew Yeo, Tommy Finlayson, Eugenio Robles.

Planning for Biodiversity

Historically, cities and urban areas have been perceived as places for people and not animals. Paradoxically, though, many species of wildlife thrive in built environments. More recently, growing interest in urban wildlife has inspired many studies on the subject; proposing means to create physical and social environments that are mutually beneficial for both humans and wildlife.

Protecting and restoring wildlife habitat in our cities is a vital component of wildlife conservation and there are lots of reasons why we should support urban biodiversity. On a practical side, these plants and animals provide ecosystem services like photosynthesis, decomposition, control of pests, and the processing of air and water pollution. They also provide recreational, aesthetic, and spiritual value; many city dwellers appreciate living within a greener environment. There is also something to be said for the intrinsic rights of these living creatures to exist in these places; especially considering they were here before we were.

People in much of the world live in cities or on the fringes of development. In these heavily modified landscapes, it can be challenging for people to experience more pristine ecosystems. Public parks and open spaces not only support habitat connectivity within ecological landscapes and serve as a refuge for species impacted by urbanization, but also expose people to nature in their own backyards, potentially broadening support for conservation on a much larger scale.
The Planning for Biodiversity – Urban Wildlife Conservation Guide has been created in order to provide information on local species and what can be done to protect and encourage them.

Information includes:

Excellent Natural Pest Control

Bats, Swifts and other insect eaters, eliminate the need for the use of harsh chemical insecticides in your home or garden.

Health Benefits

Spending time in nature has been proven to have numerous health benefits including stress relief, improved eye health, concentration, sleep and mental health, Vitamin D from sunshine, boosts to your immune system, etc.

Sense of Stewardship

By providing green spaces and nest opportunities for bats and birds, you will not only help minimise their declining populations and increase their food sources, but also fulfill your stewardship responsibility towards a more sustainable future – making you feel good!

This document can be found online from DEHCC's webpages under HM Government of Gibraltar's website [https://www.gibraltar.gov.gi/new/publications]

Some of the work carried out by DEHCC to promote biodiversity within our unique urban environment includes the installation of Blue Tit Nest Boxes.





Insect Hotel installation at Gibraltar Law Courts.



Bat Boxes in the area of Trafalgar Cemetery.



Marine Protection Legislation



Photo taken by John Piris

Gibraltar became one of the first countries in the world to provide near complete protection to all species of sharks, rays and skates, in a move that was praised by UN the the Patron of Oceans, Lewis Pugh. A significant amendment to the Nature Protection Act 1991 was published in May providing protection to all sharks, and skates within BGTW, effective ravs immediately.

Gibraltar is the only country in Europe to have banned shark fishing and joins a short list of countries across the globe to have taken that step. They include the Bahamas where all shark fishing, sale and trade in shark products was banned in July 2011; the Maldives where it was prohibited in 2010; and French Polynesia, which in 2012 permanently banned shark fishing and trade in all sharks. 53% of sharks and rays native to the Mediterranean are at risk of extinction.

The importance of both sharks and rays to the marine ecosystem stems from their position in the food chain. They are apex predators, the sea version of land animals such as lions and tigers. Without the top predators there is a trickle-down effect to the marine life below them in the food chain. Taking rays as an example, these are important because they keep the numbers of sea urchins controlled.

The new protection order is in keeping with HM Government of Gibraltar's wider mandate to become a leader in the application of Regional Marine Protection Conventions such as the Barcelona Convention for the Protection of the Mediterranean Sea. Only two species can now be fished in BGTW but only under strict licence conditions. These are the small spotted catshark/lesser spotted dogfish and the twineye skate. The legal measure was subject to a consultation process with the Nature Conservancy Council and carried the full support of the Fishing Working Group set up by the Minister for Environment under the the Marine Protection Regulations 2014.

Air Quality

No Idling Signs

Idling occurs when a motor vehicle with a diesel or gasoline engine is running but the vehicle is not in motion. Excessive idling causes an unnecessary release of contaminants into the air, including fine particulates and airborne toxins. This therefore causes unnecessary air pollution which affects human health and pollutes our environment.

Two 'No Idling' signs were installed at either end of the airport runway to discourage the idling that could occur whilst vehicles wait for the taxiing, landing, and or takeoff of aircraft. They have also been placed to discourage those vehicles waiting to cross the frontier during times of extensive queues.

