



# Contents

At the instigation of His Serene Highness, Prince Albert II, the Princely Government is working to encourage the sustainable development of the Principality by focussing its actions on conserving biodiversity, protecting resources, reducing greenhouse gas emissions and championing a sustainable city policy. The Government's sustainable development policy is structured around four cornerstones: managing natural heritage and protecting biodiversity; implementing the Energy Climate Plan; moving towards a Sustainable City; Increasing the involvement of the people of Monaco and the State, with priority given to ensuring the Administration delivers on an environmentally friendly approach.



## HSH PRINCE ALBERT II A COMMITTED HEAD OF STATE

### THE 2016 ENVIRONMENT DIARY OF HSH PRINCE ALBERT II OF MONACO

#### // VISIT OF TSH, PRINCE ALBERT II AND PRINCESS CHARLENE TO THE VATICAN - 18/01/2016

As part of their official visit to the Holy See, Their Serene Highnesses Prince Albert II of Monaco and Princess Charlene had an audience with His Holiness Pope Francis.

During this meeting with the Sovereign Pontiff, and in keeping with the encyclical, 'Laudato si,' They discussed environmental protection and the possibilities provided by COP 21, the situation in the Mediterranean, migrations, especially climatic migrations, education as well as the meeting of the Council of European Bishops' Conference in Monaco on 9 October 2016, and the Faith and Sports Conference held at the Vatican on 5 October 2016.

#### // A YEAR OF COLLABORATIVE ACTION TO TACKLE PLASTICS IN THE MEDITERRANEAN - 10/03/2016

Plastic pollution in the sea is now one of the most serious ecological problems which affects oceans. The Mediterranean has one of the highest rates of plastics pollution in the world. The increase in micro-plastics in the sea and their probable inclusion in the food chain and therefore in our food, also creates a public health problem. It is urgent to make progress in finding practical solutions such as water treatment, waste management, the use of biodegradable plastics and innovations aimed at designing and developing alternative products. There is no shortage of solutions, but considerable effort is needed to implement them.



1 • 2016 marked the 10th anniversary of the Prince Albert II de Monaco Foundation and confirms the commitment of HSH the Prince to protect the environment and the oceans.  
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2 • HSH Prince Albert II of Monaco during the 7th Monaco Blue Initiative, in Sao Paulo (Brazil) on 3 and 4 of April 2016 ©DR

**monaco**  
BLUE INITIATIVE

To meet this challenge of a plastic-free Mediterranean, the Prince Albert II de Monaco Foundation, Tara Expeditions, Surfrider Foundation Europe and the Mava Foundation are collaborating to set up the Beyond Plastic Med (BeMed) initiative. It has set itself the goal of providing information on the health of the Mediterranean, supporting innovative, citizen-based solutions, and influencing political, legislative and regulatory decisions aimed at stopping plastic pollution.

Launched at the international conference, 'Plastics in the Mediterranean: Now we know it is there, what can we do about it?' which took place in Monaco, on 10 and 11 March 2015, BeMed is now run by a wider group since the International Union for Conservation of Nature (IUCN) wanted to get involved alongside the founding members.

#### // 7<sup>TH</sup> 'MONACO BLUE INITIATIVE' 03-04/04/2016

The 7<sup>th</sup> Monaco Blue Initiative (MBI) was held in Sao Paulo, in Brazil, on 3-4 April 2016, under the chairmanship of HSH Prince Albert II of Monaco, at the Palacio dos Bandeirantes, the Governor of Sao

Paulo's Residence. This event brought together more than seventy leading figures, experts, scientists, NGOs political and economic decision-makers and eminent figures from the private sector.

Launched in 2010 at the initiative of HSH Prince Albert II, and jointly organised by the Prince Albert II de Monaco Foundation and the Oceanographic Institute, Fondation Albert I Prince de Monaco, the MBI is a discussion forum which aims to stimulate knowledge and encourage the sustainable management and protection of the oceans, by creating synergies between the different stakeholders involved in protecting marine ecosystems and economic and social development.

The debates and speeches for this 7<sup>th</sup> event were based around the theme of sustainable aquaculture, as evidenced by the title:

#### 'Sustainable aquaculture at the Heart of a Blue Economy'

The negotiations on Biodiversity Beyond National Jurisdictions were also addressed on 4 April.



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3 • Signing the partnership agreement between the Prince Albert II of Monaco Foundation, represented by Dr Diane Vachon, Chair of the Canadian branch of the Prince Albert II of Monaco Foundation and the University of Laval, represented by Mr Yves Bourget, Chair of the University of Laval Foundation, in Quebec (Canada), on 8 April 2016 ©DR

4 • Signature of a partnership agreement between the Prince Albert II of Monaco Foundation represented by HE Bernard Fautrier, CEO of the Prince Albert II of Monaco Foundation and the German Ocean Foundation represented by Mr. Frank Schweikert, CEO of the German Ocean Foundation, in Monaco, on 19 April 2016 ©DR

5 • Signature of a partnership agreement between the Prince Albert II of Monaco Foundation represented by HE Bernard Fautrier, CEO of the Prince Albert II of Monaco Foundation and the Fondation Segré, represented by Dr Claudio Segré, its founder, in Monaco, on 19 April 2016 ©FPA2

### /// SIGNATURE OF A PARTNERSHIP AGREEMENT BETWEEN THE PRINCE ALBERT II OF MONACO FOUNDATION AND THE UNIVERSITY OF LAVAL (QUEBEC) - 18/04/2016

Following the meeting between HSH Prince Albert II of Monaco and Mr Denis Brière, the Chancellor of the University of Laval, during the 'Arctic Circle' conference in November 2015, in Reykjavik, a partnership agreement was signed between the Prince Albert II de Monaco Foundation and the Chancellor of the University of Laval, on 8 April 2016 in Quebec.

The University Laval and the Prince Albert II of Monaco Foundation are both working on environmental and sustainable development issues and have a shared interest in the Arctic. They have decided to work together, especially in areas such as sustainable development, developing research and education for the Arctic peoples, helping areas threatened by climate change by disseminating know-how acquired by these peoples, and improving knowledge related to northern environmental issues.

The University of Laval, the oldest education establishment in Canada (and the second oldest in North America), was the first to offer higher education courses in French. Winner of the Green Gown Awards in 2015, the University of Laval is known for its pioneering approach to sustainable development and its expertise in northern issues ('nordicity').

### /// SIGNATURE OF A PARTNERSHIP AGREEMENT BETWEEN THE PRINCE ALBERT II OF MONACO FOUNDATION AND THE GERMAN OCEAN FOUNDATION - 19/04/2016

On 19 April, following the conference on the impact of climate change on sea levels, organised by the German arm of the Prince Albert II de Monaco Foundation, on the island of Sylt, on 29 May 2015, a partnership agreement was signed between the Prince Albert II of Monaco Foundation and the German Ocean Foundation.

Given their complementary research fields in science and marine ecosystem conservation, the two

organisations decided to officialise their willingness to work together to protect the seas and oceans.

Through this agreement, the Foundations are committed to developing technical, scientific and methodological cooperation in order to take advantage of their respective expertise and experience and build public awareness of environmental issues by organising conferences and producing joint information materials.

### /// SIGNATURE OF A PARTNERSHIP AGREEMENT BETWEEN THE PRINCE ALBERT II OF MONACO FOUNDATION AND THE FONDATION SEGRÉ - 01/07/2016

On 1 July 2016, following the meeting on 1st December 2015 of the 'Patrons of Nature' by the International Union for the Conservation of Nature, of which HSH the Sovereign Prince and Mr Claudio Segré are members, the Prince Albert II de Monaco Foundation and the Fondation Segré signed a partnership agreement to protect biodiversity, endangered species and their habitats.

On this basis, the two foundations will work jointly on projects, especially to conserve certain Mediterranean species, such as the bearded vulture and the osprey.

### /// 10<sup>TH</sup> ANNIVERSARY OF THE PRINCE ALBERT II OF MONACO – 30/06/2016

Created in June 2006 by HSH Prince Albert II in order to respond more effectively to environmental threats, the Prince Albert II of Monaco Foundation celebrated its tenth anniversary on 30 June. This important event was an opportunity to bring together eminent figures and partners of His foundation who, over this decade, have been involved in projects to protect the environment and promote sustainable development.

On the evening of the 10<sup>th</sup> anniversary of the Prince Albert II de Monaco Foundation, an exceptional event was organised in the Sporting's Salle des Etoiles. The gala evening included several highlights:

- Guests watched the screening of an anniversary film for the Prince Albert II de Monaco Foundation



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6 • Their Royal Highnesses Prince Albert II of Monaco and Princess Charlene during the gala evening celebrating the 10<sup>th</sup> anniversary of the Prince Albert II de Monaco Foundation in the Sporting's Salle des Etoiles, in Monaco, on 30 June 2016 ©JCVINAJ/FPA2  
 7 • HSH Prince Albert II of Monaco at the award ceremony of his Foundation surrounded by (from left to right) Ms Laurence Tubiana, Mrs Maja Hoffmann, Founder and President of LUMA Foundation and LUMA Arles, Deputy Chair of the Foundation Tour du Valat, Mr Dhesigen NAIDOO, Director General of the Water Research Commission, in the Sporting's Salle des Etoiles in Monaco, on 30 June 2016 ©JCVINAJ/FPA2  
 8 • Launch of the 'Stop Buying Ivory' campaign by the WWF, the NGO TRAFFIC and the Prince Albert II of Monaco Foundation, in Beijing (China), at the Monaco Salon, on 12 July 2016 ©DR

which retraces the history of the foundation and details the projects accomplished over these ten years.

• The 2016 awards ceremony of the Prince Albert II of Monaco Foundation, which rewards people who, in their own way, are leading the way in sustainable projects that reconcile Mankind with the Environment on which we depend and who are making an exceptional commitment to save our planet, in each of the Foundation's three priority areas:

- Biodiversity conservation: The 2016 awarded went to Mr Luc Hoffman for his visionary approach to protecting biodiversity and his remarkable initiatives which he has developed with the MAVA Foundation, the biology station of the Tour du Valat, WWF International and the International Foundation for the Banc d'Arguin.

- Sustainably water resource management. The 2016 award went to the Water Research Commission represented by its CEO, Mr Dhesigen Naidoo, for its exemplary work in South Africa in water supply and treatment and sustainable water resources.

- Reducing the effects of climate change and promoting renewable energies: The 2016 award went to Mrs Laurence Tubiana for a remarkable commitment to climate issues, creating the Institute of Sustainable Development and International Relations (IDDRI) and her active role in the successful COP 21 negotiations.

- The ceremony continued with the presentation of the 'Camp Monaco Award 2016.' Awarded every three years, the Camp Monaco Award is named in honour of the camp set up in 1913, close to the Yellowstone National Park by Prince Albert I of Monaco and William 'Buffalo Bill' Cody. Awarded for the first time in 2013, the 2016 price was given to Dr Craig Mr Lee, Dr David McWethy, and Dr Gregory T. Pederson.

**// THE PRINCE ALBERT II DE MONACO FOUNDATION TAKES PART IN WWF'S 'STOP BUYING IVORY' CAMPAIGN IN CHINA - 12/07/2016**

Around 30,000 elephants are poached each year for their tusks. On 12 July 2016, WWF and the NGO,

TRAFFIC launched a major campaign, along with the Prince Albert II of Monaco Foundation at the Monaco Salon in Beijing, to convince the Chinese to stop buying ivory. This campaign was backed by the Chinese government which is preparing to ban this trade nationally.

**// SIGNATURE OF A PARTNERSHIP AGREEMENT BETWEEN THE PRINCE ALBERT II OF MONACO FOUNDATION AND THE CORPORACIÓN MUNICIPAL DE ISLA DE PASCUA - 18/07/2016**

After the 'Our Ocean' Conference in Valparaiso (Chile) on 5 and 6 October 2015, during which HSH Prince Albert II of Monaco met the representatives of Easter Island, and his visit to the island on 7 and 8 October, a partnership agreement was signed between the Prince Albert II de Monaco Foundation and Corporación Municipal de Isla de Pascua at the Foundation's head office, on 29 June 2016, by Mrs Ana Maria Gutierrez, Environmental advisor for the Mayor of Easter Island and His Excellency Bernard Fautrier.

The Foundation and the Corporación municipal have identified areas of common interest such as the setting up and sustainably managing Marine Protected Areas, conserving land and marine ecosystems, developing sustainable fishing activities, tackling plastic pollution on land and in the sea, developing innovative and sustainable solutions and exchanging information in the field of oceanography.

As part of this Agreement, the Foundation may finance a project to reintroduce the Sophora Toromiro tree to Easter Island. Today, many species are threatened on the islands and some are considered by the IUCN (International Union for the Conservation of Nature) as recently extinct in their natural environment, which the case for the iconic Toromiro.

This project will be carried out in collaboration with the Jardin Botanique of Menton, which owns a Toromiro plant grown from the seeds collected on the island before it became extinct. The Botanical Garden will provide its technical support and expertise in order to reintroduce this species.



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9 • Signature of a partnership agreement between the Prince Albert II of Monaco Foundation represented by HE Bernard Fautrier, CEO of the Prince Albert II of Monaco Foundation and the Corporacion municipal de Isla de Pascua, represented by Mrs Ana Maria Gutierrez, Councillor for the environment for the Municipal Council of Easter Island, in Monaco, on 18 July 2016 ©FPA2

10 • HSH Prince Albert II of Monaco surrounded by the 2 Solar Impulse pilots (from left to right) Mr Bernard Piccard and André Borschberg and their team at the Monaco Yacht Club, on 1 August 2016 © G. Luci / Palais Princier

11 • HSH Prince Albert II of Monaco surrounded by the teams from the Center for Automotive Research (CAR) of the Multidisciplinary Research Centre of University of Columbus (Ohio), on 31 August 2016 ©DR



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This partnership is also an interesting opportunity to promote the Rapa Nui culture in the Principality; an exhibition on Easter Island traditions and the close relationship it developed with the Ocean will be open to the public, at the Oceanographic Museum of Monaco.

**THE SWISS PIONEERS BERTRAND PICCARD AND ANDRÉ BORSCHBERG COMPLETED THE VERY FIRST CIRCUMNAVIGATION OF THE WORLD IN A SOLAR PLANE, AN HISTORIC EXPLOIT ACHIEVED WITHOUT A DROP OF FUEL - 26/07/2016**

By each taking turns to fly Solar Impulse 3 (Si2) - their electric and solar plane with zero emissions, capable of flying both at night and during the day without fuel, Bertrand Piccard and André Borschberg realised their incredible dream to be the first to fly round the world in a solar plane. Returning to Abu Dhabi at the end of an epic journey of 23 days of flight and 43,041 km travelled in 17 stages, Si2 has shown that clean technologies can achieve the impossible. After

this historic step, the two Swiss pioneers will continue to promote the implementation of efficient energy solutions by setting up the International Committee of Clean Technology. In addition, they will use the expertise and technology they have developed over the years, thanks to Solar Impulse to present new innovative projects such as developing solar drones.

HSH Prince Albert II of Monaco declared: *“Solar Impulse is a landmark in our History. And on this day, which will remain as the great victory of solar aviation, we will also remember as the day that we received the proof that we can transition to a low carbon emission economy, reconciling mobility and the progress that each of us needs, with the need to save our planet, which is our most important duty. This is an historic moment for Monaco and for me, since the Principality has the pleasure of hosting the Solar Impulse control centre and my Foundation is a partner in this adventure. We have shared so many hopes and so much joy together, during this great epic,”* he added.