Always remember to switch your engine off when waiting in a queue or at either side of the runway whilst access across is prohibited.



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Energy



Department of the Environment, Heritage and Climate Change



Proud to Support Earth Hour 2017 25th March 8.30pm



Lights off for Earth Hour! Join Us for a Candlelit Dinner Saturday 25th March

Post a photo of your night on the Environment's Thinking Green – Gibraltar Facebook page for a chance to win a night's stay at the Rock Hotel!

Earth Hour



Earth Hour is a global environmental movement of WWF that mobilises hundreds of millions of people to make a difference for the planet. Its core vision is to create environmental impact by utilizing the power of the crowd.

The massive global movement, which began as a simple lights-off event in Sydney in 2007, has grown to engage hundreds of millions of supporters in more than 7000 cities and towns in over 172 countries and territories worldwide. From Sydney Opera House to the Eiffel Tower; from the Empire State Building to Big Ben; nearly all major landmarks across the globe take part each year, including Gibraltar.

Earth Hour was celebrated on the 25th March 2017, between 8.30pm and 9.30pm. In a huge symbolic display, lights across the globe where switched off for one hour in a show of solidarity in the fight against climate change.

In Gibraltar, our iconic Moorish Castle and North Face of the Rock remained unilluminated for the entire weekend in an extended celebration of WWF's Earth Hour.

The local community, including shops and businesses, were also encouraged to switch off all non-essential lighting. Restaurants supporting the 'Switch Off' initiative to raise awareness on climate change by hosting a candle-lit dinner included: Café Solo, Wagamama, Pizza Express, Café Rojo, Gallo Nero, Little Rock, The Lounge, Raj's Curry House and Little Bay.

In addition, DEHCC also held a competition on their Thinking Green - Gibraltar Facebook page where members of the public were encouraged to post photos of their efforts during Earth Hour's celebrations.

For a chance to win a night's stay at The Rock Hotel, including breakfast and a 3 course dinner, members of the public were encouraged to:

1. Like our Facebook page Thinking Green - Gibraltar;

2. Like and Share the post;

3. Post a photo of what they were doing to support the cause during Earth hour.

The winner was announced, via Facebook, on Monday $27^{\rm th}$ March 2017.

Switching off and other energy efficiency actions reduce pollution and save power and money.

Remember – Every Action Counts.



Energy Efficiency Awareness Day

DEHCC held a free light bulb swap on Thursday 23rd March as part of its energy efficiency campaign and in celebration of the Earth Hour 'switch off' initiative.

Members of the public were encouraged to visit DEHCC's stall at the Piazza, on Main Street, and exchange one of their old, inefficient light bulbs for an energy and money saving LED free of charge.

Availability was determined on a first come, first served basis and the swap was limited to one light bulb per household to ensure as many households as possible had an opportunity to take part.



ClimACT



The ClimACT project aims to support the transition to a low carbon economy in schools and has four main lines of action. These are:

Develop decision support tools

Develop decision support tools that will assess and identify sustainable solutions for schools, based on intelligent resource management, renewable energy and behaviour change.

Generate new business models

Generate new business models and new management strategies for schools.

Create educational tools

Create educational tools to raise awareness in low-carbon, assisted by information and communication technologies.

Establish a thematic network

Establish a thematic network in the SUDOF driven region, by a Livina lab methodology, which will raise awareness training and and will foster a communication framework between endusers and stakeholders.

The project is funded by the Interreg SUDOE programme and involved 35 pilot schools from Portugal, Spain, France and Gibraltar.

The Interreg SUDOE programme is an EU Territorial Cooperation Programme funded by the European Regional Development Fund (ERDF). It offers support to regional development in South-Western Europe, by funding transnational projects.

In Gibraltar, educational institutions were involved in the project. These were:

- o St. Bernard's First School,
- o St. Bernard's Middle School,
- o St. Joseph's First School,
- o St. Joseph's Middle School,
- o St. Anne's Middle School,
- o Bayside Comprehensive School,
- College of Further Education, and
- o University of Gibraltar.

DEHCC carried out environmental audits that reviewed seven aspects of each educational environment, including energy, water, comfort and Indoor Air Quality (IAQ), waste, transport, green spaces, and green procurement. These audits were carried out in order to:

- Understand why, how, where and when each of the seven aspects is used;
- Record / monitor data profiles for the seven aspects;
- Make decisions based on the data gathered; and
- Implement new decisions with an aim to improve and/or maintain optimal conditions within the school environment.











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The Dangers of Plastic

Plastic Bags, first introduced in the 1970s, were designed to be disposable, single-use items that after their shortterm convenience could be disposed of as solid waste along with food waste and any other household items. They are designed to be durable in order to allow for the carrying of heavy items. The downside of their design, in being made from plastic and especially the chemical bonds which make it so strong, is that these same bonds make them resistant to the natural process of degradation.



Considered as a symbol of consumerism, it is estimated that between 500 billion and one trillion plastic bags are used worldwide each year. Whilst a fair number end up in landfill sites, many more end up littering both our terrestrial and marine environments. It is important to remember, that both our terrestrial and marine environments are not exclusively for our use. We share these spaces with a multitude of natural wildlife. Experts estimate that up to a million birds and 100,000 other marine fauna are killed each year as a result of plastic debris including plastic bags.

Plastic Bags – the problem.....



Leatherback, Green and Loggerhead turtles are found in the Mediterranean and Black Sea. Plastic bags appear to turtles as jellyfish, their staple diet, and being unable to distinguish between plastic bags and jellyfish, they will consume these. The plastic blocks their digestive system and leads to their death from starvation. Currently all three species of turtles found in the Mediterranean are endangered. Leatherback turtles have seen their population numbers drop by 95%, partly due to plastic ingestion. If plastic bag pollution continues, these species could very likely become extinct.



Several species of whales especially Baleen Whales such as the Fin whale (the second largest animal in the world) are filter feeders and inevitably ingest pieces of plastic as they feed on Krill. These whales are also being affected in great numbers due to the level of plastic present in our oceans.



In addition to the immediate effects of plastic bags and other plastic items on our wildlife, as plastic breaks down into smaller pieces this results in 'microplastics'. This then becomes easier for fish and other marine life to ingest resulting in the introduction of plastics into the food chain and bio accumulating through this, with humans being among the ultimate consumers.

Whilst emphasis is given to the effects of plastic on the natural environment and its wildlife, it must also be remembered that in encouraging the continued use of plastic bags and other plastic items we are also causing great harm to ourselves and our children even though the effects are not currently as obvious as those now seen in our wildlife.



Plastic Bag Reduction Initiative



HM Government of Gibraltar joined forces with nongovernmental organisations (NGOs) and the business community in a major initiative to reduce the use of plastic in Gibraltar.



DEHCC, with the NGOs (the Gibraltar Ornithological & Natural History Society (GONHS), the Nautilus Project and Environmental Safety Group (ESG)) joined in this initiative along with a growing number of businesses.



Morrisons, Eroski and M&S all agreed to substantially reduce, with an aim to completely remove, the use of all types of plastic bags, having already done away with all single use plastic bags. Responding to work by the Nautilus Project, other retailers and other businesses also stopped using plastic bags altogether. These include:

- All Wrapped up,
- Gache Opticians,
- Gibraltar Arts and Crafts,
- Hearts Boutique,

- Purple Rain,
- Holland and Barrett,
- In Motion,
- NaturHouse,
- Newton Store,
- Pashmina,
- Riviera Maison,
- SM Seruya,
- Sonic Electronics,
- The Clipper,
- The Gibraltar Museum,
- The Health Store,
- Venice Perfumery,
- Tommy Hilfiger,
- Tommy Hilfiger Kids,
- SFA Homes,
- The Paint Shop,
- Trends, and
- Biancas.

DEHCC is encouraging a reduction in the use of plastic, and calls on consumers and businesses to respond actively.

At the press call, the NGOs and DEHCC delivered awareness raising presentations and some of the businesses explained what they are doing to decrease the use of plastic.



www.constantinealexander.net







www.plasticsnews.com

Plastic Microbead Importation Ban

Plastic Microbeads: The Hidden Threat

HM Government of Gibraltar's implementation of a ban on the importation of most products containing microbeads came as a result of the pressing issues regarding the effects of plastic microbeads on the natural environment.

GIBRALTAR GAZETTE, No 4412, Monday 20 November, 2017

LEGAL NOTICE NO. 225 OF 2017.