**THE HEROES OF SOLAR IMPULSE HONoured BY HSH PRINCE ALBERT II OF MONACO - 01/08/2016**

HSH Prince Albert II of Monaco hailed the exploit of the Solar Impulse teams during a ceremony organised at the Yacht Club of Monaco. All the members of the team were therefore honoured during this evening, including the two pilots André Borschberg and Bertrand Piccard. The Sovereign also unveiled a sculpture called Paper Plane, a work of art offered by the artist, Burak Oymen, close to the Control Centre based in the Auditorium Rainier III congress centre.

**HSH PRINCE ALBERT II VISITS THE MULTIDISCIPLINARY SUSTAINABLE DEVELOPMENT RESEARCH CENTRE AT OHIO STATE UNIVERSITY IN COLUMBUS - 31/08/2016**

HSH Prince Albert II went to Columbus (Ohio, USA) to visit the different research and educational centres working on sustainable development and climate

change at the Ohio State University. The Sovereign first visited the Center for Automotive Research (CAR) a research and training automobile laboratory, working on alternative energies. It is here, through a partnership set up more than 8 years ago, that Monaco-based company Venturi Automobiles runs its high performance electric engine business and has built the VBB Venturi series of vehicles, with the students and CAR, which holds the FIA world speed record for an electric vehicle, set at 495 km/h. *“We have the means to leave this carbon economy and its streams of pollution. We are beginning to learn how to travel without needing petrol. At we can now dream of a large-scale electric mobility, which we are developing in Monaco, on its own, will enable us to reduce our greenhouse gas emissions by a third. Venturi is in fact one of the best examples: the tools are available, we now need to develop them. It will take time, of course, as it requires a considerable change in our habits and mentalities,”* declared HSH Prince Albert II.

HSH Prince Albert II then went to the BYRD research centre, specialised in polar, alpine and climate research. Focused on the role of cold environments in

the Earth's overall climate system, the centre has many ice cores from both poles, as well as from peaks such as Kilimanjaro. In addition to these 'recordings' of climate change, the centre is home to the largest research centre on stones and minerals in the United States. These projects fit with certain projects supported by the Prince Albert II Foundation concerning glacial cores which have been recently taken from the Alps.

HSH visited the football stadium in Columbus (50,000 seats), the first 'zero waste' stadium in the world, before taking part in a meeting with 300 students and in the presence of Michaël Drake, President of the University of Ohio, on the theme of clean and sustainable mobility, a subject which is very close to the heart of the Principality and the Prince Albert II Foundation.

### /// HSH PRINCE ALBERT II AT THE WORLD CONGRESS OF THE INTERNATIONAL UNION FOR THE CONSERVATION OF NATURE (IUCN) WHICH WAS HELD IN HAWAII FROM 1 TO 10 SEPTEMBER

The environmental network which was created in Fontainebleau in 1948, now has 8,000 delegates from more than 160 countries, representing governments, companies, the scientific community and NGOs.

It was the biggest gathering of environmental decision-makers since the Paris Agreement on climate change when the UN adopted sustainable development objectives. The IUCN congress is, in this respect, a major occasion to begin to put these agreements into practice. This year, the themes of the IUCN congress were symptomatic of current environmental trends and priorities. The six main themes discussed in Hawaii concerned the protected areas, natural-based solutions, biodiversity offsets, ocean governance, the expansion of palm oil production and ecotourism.

For the forum organised by WWF International entitled 'Rethinking protection; thinking and acting differently to secure a living planet and meet our development needs,' HSH Prince Albert II gave an opening speech: *"I am proud that my Foundation is a partner with WWF for many projects. While we don't have the power of WWF, we have, over the last ten years, already implemented or supported more than 370 projects in our three priority intervention areas: saving biodiversity, fighting climate change and preserving water resources... With the Monegasque diplomatic corps, we have been involved month after month in most of the major issues under negotiation at the UN, such as preserving biodiversity in international waters."*

Then during the Patrons of Nature meeting, HSH Prince Albert II stated: *"Protecting the oceans obviously*

*means showing concern for my country, located as it is on the coast, and which has a history closely bound with the Mediterranean. But protecting the oceans also means making a commitment to all these peoples from further afield with whom we share the same planet and seas. I often meet these people within the scope of my Foundation's activities and some of them are already suffering terribly from deteriorated oceans and weakened ecosystems."*

During a workshop of the regional network of marine protected areas, organised by MEDPAN, He mentioned that *"We now need to set more ambitious goals. Because in my view we should not be placing a mere 10% of marine areas under protected status, but instead, 20%. One of the keys for achieving this, is the question of funding. That is why I contributed, in partnership with France, to setting up of a trust fund dedicated to funding the development of marine protected areas in the Mediterranean."* He then continued: *"It would be dangerous for marine protected areas to become a cover for deficient, counter-productive, even hypocritical conservation measures. I therefore believe that it would be worthwhile for the networks we spoke about today to work on producing common rules and objectives which could subsequently be incorporated into international law."*

In Hawaii, HSH, the Sovereign Prince had many bilateral talks. Furthermore, HSH the Sovereign Prince held several bilateral discussions in Hawaii with Peter Bakker, President and CEO of the World Business Council for Sustainable Development (WBCSD), Anote Tong (former President of the Republic of Kiribati), Irina Bokova, Director-General of UNESCO, Naoko Ishii, Director-General of the Global Environment Facility (GEF) and Cathy Novelli, Under Secretary of State for Economic Growth, Energy, and the Environment.

Finally, the Sovereign Prince opened an exhibition organised by his Foundation entitled "Amazing Planet" featuring pictures by the photographer and explorer Filip Kulisev.

### /// PROGRESS IN TERMS OF PLASTIC POLLUTION AND A NEW TRUST FUND ANNOUNCED AT THE OCEAN CONFERENCE IN WASHINGTON - 19/09/2016

At the 'Our Ocean' Conference, which was held on 15 and 16 September in Washington, His Excellency Mr Bernard Fautrier, CEO of the Prince Albert II of Monaco Foundation announced that the Prince Albert II of Monaco Foundation and its partners, Surfrider, Tara Expeditions, the Mava Foundation, the Veolia Foundation and IUCN will provide *"financial support amounting to €150,000 per year over a three-year period to micro-initiatives aimed at reducing plastic pollution in the Mediterranean, through the Beyond*



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12 • HE Bernard Fautrier, CEO of the Prince Albert II of Monaco Foundation during the 'Our Ocean' conference in Washington (USA) on 19 September 2016 ©DR

13 • HSH Prince Albert II of Monaco at the COP 22, in Marrakech (Morocco), 12 November 2016 ©Palais Princier

14 • HSH the Prince saying the opening speech of the Ocean Day at to the COP22 © G. Luci / Palais Princier

*Plastic Med Task Force (BeMed)*". In the long-term, this call for micro-initiatives will progressively create a Mediterranean network of active, committed local stakeholders who will work to tackle plastic pollution. Around twenty applications requesting support under these initiatives have already been submitted. Partners include the French Facility for the Global Environment (FFEM) and the French Development Agency (AFD), the Fund for the Global Environment Facility (GEF), the World Bank and Basel Zoo.

*"Monaco is contributing €500,000 to the new trust fund in partnership with France and Tunisia. This will provide financial long-term financial support to the marine protected areas (MPAs) created by the Mediterranean countries. The funds will be used to improve pre-existing marine protected areas, encourage the creation of new ones, strengthen development capabilities and support current initiatives,"* said HE Mr Bernard Fautrier.

During this summit, a high-level meeting on the Mediterranean took place on 16<sup>th</sup> September at the French Embassy, on the initiative of Mrs Ségolène Royal, Minister of the Environment, Energy and Sea, in charge of international relations on the climate; this meeting was attended also by Mr Karmenu Vella,

European Commissioner for the Environment, in charge of Maritime Affairs, as well as several ministerial representatives from the different Mediterranean countries.