IMPORTS AND EXPORTS ACT, 1986

IMPORTS AND EXPORTS (CONTROL) (AMENDMENT) REGULATIONS 2017

In exercise of its powers under section 16 of the Imports and Exports Act, 1986, and all other enabling powers, the Government has made the following regulations-

Title.

 These regulations may be cited as the Imports and Exports (Control) (Amendment) Regulations 2017.

Commencement.

2. These regulations come into operation on the day of publication.

Amendment to the Imports and Exports (Control) Regulations, 1987.

 The Imports and Exports (Control) Regulations, 1987 are amended in Schedule 1 by adding the following paragraph after paragraph 16–

> "17.(a) Subject to subparagraph (b), a commercial quantity of a rinse-off cosmetic or personal care product containing microbeads that is used to exfoliate or cleanse.

The hidden threat!

Within the beauty and personal care industries, plastic microbeads are specifically manufactured to be used in rinse-off products as a means by which to exfoliate. Plastic microbeads are seen as a cost-effective ingredient by industry for use in their products. However, the environmental consequence of using plastic microbeads is significant.

It is worth noting that plastic microbeads absorb persistent organic pollutants (long-lasting toxic chemicals like pesticides, flame retardants, motor oil, etc) and other industrial chemicals that move up the food chain when the toxic-coated beads are consumed by fish and other marine organisms. The end result? Through our consumption of fish and seafood, we are also consuming these toxins which are detrimental to our health without even considering that of the fish and other marine organisms that first absorb them.

Solid evidence has been found to prove that microplastics and microbeads also affect plankton, being one of the smallest organisms in the marine food chain, through ingestion. These then bio-accumulate through the food chain, working their way up to larger predators, including humans.

Fish caught for our consumption are also known to eat plastic microbeads and the toxins absorbed in those plastics transfer to the tissue in the fish.

What are the alternatives?

There are various rinse-off cosmetic or personal care products on the market which are equally affective but do not contain plastic microbeads. As mentioned above, the industry prefers to keep plastic microbeads in their products because they are cheap and easy to source. In addition, plastic microbeads are also smoother than natural alternatives including apricot shells, jojoba beans, and pumice. Being smoother means that the products will be less effective at exfoliating, encouraging consumers to use them every day and as a result purchase products on a more regular basis. Whilst environmentally-friendly rinse-off cosmetic or personal care products may be slightly more expensive, the likelihood is that these will be used once or twice a week, as opposed to everyday, and do not harm the natural environment or humans in the process. Sea Salt and Sodium Bicarbonate are two examples of healthy home-based alternatives for exfoliation which have no detrimental effects on the natural environment or human health.

What else can we do?

When plastic products are discarded, some of these find their way into the natural environment, both on land and in the sea. There have been claims that plastic products, or at least some of them, are biodegradable. This is untrue! By definition, the term 'Biodegradable' means an item which can be decomposed by bacteria or other living organisms. Most plastics will not biodegrade. The confusion lies in that plastics will break down into smaller pieces, commonly known as microplastics, but still remain as plastic in the natural environment.

Remember, once on the land and/or in the marine environment, the plastic will break down into smaller plastic pieces and eventually into microplastics. **It will never biodegrade!**

Please remember to **refuse** plastic bags, **reduce** the amount of plastic used in the home, **reuse** wherever possible, and **recycle** in the yellow recycling bins **always**!



www.thescienceexplorer.com



www.beatthemicrobead.org

Beach Recycling Bins

As part of DEHCC's initiative to increase recycling rates and reduce littering on Gibraltar's beaches, recycling bins were installed on all beaches during 2017 for the summer season.

In total, 26 recycling units were deployed across all six beaches. Each recycling unit contains four bins:

- Yellow: for plastics, cans and tetra brik containers
- Green: for glass items
- Blue: for paper & cardboard
- Black: for other general waste

Litter on beaches is a significant environmental problem. It can cause injury to people on land and, if blown into the sea, become marine litter. Marine litter is one of the deadliest killers of marine wildlife, the largest polluter of our oceans and the quietest growing threat to human health.

Officers from DEHCC visited all the beaches during the summer months to provide further information and advice to beach users on the issue of marine litter and how to tackle it.

DEHCC would like to continue asking beach users to support this campaign in years to come in order to promote a cleaner environment by ensuring they collect all their rubbish at the end of the day and dispose of it correctly in the bins provided.

The bins were serviced on a daily basis but beach users should be aware that larger recycling bins as well as general waste bins are also available on all beaches, should the smaller units be full. These recycling units will continue to be deployed every year in our beaches.



Marine Litter Awareness Day

In addition to the installation of recycling bins at all of Gibraltar's beaches, an awareness day was organised to support further efforts to promote the issue of marine litter. Information boards were created and displayed at all beaches providing images and information for all beach goers. Leaflets highlighting the dangers and issues relating to litter entering the marine environment were also distributed.



In addition, reusable beach ashtrays were also distributed to encourage beach goers who smoke to dispose of their cigarette butts correctly and therefore prevent these from entering the marine environment.





ghan The state of preventable deaths worldwide.

Smoking is harmful to your health and to the health of those around you. Use the GHA Stop Smoking Service to help you quit, by calling 20007865

How to Assemble ...





Place Beach Ashtray into the sand. Put a handful of sand inside.

St. Anne's Middle School Recycling



St Anne's Middle School has been recycling paper for some time now, with dedicated recycling bins in each class, although emphasis is given to the pupils to first reduce and reuse. The School has now begun recycling plastics, tetra bricks and cans with dedicated recycling bins in the playground, lunch hall and in each class.



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To encourage the pupils, Deputy Head Jackie Linares and Mrs Tamara Perez introduced the 'Eco Warrior' initiative where pupils are selected every week for their efforts in recycling and encourage others in the school to deposit their recyclable waste in the appropriate recycling bins. DEHCC congratulates the dedication of the staff and pupils. Keep it up and well done!



Reduce, Reuse and Recycle is what we should all be implementing throughout our daily activities at work, at home as well as when out and about.

Educational Awareness

Environmental education explains how natural environments function and, in particular, how human beings can seek to manage their behaviour and ecosystems in order to live sustainably. It refers not only to education within the school system but also to all efforts to educate the public, including print materials, websites and media campaigns. DEHCC considers environmental education and awareness to be of utmost importance and devotes a major part of its efforts to this, thus promoting the creation of a better and more sustainable environment.

World Environment Day

World Environment Day (WED) is an annual event which aims to be the biggest and most widely celebrated global day for positive environmental action. WED activities take place all year round but culminate on 5th June every year, involving people from all over the world.

WED celebrations began in 1972 and have grown to become one of the main vehicles through which the UN
stimulates worldwide awareness of the environment and encourages political attention and action. Gibraltar has been taking part in the WED celebrations for many years. Through WED, the UN Environment Programme is able to personalise environmental issues and enable everyone to realise not only their responsibility, but also their power to become agents for change in support of sustainable and equitable development. WED is also a day for people from all walks of life to come together to ensure a cleaner, greener and brighter outlook for themselves and future generations.

'Connecting People to Nature', the theme for World Environment Day 2017, implored us to get outdoors and into nature, to appreciate its beauty and its importance, and to take forward the call to protect the Earth that we share.

The Value of Nature

In recent decades, scientific advances as well as growing environmental problems such as global warming are helping us to understand the countless ways in which natural systems support our own prosperity and well-being.

The world's oceans, forests and soils act as vast stores for greenhouse gases such as carbon dioxide and methane; farmers and fisher-folk harness nature on land and under water to provide us with food; scientists develop medicines using genetic material drawn from the millions of species that make up Earth's astounding biological diversity. Billions of rural people around the world spend every working day 'connected to nature' and appreciate full well their dependence on natural water supplies and how nature provides their livelihoods in the form of fertile soil. They are among the first to suffer when ecosystems are threatened, whether by pollution, climate change or over-exploitation.

Nature's gifts are often hard to value in monetary terms. Like clean air, they are often taken for granted, at least until they become scarce. However, economists are developing ways to measure the multi-trillion-dollar worth of many so-called 'ecosystem services', from insects pollinating fruit trees in the orchards of California to the leisure, health and spiritual benefits of a hike up a Himalayan valley.

In the age of asphalt and smartphones and among the distractions of modern life, connections with nature can be fleeting. During, and in the run up to, WED, DEHCC encouraged the general public to connect with nature, culminating in a celebration at Commonwealth Park.