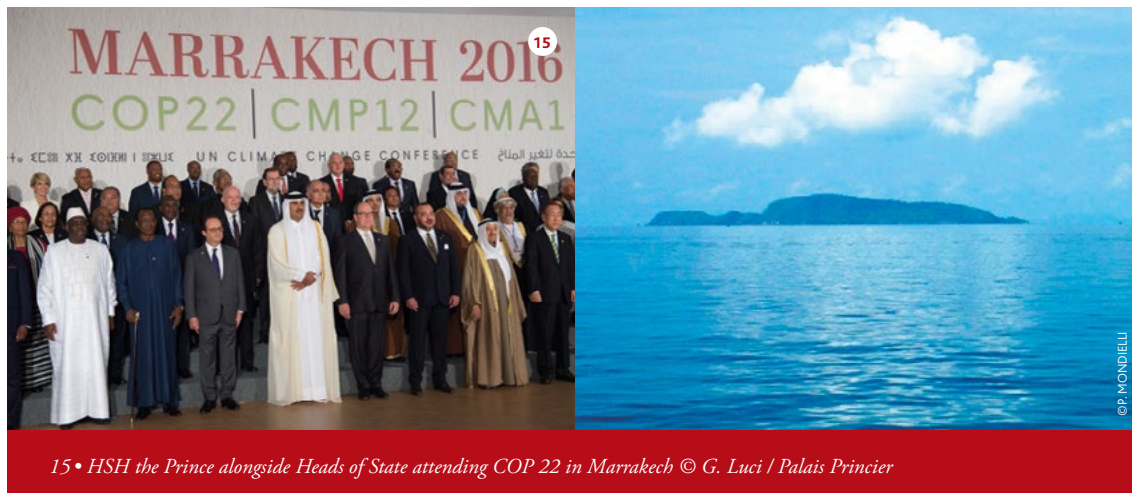
On this occasion, the Minister announced the creation of a coalition between France, Morocco and Monaco, to tackle plastics in the sea, in addition to a declaration requesting the International Maritime Organization (IMO) to consider the need to reduce greenhouse gas emissions from ships.

### /// PARTNERSHIP BETWEEN BASEL ZOO AND THE PRINCE ALBERT II OF MONACO FOUNDATION - 15/10/2016

On 15 October 2016, Basel Zoo organised the third 'Zolli Bâle' event: The theme of the event, which took place in the presence of more than 200 guests, including HSH Prince Albert II of Monaco, was protecting marine environments.

In May 2016, the Prince Albert II de Monaco Foundation signed a partnership agreement with Basel





15 • HSH the Prince alongside Heads of State attending COP 22 in Marrakech © G. Luci / Palais Princier

Zoo, which has agreed to contribute financially to the Trust Fund for Mediterranean Marine Protected Areas' by donating a percentage of the income from entrance tickets to the Zoo and Ozeanium, the future Aquarium in Basel.

Mr Olivier Pagan, the Zoo's Director, said: *"In the future, Basel Zoo and the Ozeanium are likely to become a unique and innovative centre dedicated to recreation, education, research and nature conservation in Switzerland"*.

#### // HSH THE PRINCE AT THE COP 22 IN MARRAKESH - 12-15 NOVEMBER 2016

HSH Prince Albert II was in Marrakesh from 12 to 15 November, to attend the COP22, of the United Nations Framework Convention on Climate Change (UNFCCC). The Sovereign was accompanied by Mrs Marie-Pierre Gramaglia, Government adviser - Minister of Public Works, the Environment and of the Urban Development, HE Bernard Fautrier, CEO of the Prince Albert II of Monaco Foundation, Mr. Mustapha Zine, Honorary Consul General as well as representatives from the Department of Foreign Affairs and the Department of the Environment.

On 12 November, HSH the Prince was welcomed by HRH Princess Lalla Hasnaa, then he gave the opening speech at the Ocean Day in the presence of Mrs Ségolène Royal, President of the COP21. On the fringes of the negotiations, the Sovereign wanted to stress the importance of climate action to protect the oceans.

The Sovereign then attended the E-Prix race in Marrakesh, accompanied by Ms Catherine Novelli, US Under Secretary of State for Economic Growth,

Energy and the Environment, Mr Salah Eddine Mezouar, the Moroccan Minister of Foreign Affairs of Morocco and President of the COP22, HE Bernard Fautrier, CEO of the Prince Albert II Foundation, as well as Mr. Bertrand Piccard.

On 14 November, HSH Prince Albert II received Mrs Patricia Espinosa, Executive Secretary of the UNFCCC. They discussed several topics together such as the need to maintain the political momentum initiated at COP21, since this is the only way of ensuring that the Paris Agreement can be implemented effectively. The Sovereign then took part in the 'Plastic waste in the marine environment' talk organised at the French pavilion. On this occasion, HSH the Prince signed the declaration of intent to launch an international coalition to reduce plastic waste in the sea, which Monaco, France, Morocco, Chile and Australia have already joined.

On 15 November, at COP22, HSH Prince Albert II was received by His Majesty King Mohammed VI, the former Secretary General of the United Nations Mr Ban Ki-Moon and Mr. Salah Eddine Mezouar, President of the COP22. The days was devoted to opening of the high-level segment. During the morning, the entry into force of the Paris Agreement was celebrated in the presence of His Majesty King Mohammed VI, Mr François Holland and Mr Ban Ki-Moon. Then all the Heads of State and Government were invited to a lunch at the Royal Palace in Marrakesh. The afternoon was given over to national speeches. In this regard, HSH Prince Albert II spoke in the name of the Environmental Integrity Group, to which Monaco belongs, along with Liechtenstein, Mexico, the Republic of Korea and Switzerland.

#### // ASSOCIATION FOR THE SUSTAINABLE FINANCING OF MEDITERRANEAN MARINE PROTECTED AREAS FUNDS ITS FIRST PROJECTS FOR MARINE PROTECTED AREAS IN THE MAGHREB - 28/11/2016

For the second Forum in the Mediterranean Marine Protected Areas (MPA) organised in Tangiers from 28 November to 1 December 2016, the Association for the Sustainable Financing of Mediterranean Marine Protected Areas (M2PA) announced, through its chairman Xavier Sticker, funding for Marine Protected Areas in Morocco and Tunisia. This funding, amounting to €60,000, will help cover the priority needs of managing these marine areas on a day to day basis.

In Morocco, M2PA gave 30,000 euros to the NGO AGIR ('Integrated Resource Management Association') which helps sustainably manage the Al Hoceima National Park as part of a project in collaboration with the High Commissioner for Water and Forests and the Fight Against Desertification.

In Tunisia, MP2A gave 30,000 euros to the Coastal Protection and Development Agency (APAL) and the NGO, Notre Grand Bleu, which have pledged a joint-management approach to protect marine and coastal area of the Kuriat Islands.

During the Tangiers Forum, the Association for the Sustainable financing of Mediterranean Marine Protected Areas held its 3<sup>rd</sup> Annual General Meeting. This notably decided on an action plan for 2017 to increase the support for marine protected areas in the Mediterranean by expanding contributions from public, private and multilateral donors.

#### // THE PRINCE ALBERT II OF MONACO FOUNDATION SIGNED A MOU WITH THE CAMBRIDGE CONSERVATION INITIATIVE (CCI) - 09/12/2016

There has never a more crucial period than the one we are currently living through, when it comes to the threat to the environment. Given Humanity's high dependency on the natural environment, we are in urgent need of new, innovative ideas to help protect our planet.

In this context, Prince Albert II of Monaco signed a Memorandum of Understanding with the Cambridge Conservation Initiative (CCI)

The CCI aims to create and deliver solutions to help protect the world's biodiversity, by fostering collaborations between leaders in conservation research, practice, policy and education around the world.