Various Non-Governmental Organisations (NGOs) joined the celebrations providing talks to school children and the general public.

Below we have The Nautilus Project talking to children about Gibraltar's varied and special marine life.



Below we have members of the Marine Mammal Information, Research and Conservation (MMIRC) Group talking to school children about marine mammals found in BGTW and what we can do to help protect them.





School Presentations

As part of its educational awareness programme, every year DEHCC visits all schools and presents them with an environmental issue. The yearly theme is determined by the United Nations Environmental Programme.

The theme for 2017, Connecting People to Nature, was very well received by pupils and teachers alike.



According to scientific research, our connection to nature is defined by our feelings and attitudes towards nature. Our sense of empathy for creatures, our sense of responsibility for our environment, and our sense of oneness with it all have a role to play in how we treat nature. If we love, understand and appreciate our environment and its resources we are far more likely to treat it with care than if we feel distant from nature and know nothing about it.

When it comes to health, there are a number of scientifically proven benefits to being connected with nature. Physically, outdoor activities increase the amount of exercise we do and as such can fight obesity, heart disease, diabetes and asthma. Psychologically, being connected to nature has proven to improve mood, cognitive skills, vitality and life satisfaction. It is even proven to boost our immune systems for fighting illness like chronic fatigue, anxiety, depression and even cancer.



Designated as a Nature Reserve in 1993 under local legislation, the Upper Rock is an obvious first location when we think about connecting with Nature in Gibraltar. Now recognized as a Special Area of Conservation and Special Protection Area, our Upper Rock boasts of around 669 different species of plants, a variety of invertebrates and other animals, and also provides a refuge pit stop for many different species of migratory birds.



The Gibraltar Upper Rock App (screenshots above and on the following page) is a useful tool when exploring the Upper Rock, essentially working as a reference guide for Upper Rock pedestrian routes.

Showing geotags for a number of points of interest across the Upper Rock, one is able to select from a number of available trails to explore. Once a specific trail is selected, a map will appear highlighting specific historical points of interest along the trail. In addition, further information is provided on what flora and fauna can be noted along the chosen trail.



Caves are probably one of the more adventurous ways to connect with nature locally. Although we may instinctively think of caves as dark and damp places with little, or no, life in them, caves provide a unique environment for specialised processes, flora and fauna.

Including both natural and man-made caves, in Gibraltar there are over 200 caves. Whilst most are inaccessible to the general public, there are a few that can be visited.



Old St Michael's Cave is the most frequently visited cave in Gibraltar, being promoted as one of its main tourist attractions.

New St Michael's Cave, which was discovered in 1942 as a result of a tunneling operation, is known locally as Lower St Michael's Cave. This is because the entrance to this cave can be found within the lower levels of Old St Michael's Cave. It is around 370m long and showcases a lake which reiterates the wonders that water can produce, percolating and dissolving limestone over thousands of years to create remarkable formations.

Martin's Cave was formed by marine erosion over many years. About 20 years ago, this cave was home to over 300 Schreiber bats which have since left.



The predominant species using Gibraltar's caves are bats. Bats are mammals and, with their webbed wings, are the only mammals capable of true and sustained flight.

Among bat species, there are insectivores (diet involves mainly insects), frugivores (diet involves mainly fruit) and vampire bats which do indeed feed on blood, mainly from animals. All bats found in Gibraltar are insectivores, mainly feeding on mosquitos, moths and other flying invertebrates.

Gibraltar's waters provide another great way to connect with nature through our enjoyment of beaches and observing the wildlife that resides within.



Orcas, also known as killer whales, can be sighted in the Strait of Gibraltar especially during the Atlantic Bluefin Tuna migratory season. Orcas hunt, migrate and work together in groups known as pods. Recent studies have shown that the orcas frequenting the Strait of Gibraltar are unique and do not share the same genes, diet or even social characteristics with other pods living in other areas of the world.



Loggerhead turtles spend most of their lives in the open ocean and shallow waters near the coast making Gibraltar an ideal place for them. Most adults will typically be spotted in the spring and summer months. Along with the Leatherback and Green Turtles, Loggerhead turtles are endangered largely due to plastic pollution and the loss of undisturbed nesting beaches.