The CCI and the Prince Albert II of Monaco Foundation are convinced that by working together they can make a bigger, more targeted impact on issues close to their heart and work in partnership to provide a powerful platform to protect biodiversity rather than working independently.

#### // HSH PRINCE ALBERT II OF MONACO VISITS QUEBEC TO SIGN A PARTNERSHIP AGREEMENT DURING THE ARCTIC CIRCLE FORUM - 13/12/2016

On 13 December 2016, HSH Prince Albert II of Monaco attended the Arctic Circle Forum in Quebec. This year's theme was 'Sustainable development in the northern regions, an integrated partnership approach.'

Set up in 2013, the Arctic Circle aims to facilitate dialogue between high-level decision-makers on key issues in the Arctic (notably climate change and economic and social development in the northern regions), as well as to increase collaboration in decision-making.

On this occasion, the Sovereign was received by Mr Philippe Couillard, Prime Minister of Quebec. After this meeting, a framework partnership agreement between the Government of Quebec, the company, Plan Nord and the Prince Albert II of Monaco Foundation was signed by HE Bernard Fautrier, CEO of the Foundation, Ms. Christine St-Pierre, Minister of International Relations and Francophonie, Ms. Diane Vachon, Chair of the Canadian branch of the Prince Albert II of Monaco Foundation and Mr. Robert Sauvé, CEO of Plan Nord. Plan Nord aims to enhance the mining, forestry, energetic, social, cultural and tourism potential of the Quebec region located above the 49<sup>th</sup> parallel. It will create jobs and wealth both for northern communities and all Quebecers, while respecting the environment and the northern peoples. By harmonizing the economic, social and environmental aspects on which Plan Nord is based, the Quebec government would like to become a benchmark for northern sustainable development and a unifying project for Quebec society. Plan Nord is the body responsible for its implementation.

*"The Arctic is a global issue. Its future is vital for the whole of humanity, for current generations and for future generations. This is why it must be addressed globally, and be developed by taking account of general interest, peace and environmental protection."* said the Sovereign during His speech.

## MANAGING THE NATURAL HERITAGE: A PRIORITY

The Principality of Monaco is a densely-urbanised city state of 2 square kilometers. The major challenge for the Principality in terms of protecting biodiversity is to reconcile economic and demographic development with a concerted, forward-looking and sustainable management of its territory. The Government is being particularly proactive in protecting its sometimes surprisingly rich land and marine biodiversity. The policy for managing the Principality's natural heritage is implemented using several tools: inventory programmes, mapping, monitoring fauna and flora, monitoring habitats and pollution, conservation measures.

### ■ MARINE BIODIVERSITY

#### > MARINE PROTECTED AREAS

The policy of sustainably managing the marine resources is based on creating 2 protected Marine Protected Areas in order both to maintain the ecosystems and protect species:

- The Larvotto Marine Reserve created in 1978, covers an area of 33 hectares, and is mainly aimed at conserving and revitalising a field of Posidonia sea grass, a species that is endemic to the Mediterranean;
- The Spélugues reserve, a 'coralline drop off', created in 1986, is mainly home to iconic Mediterranean species, such as red coral, sponges and groupers.

#### > MONITORING MARINE BIOCOENOSES

Species and habitat inventories and mapping help build knowledge and awareness, but also help the State make decisions when implementing its strategy for biodiversity monitoring and conservation as well as its territorial development policy.

The Department of the Environment is implementing a programme of marine biodiversity inventories in order to monitor the change in ecosystems over time and identify species that can be used as bioindicators. These inventories together with mapping the biocoenoses not only make it possible to understand

the spatio temporal distribution of species and different types of habitats, but also contribute to assessing the healthiness and the richness of the natural heritage in the Principality.

Specific attention has been given to 'heritage' or protected species (posidonia sea grass, noble pen shells, brown groupers, red corals, sea fans, etc.), remarkable habitats (coral drop off, St Martin rocks, St Nicolas rocks, etc.), and the Marine Protected Areas (Larvotto and Spélugues).

Iconic species (grouper, posidonia and noble pen shells) give an indication of water quality. By monitoring them, the habitat can be conserved (lower limit of the posidonia fields, growth of the grouper populations, monitoring the growth of the noble pen shell population).

#### > POSIDONIA SEA GRASS

Posidonia (*Posidonia oceanica*) is a marine phanerogam (flowering plant) endemic to the Mediterranean,





which grows in vast sub-marine fields, starting from the surface of the water down to a depth of 40 m. In the Larvotto reserve, the first markers on the lower limits of the Posidonia sea grass fields were put in place in 1976 in order to monitor the growth over the medium and long term. In 2002, the Department of the Environment placed 48 permanent markers around the entire lower limit of the posidonia sea grass fields. That represents a distance of around 1 km, and is therefore sufficient to monitor the evolution of this field over the long term. This area's biodiversity has now been monitored for forty years.

#### > CORALLINE ALGAE

Coralline algae create a true marine landscape that is rich yet fragile. Sea fans and corals, indicators of coralline algae, play a role in its construction. In the Principality, these Coralline colonies are mainly found in the Réserve du Tombant des Spélugues, the rocks of St Martin, St Nicolas and the rocks off the coast. In 2003, the exploration of the Roches Saint Martin, located off the great dike at a depth of 60m, resulted in identifying clusters of large bryozoans & sponges, large colonies of sea fans, as well as red coral. The colonies on these rocks are perfectly healthy, notably thanks to plenty of cold, choppy water. Among the species identified on the St Martin rocks, more than thirty are

regarded as remarkable or determinative by the French network of Sites of Ecological Interest, Fauna and Flora (ZNIEFF).

After the sea floor of the Principality was mapped in 2010, new zones likely to shelter coralline species were identified. These sites were confirmed by dives carried out by the Department of the Environment and led to the discovery of a rich Coralline colony, including the first sighting of the black coral (*Antipathes* spp) in the waters of Monaco. These rocks were the focus of a characterisation campaign for species under the RAMOGE agreement (Saint-Raphaël - Monaco - Genoa).

#### > ICHTHYOLOGICAL FAUNA

In 2006, the ichthyological (fish) inventory identified 224 species of fish grouped into 87 families in the waters of Monaco. This inventory was supplemented by regularly counting the population of brown grouper, a protected species in the Principality. The last campaign, carried out in 2015 led to the identification of 193 individuals and showed a significant increase in the population of young groupers (3-4 years), measuring around 30 cm. This monitoring programme shows the effectiveness of the conservation measures taken by the Government in January 1993. The population of this iconic species has now recovered in our waters.



#### > NOBLE PEN SHELLS

The mapping of noble pen shells (*Pinna nobilis*) carried out by the Department of the Environment resulted in 650 individuals being identified over a little less than half the area of the Larvotto Reserve.

The reserve's current population is estimated at more than 1,000 individuals. Some of these pens shells are being monitored over time (for growth and mortality rates) in order to assess the healthiness of this colony over the long term. This iconic mollusc of the Mediterranean maritime environment is a protected species that is particularly sensitive to pollution. It is a sentinel species, a bioindicator of the good overall quality of marine waters.

#### > RESPIRE PROJECT

The Principality of Monaco has joined the RESPIRE project (Réseau pour le suivi du recrutement) a new tool to monitor the biodiversity and abundance of young fish (fingerlings) in ports. This monitoring network plans to monitor the arrival of populations of small fish larvae for ecological and scientific purposes on the coastal zone. In 2015, more than 40 artificial habitats, called Biohuts® placed under pontoons, were installed in the ports of Monaco.

The goal in installing these structures is to develop nurseries, a role more usually played by shallow sea floors. They will be monitored scientifically following a specific protocol, three times a year.

#### > QUALITY OF COASTAL WATERS AND CONTROLLING POLLUTION

The Department of the Environment monitors the physical, chemical and bacteriological quality of coastal waters, based on samples and analyses of the marine environment (water and sediments), but also through the knowledge of activities or natural and anthropogenic inputs likely to affect the quality of the environment.

The quality of swimming water is monitored from May to September at each beach on the Monaco coast. Since 2007, a health and environmental monitoring scheme, together with the preventive management of risks due to the presence of the algae, *Ostreopsis ovata* have been implemented around the swimming areas at Larvotto.

The Department of the Environment took part in the European 'M3 Hab' project, aimed at providing a joint Mediterranean strategy to monitor toxic benthic microalgae. The aim is to develop joint procedures and



protocols making the process more efficient in terms of time and cost, while building knowledge on the environmental factors which affect the proliferation of harmful algae.

## LAND BIODIVERSITY

The Principality's land biodiversity is part of the biogeographic area of Alpes-Maritimes and Liguria, forming one of the 10 regional "biodiversity hot spots" in the Mediterranean basin.

In the sites around the Principality where the natural habitat remains intact (cliffs, slopes, valleys), a survey of fauna and flora has identified several rare species. Since 2006, land based inventories of the wild flora, insects, birds, reptiles and butterflies, have revealed an unsuspected richness, and has included several remarkable discoveries. What makes Monaco unique as an urban country, in maintaining and developing this biodiversity, is that it seems to have certain specific characteristics:

- the geological and urban configuration of the territory. The cliffs of the 'Rocher' are true sanctuaries where wildlife can survive and prosper away from any anthropogenic pressure;

- "green confetti" (gardens, terraces, green walls, etc.). These green spaces are particularly important as habitat for birds and insects.
- green spaces, managed on environmentally friendly principles, are an oasis of greenery for bird life.

### > TERRESTRIAL FLORA

The inventory of land flora native to the Principality's territory, carried out in 2006 identified 347 species and subspecies, including 6 endemic species and 18 species of significant scientific interest. *Acis nicaeensis* (Nice Snowflake), a rare and highly threatened species, endemic to the Nice region has been found at 4 sites in the Principality. This inventory was also a chance to draw up a map of the remarkable sectors of the Principality.

### > ENTOMOFAUNA

The inventory of entomofauna (insects) produced very interesting results: no less than 330 species of coleoptera (beetles, ladybirds and weevils) and 101 species of heteroptera (shield beetles) were identified, and two species of coleoptera were discovered, which are entirely new to science.

In 2014 and 2015, this inventory was completed by a further study of mesofauna and macrofauna in the soil of green spaces maintained by the Principality of Monaco. The study was particularly focussed on finding four classes of Anthropods: Springtails (Collembola), insects especially beetles, Isopoda (woodlice) and Miriapoda (millipedes, centipedes). The encouraging results point to the excellent health of the soil.

### > AVIFAUNA

The ornithological inventory undertaken in 2010 by the Department of the Environment helped identify 60 species of birds, including 10 species protected at the European level and 7 that are considered as endangered.

The Principality is now home to two iconic nesting species in its territory: the peregrine falcon and the European shag. These results confirm Monaco's remarkable biodiversity. The cliffs of the Rock, with their island habitat in a marine environment, provide the richest diversity.

### > EUROPEAN SHAG

2015 was marked by the successful nesting of the Mediterranean subspecies of the European shag.

This species, relatively rare on our coast, is protected in the Principality. The only known colony in mainland France is located in the Bouches-du-Rhône, and one pair has only been shown to have been breeding successfully in the Var since 2006. This discovery is the first official nesting site for the species in this sector of the Mediterranean coast.

The observations made in April 2017 resulted in 6 chicks being found in their nest, which brings the number of birds hatched this year to eight. The population of shags on this site continues to increase, with at least 15 birds counted.

### > PEREGRINE FALCON

After 3 falcons fledged in 2010, the Department of the Environment spotted two young peregrine falcons hatched in a cliff cave on the Rock. Once again, the fact that the peregrine falcon is breeding in the Principality shows that the right conditions are there for this iconic protected species, which also 'protects' against certain invasive species such as sea gulls and feral pigeons.

### > BEES 'SENTINELS FOR THE ENVIRONMENT'

By helping to pollinate more than 80% of plant species in our planet, bees play an essential role for the environment. As part of an awareness raising



campaign to protect this threatened species, the Principality signed a partnership agreement with the Union Nationale de l'Apiculture Française (UNAF) (*National Union of French Beekeepers*) which led to six hives being installed on the roof-terrace of the Musée des Timbres et des Monnaies (Museum of stamps and coins) in Monaco. In addition, in partnership with the National Office of Forests (NFB), an insect hotel was set up in the Saint Martin gardens in 2013. By reproducing the specific habitat for certain species, such as wild bees, this facility makes it possible to study and follow the life of these pollinating insects. These programmes have been made possible by the Department of Urban Amenities' policy of managing urban open space ecologically, eliminating the use of pesticides and creating nectar-filled flower beds.

#### > PARTNERSHIP AGREEMENT WITH THE MERCANTOUR AND ALPI MARITTIME PARKS

In 2008, a framework partnership agreement between the Government of the Principality, the Mercantour National Park, the Alpi Marittime Natural Park and the Prince Albert II of Monaco Foundation, was signed in 2008. These two parks have outstanding natural ecosystems. One of the projects in this partnership is to carry out one of the most ambitious general natural

inventories of living world ever carried out. This ATBI (All Taxa Biodiversity Inventory) inventory relies specifically on hosting and managing international teams of scientists, but also local naturalists. Consequently, more than 350 taxonomists from over 10 European countries contributed to this inventory that will provide decision makers with a benchmark. It has also led to the discovery of species entirely new to science. In total, no less than 12,000 species were identified over a region covering close on 2,500 km<sup>2</sup>, which is considered as a hot-spot for biodiversity. In 2015, the government of the Principality and the Prince Albert II of Monaco Foundation signed a new Framework Partnership Agreement for the period 2015-2018. This Framework Agreement has as its objective to identify new projects and continue to support the projects already launched.

#### > THE WASHINGTON CONVENTION (CITES)

The CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) aims to protect wild species from unregulated and illegal trade, which is partly responsible for the decline of global biodiversity. Signed on 3 March 1973 in Washington, the Washington Convention come into

force internationally on 1 July 1975. The Principality of Monaco has been a signatory to CITES since 19 April 1978. The responsibility for implementing CITES in Monaco is handled by: a management body responsible for liaising with the CITES Secretariat (Department of International Relations), a management body charged with issuing permits and performing inspections (Department of the Environment), and a scientific authority which gives its opinion on the effects of trade on species (Department of the Environment).

Since November 2014, an online procedure has been set up on the Government's website, making it easier for both individuals and professionals to request CITES documents. An explanatory booklet is available for download on the Government's website. (<http://www.gouv.mc/Action-Gouvernementale/L-Environnement/Publications/Brochure-sur-la-CITES>).

# TACKLING CLIMATE CHANGE ENERGY CLIMATE PLAN

Current scientific knowledge has confirmed that global warming is unequivocal, and that the changes observed in recent decades are without precedent. The 5<sup>th</sup> report of the Intergovernmental Panel on Climate Change (IPCC), confirmed that human activities are the main cause of global warming. Conscious of these issues, the Principality of Monaco is committed to implementing an ambitious energy and climate policy.

The Principality's government has implemented an Energy Climate Plan which aims to:

- tackle climate change;
- adapt and reduce our country's vulnerability to climate change.

The biggest sources of greenhouse gases in the Principality are the transport, building heating and waste management sectors. In this context, successfully transitioning to a carbon free energy mix and continuing to reduce energy consumption, are the main challenges if we are to play our part in tackling climate change, increase our energy independence and our different energy sources.

Targeting this new growth is the crux of sustainable development; it requires a commitment from the whole community: businesses, civil society and non-governmental organisations to rethink the way we live, travel, produce and consume.