Common dolphins are one of three species of dolphins found residing throughout the year in BGTW. Common dolphins can grow to a length of 2.5 metres and weigh up to 150kg. They have a life expectancy of up to 40 years.



Atlantic Bluefin tuna can be found in the Mediterranean and can grow to weigh more than 450 kgs. Typically though, adults average around 250kgs. Because of their muscular bodies, they can swim to speeds of up to 80 kilometers per hour which allows them to catch some of their favourite foods such as mackerel and sardines.



The Sperm Whale is less common in the straits but was spotted during 2017 in BGTW. One of the best ways to identify whales is by looking at the back fin. Some whales, like the Fin Whale, never bring their tail out of water, but Sperm whales do. Sperm whales can weigh up to 45 tonnes, and when they dive, they can reach depths of up to 3000 metres and take 2 hours in the process. Since these animals are very heavy, they use the force of tidal currents to help them migrate.





Connect with Nature and help preserve Gibraltar's unique local environment for future generations to enjoy in the same manner as we are privileged to do today.

Conscious Eating Campaign





DEHCC, in conjunction with the Alameda Wildlife Park and the Gibraltar Health Authority (GHA), launched the Conscious Eating Campaign, A Gibraltar Green Initiative, on World Meat Free Day, to raise awareness of the environmental, health and monetary benefits of cutting down on meat consumption by giving up meat once a week.

This initiative was supported by numerous local restaurants who offered vegan and vegetarian options on the 12^{th} June.

Restaurants that took part in the World Meat Free Day celebrations included:

- The Lounge Gibraltar,
- The Landing's,
- Raj's Curry House,
- Bistro 292,
- The Kasbar,
- La Parilla on the Go,
- The Muscle Bakery,
- Benjamin's Gourmet Foods,
- Grille53,
- Pizza Express Gibraltar,
- Little Bay, Indian Tapas Bar & Restaurant,
- THE LITTLE ROCK CAFE,
- Cafe Solo,
- Latinos, and
- Cork & Fork.

All the above named restaurants also displayed and provided customers with information on the benefits of reducing their weekly meat consumption.



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In Town without My Car

DEHCC held an 'In Town without My Car' awareness day at the Piazza on Wednesday 1st November.



As part of its ongoing efforts to reduce car movements within Gibraltar, the awareness day served to promote alternative means of transportation and highlight the benefits of these.

For members of the public, leaving the car at home and using smart and sustainable modes of transport can bring financial benefits. Through making clever choices about the type of transport we use, we can save money, improve our health, and contribute to the protection of the environment.

Each benefit has a positive economic impact on society, and it all starts with the decision to try something new!

GiBi Bikes were also present to help promote and explain to members of the public how the GiBi Bike initiative works.





We all want to breathe clean air, and city dwellers are no exception. No one likes congestion and pollution. Rethinking our mobility can go a long way to solving these urban problems.

By leaving the car at home, cycling, walking and using public transport, we can all make urban life healthier, safer and more enjoyable. And as the Commission's Green Capitals scheme has shown, when you improve the quality of an urban environment, better economic performance can follow, as talent and investment are attracted to the city.

We're all responsible for our mobility. Let's be smart and keep it clean!

Commissioner for the Environment, Maritime Affairs and Fisheries, European Union

Karmenu Vella

Recycling



Whilst the amount of waste being recycled is on the increase, further action is still needed to maximise the amount of waste deposited at recycling collection points.

In addition to minimizing the amount of waste sent to landfill, recycling enables the reuse of resources to make brand new products. This reduces the need for acquiring further raw materials.

Did you know that by recycling plastic, new clothes can be made of high quality which is durable without the need for further natural resources to be consumed? There are various high street brands which have committed to sourcing clothing made from recycled plastic. Patagonia and H&M's Conscious Collection are just two in a new movement within the fashion industry.

In our disposable culture, fast-changing trends and cheap manufacturing means we can throw things away without a second thought.

As waste continues to rise and as resources become ever-more scarce, the need to recycle existing materials is increasingly pertinent.

Designers are also proving recycled materials make elegant outfits fit enough to grace the catwalk or red carpet. At the 2016 Met Gala, actress Emma Watson's sleek, monochrome gown woven from yarn made out of recycled plastic bottles made waves for its true sustainability and responsible sourcing.