## INTERNATIONAL COMMITMENT

International awareness of the risks of global warming led to the adoption of the United Nations Framework Convention on Climate Change (UNFCCC) at the Earth Summit held in Rio de Janeiro in 1992. Monaco joined the UNFCCC in 1993 and in 1997 the Principality was officially included in the number of countries listed in Appendix 1 of this Convention.

### > KYOTO PROTOCOL

In 2006, Monaco ratified the Kyoto Protocol, and committed to reduce its greenhouse gas emissions by 8% (compared with 1990) for the first commitment

period from 2008 to 2012. At the end of this first commitment period in 2012, the Principality had reduced its emissions by 13.2%, thus exceeding this initial objective.

In 2013, Monaco became the first country listed in Annex 1 of the Kyoto Protocol, to have submitted acceptance instruments for the second period of the Kyoto Protocol and committed to reduce its emissions by 30% by 2020.

### > THE PARIS AGREEMENT

In December 2015, the Paris Agreement, which was agreed during COP21 of the UNFCCC, was a turning point in tackling climate change. For the first time, this universal Agreement commits all parties to implement measures to tackle climate change, in order to keep global warming below 2°C (and if possible to 1.5°C), but also take measures to adapt to climate change.

Each country was required to propose a national contribution to tackle climate change caused by human activities. Monaco has increased its commitments, by setting an objective to reduce its GHG emissions by 50% in 2030. This is an ambitious goal, putting the Principality on target to reach the objective set by H.S.H. the Sovereign Prince to achieve carbon neutrality by 2050.

## ENERGY TRANSITION MISSION

In 2016, in order to enhance its ability to reach the objectives of reducing greenhouse gases, the Prince's Government created the Energy Transition Mission.

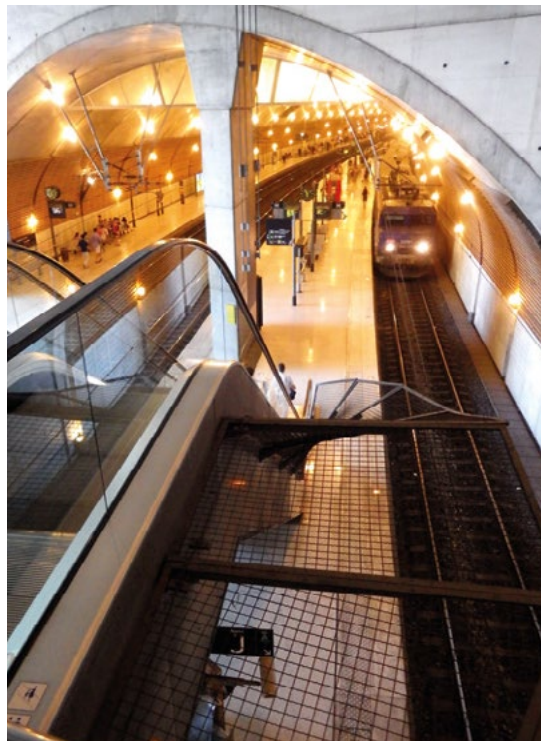
This body manages the *Fonds Verts National* (National Green Fund), whose objective are to give the Principality the financial resources to implement long-term measures to achieve its energy transition.

Producing the Principality of Monaco's White Book of Energy transition is the first step in getting the people of Monaco involved.

## ENERGY CLIMATE PLAN

The purpose of Principality of Monaco's Energy Climate Plan is to tackle climate change and adapt the country to these changes. Ultimately the goal is to build a resilient, robust territory, tailored to its population and its activities.

If we are to take the country forward to a vision of sustainable development in the context of climate change, we must get all business sectors actively involved and get the entire community of Monaco on board and committed.



### > THE OBJECTIVES OF THE ENERGY CLIMATE PLAN

The objectives set for the 2020 time line are as follows:

- reduce direct GHG emissions by 30% (compared to 1990), and by 50% in 2030;
- reduce unit energy consumption in buildings by 20%, (compared to 2007);
- increase the share of renewable energy in final energy mix to 20%;
- keep peak electricity consumption stable (compared to 2006).

### > IMPLEMENTING THE ENERGY CLIMATE PLAN

The policies and measures implemented to achieve objectives of the Energy Climate Plan cover 5 main areas:

- energy;
- construction;
- transport;
- waste;
- communication awareness building.

In 2012, the Government committed to a programme of environmental certification through the European Energy Award (EEA) programme.

This certification rewards states committed to ambitious energy and climate policies, and acts as a quality management process for their Energy Climate Plan.

In November 2014, the European Energy Award certification was awarded to the Principality for 4 years. The action plan for the next four years (2014-2018) is aimed at consolidating the steps already undertaken to achieve the objectives set.

### REducing GREENHOUSE GAS (GHG) EMISSIONS

Monaco keeps its inventory of GHG emissions up-to-date. The emissions are calculated using a method established by the Intergovernmental Panel on Climate Change (IPCC), and are then subject to an audit, before being included in the global record of GHG emissions at the UNFCCC and the Kyoto Protocol.

Around 90% of GHG emissions in the Principality come from energy use in the sectors of waste, road transport and building heating systems. The remaining emissions mainly concern the use of fluorinated gases for air conditioning in buildings and vehicles as well as industrial and domestic cooling plants.

The action plan set up by the Government takes into account this emission profile, in order to define the

priorities for implementing actions in the sectors with the biggest emission levels.

### > WASTE TREATMENT

Since 1982, the Principality disposes of its waste at an energy recovery plant, which generates heat, cooling and electricity. Reducing the emissions of the energy recovery plant, and more widely for waste management, is a key priority in the Government's policy for reducing GHG emissions.

Since 2008, measures to prevent waste generation and intensified selective recycling of waste has resulted in stabilising the amount of waste incinerated. These measures are currently being stepped up, with the goal of progressively reducing the volumes incinerated and with it, reducing the share of fossil carbon mainly derived from plastics. Further measures, such as banning single use plastic bags in 2016 and improving recycling, especially for household packaging, should play a role in meeting the overall objectives of reducing GHG emissions.

The current plant is close to the end of its life cycle and will be replaced by a more robust energy recovery plant. The process has yet to be chosen, as the best technology available to meet technical and environmental constraints is currently being studied.

### > TRANSPORT AND MOBILITY

Transport measures, based on an Urban Development Plan (UDP), an infrastructure master plan, actively managing road traffic (Integrated Mobility Management Centre) and logistics for goods (logistics park and urban distribution centre), all of which are designing the mobility of the future.

Along with designing and managing for the mobility of the future, an incentive-based policy has been implemented, which aims to encourage individuals to choose alternative modes of transport to the car (modal transfers, development of public transport, etc.), and soft modes (lifts, travellers and other mechanical pedestrian links, pedestrian paths, bicycles, etc.).

These measures are supported by significant subsidies to develop electric and hybrid vehicles: including purchase subsidies, free charging, preferential pricing (parking and registration).

### > BUILDING SECTOR

Oil and gas emissions are the third major source of emissions in the Principality of Monaco. As of 2003, the ban on oil-fired heating systems in any new buildings, accelerated the transition towards energies



with lower carbon emissions. In addition to reducing the use of fossil fuels in buildings, energy efficiency measures must be installed.

### MANAGING ENERGY DEMAND AND DEVELOPING DISTRIBUTED GENERATION FACILITIES LOCALLY.

By managing energy demand and developing local distributed generation facilities in new buildings or in old building stock, GHG emissions are being reduced in this sector (environmental certifications, thermal regulations, encouraging the development of renewable energies, etc.).

#### > DEMAND SIDE MANAGEMENT IN PUBLIC BUILDINGS

The challenges of managing the demand side in the State's real estate assets are particularly crucial, since this covers more than 250 buildings or sites, with a floor space of almost 1 million square metres, more than half of which are multi-storey car parks.