Check the following pages for a reminder of what can be recycled and where such items should be placed.

WHAT ITEMS CAN YOU DEPOSIT IN THE GREEN RECYCLING BINS?

ALL GLASS JARS GLASS BOTTLES WITHOUT THEIR CAPS & LIDS

Bottles of wine, spirits, etc. Jars of food, jams, etc. Perfume and cosmetic glass bottles.

All types of glass containers and products can be placed in any green recycling bin, once they have reached the end of their useful life.

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Should you be disposing of glass jars, remember that the lids (normally made of metal) should be taken off the jar or glass container and placed in the yellow recycling bin.

WHAT ITEMS CAN YOU DEPOSIT IN THE PINK RECYCLING BINS?

ANYTHING ELECTRIC including:

Small household items: clocks, coffee machines and electric toothbrushes. IT and telecommunications equipment: all types of phones, computers and keyboards, etc. Toys and leisure equipment: video games, car racing sets, etc.

For a comprehensive list please visit: thinkinggreen.gov.gi

All electronic and electrical equipment can be recycled in any pink recycling bin once the item is broken and cannot be repaired.

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Anything which runs on electricity, obtained from a battery, solar/wind powered or from mains electricity, is classified as an electronic or electrical item.

This includes all types of cables, light bulbs and light fittings as a few examples.

WHAT ITEMS CAN YOU DEPOSIT IN THE BLUE RECYCLING BINS?

NEWSPAPER MAGAZINES CARDBOARD EGG CARTONS FOOD PACKAGING BOXES

REMEMBER: Fold empty cartons & cardboard boxes to make them easier to transport and place in bins.

Any item made from paper can be recycled in any blue recycling bin.

Please remember to flat pack boxes which are intended for the recycling bin in order to maximise space in the bins for other items.

Discarded envelopes with plastic windows can also be placed in the blue recycling bin as the processing of paper, during the recycling process, allows for the removal of the plastic window.

WHAT ITEMS CAN YOU DEPOSIT IN THE RED RECYCLING BINS?

ALL TYPES OF BATTERIES including:

AAA, AA, C, D, 4,5 volt, 9 volt and Lantern (Spring). Smaller batteries from watches, etc, are also recyclable.

NB: Car and other vehicle batteries should be taken to the Recycling Centre at Europa Advance Road.

All batteries should be recycled as these pose a toxic threat to our natural environment.

All household batteries, whether single use or rechargeable, can be deposited in a red recycling bin. These recycling bins are small and therefore can be found attached to one of the other larger recycling bins available.

Please note that portable power banks, those taken to top up your electronic device, can also be recycled.

WHAT ITEMS CAN YOU DEPOSIT IN THE YELLOW RECYCLING BINS? PLASTIC

Bottles of water, soft drinks, etc. Cleaning product containers. Bath/shower gel bottles, yogurt containers, plastic shopping bags, plastic wrappers (from biscuits, etc). Packets of crisps, sweets, etc.

TETRA BRIK

Tetra Brik packaging from juices, milk, wine, etc.

CANS/METALS

All types of food tins and cans (tomato, tuna, peas, etc). Soft drink cans. Metal bottle caps. Clean aluminium foil and foil trays.

Anything made from plastic, including plastic wrappings and polystyrene packaging which might state that it is not recyclable, can be recycled in any local yellow recycling bin.

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All tetra brik packaging, although appearing to be solely made from cardboard, has an internal plastic/metallic coating, which is why it is collected for recycling with other plastic products.

All metal waste products such as cans, tins and even items such as frying pans, can be recycled in the yellow recycling bin.



ECO PARK

FREE DROP-OFF FACILITY FOR RECYCLABLE WASTE

Located at 8 Flint Road—Just off Devil's Tower Road



WHAT CAN YOU RECYCLE?

- Electrical & electronic equipment (including light bulbs)
- Batteries (all types)
- Mattresses
- Paper & Cardboard
- Paint
- Tyres
- Scrap Metal
- Aerosol & Spray Cans
- End of life vehicles
- Household Bulky items
- Waste Oils
- Plastics & Packaging
- Polystyrene
- Greenery
- Timber







information

Opening hours

Sunday-Friday :

8am-11.30pm

Saturday:

8am-8pm

Holidays

on : 200 75108

For

further

please contact the Eco Park

Excluding Public