The process of managing and monitoring energy implemented by the Public Buildings Maintenance Office means the energy consumption data for the

buildings can be pooled, making remote corrective action possible. This system, which will be rolled out across all public buildings in 2017, has already managed to reduce energy consumption by 31%.

#### Responsible power consumption

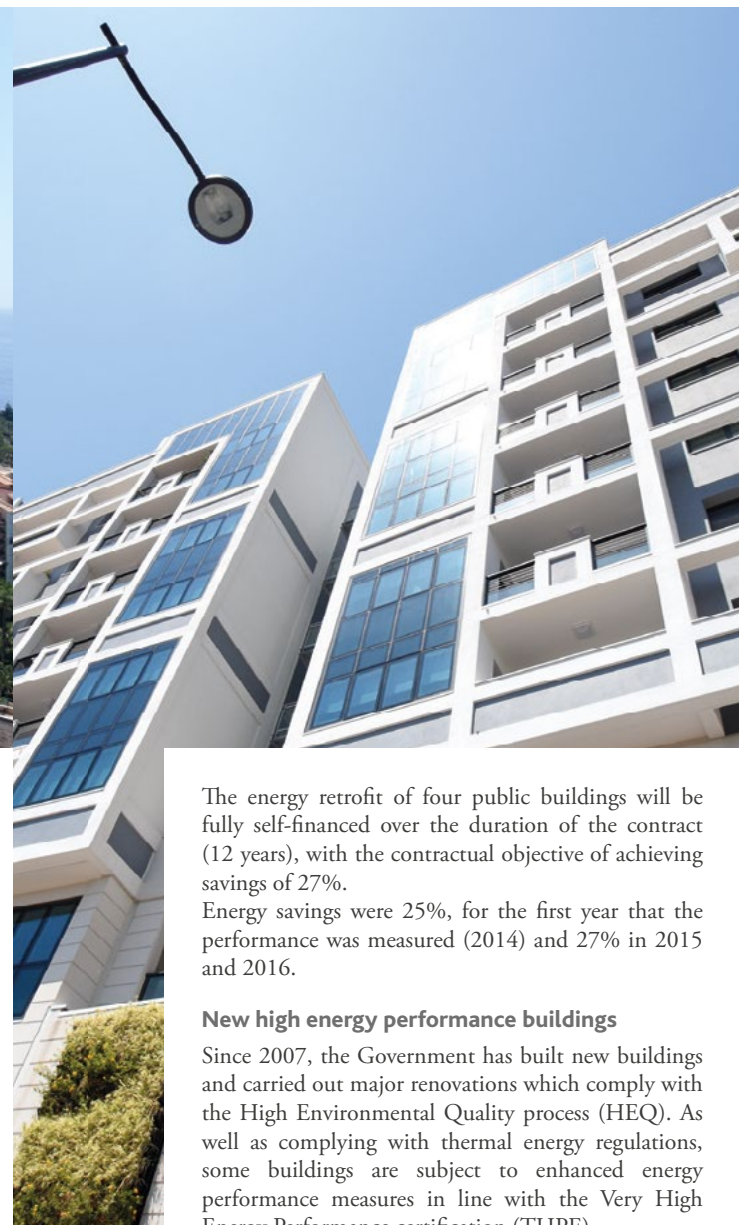
Since 2015, the Government has committed to a responsible power consumption approach, by selecting power generation methods from renewable energy sources for all of its supply contracts.

Across the territory, 38.4% of the power purchased in 2016 was guaranteed to be from renewable energy sources.

#### Energy performance contract

In partnership with the Berlin Energy Agency, the Government set up an Energy Performance Contract (EPC) to renovate the energy installations in public buildings.

For the owner of a building or building stock, an EPC involves subcontracting the improvement of the building's energy performance and its financing to an energy services company. The company reimburses its investment from the savings generated by reducing the energy bill. These energy savings are guaranteed and the company agrees to accept the financial consequences of failing to meet the objectives.



The energy retrofit of four public buildings will be fully self-financed over the duration of the contract (12 years), with the contractual objective of achieving savings of 27%.

Energy savings were 25%, for the first year that the performance was measured (2014) and 27% in 2015 and 2016.

#### New high energy performance buildings

Since 2007, the Government has built new buildings and carried out major renovations which comply with the High Environmental Quality process (HEQ). As well as complying with thermal energy regulations, some buildings are subject to enhanced energy performance measures in line with the Very High Energy Performance certification (THPE).

In order to guarantee the energy integrity of its assets and boost local distributed energy generation, the Government is also trying to systematise solar thermal and photovoltaic facilities. These facilities are deployed in new build and renovation projects for buildings and public infrastructure.

#### Measures for the Territory and building community involvement

To achieve the goals set by the Energy Climate Plan, the Government is putting in place measures to manage energy use across the territory.



#### Responsible energy distribution

When the energy distribution agreement was being renewed in 2009, a contribution to the sustainable development policy was written into the new concession agreement with the Société Monégasque de l'Electricité et du Gaz (SMEG) (*Monaco Electricity and Gas Utility Company*), notably:

- the introduction of specific sustainable development services, such as guarantees of the renewable source of the distributed power, offsetting emissions, and energy audits;
- building a database of consumption and usages, called 'DATA+', which aims to improve knowledge on how the energy is used;
- deploying Nexio smart meters so that the concession holder can gain a better understanding of consumption and users can manage their energy costs;
- finally, creating a sustainable development fund, financed by energy sales, in order to finance measures to improve energy demand management and develop renewable energies.

#### Positive results and community commitment

The thermal regulation sets a general framework in the building sector, requiring any new building or





major renovation to meet stringent thermal energy performance values. Furthermore, energy retrofit work can benefit from a reduced VAT rates of 5.5% instead of 10%, if applicable.

The effects of the different measures are now bearing fruit: oil consumption is in sharp decline, increases in gas sales are contained, and since 2006, total peak power consumption has stabilised.

The commitment of the local community can be also measured by the take-up rate for the renewable energy 'guarantees of origin' contracts, which represented around 30% of the Principality's total energy use in 2016.

31.25% of GHG emissions related to natural gas consumption can also be offset voluntarily as part of the 'Monaco Carbon Offsetting' programme, set up by the Prince Albert II of Monaco Foundation.

#### > DISTRIBUTED ENERGY GENERATION

Energy is generated in the territory via the waste to energy facility: *Usine d'Incinération des Résidus Urbains et Industriels* (UIRUI), the different solar power conversion systems (thermal and solar PV) and via heat pumps, which draw energy for heating and air conditioning from the environment and especially in Monaco, sea water.

#### Waste to energy

The energy generated from burning waste within the incineration plant is converted into:

- electrical energy, re-used by UIRUI with the excess supplying the local urban grid;
- steam, sent to a thermofrigorific plant, to supply heating and cooling for most of the buildings in the Fontvieille district.

The district heating plant of Fontvieille had its production capacity increased in 2012, by adding sea water heat pumps, and is planned to extend to the new hospital.

#### Sea water heat pumps

Heat pumps are efficient energy generation systems since they draw energy from the environment, The Principality is fortunate to have buildings within easy access to seawater that is temperate throughout the year, thereby significantly increasing the energy efficiency for power generation systems. Taking full advantage of its location the Principality began developing these systems as early as 1963; today, more than 70 heat pumps produce around 17% of the energy consumed in Monaco.

#### Solar thermal and PV power

The main source of renewable energy power comes from solar energy. Since 2008, the Government has

been subsidising thermal generation systems using solar power (solar thermal panels), by replacing oil-fired boilers and/or in addition to gas or wood fired boilers. In 2012, this subsidy was extended to the installation of any solar power generation system.

This incentive measure provides a subsidy of 30% of the installation cost, capped at €30,000 The development of photovoltaic facilities is now a priority for the Government in terms of renewable energy development. In order to further encourage their development, the Government introduced a financial incentive for generating photovoltaic power since 2014.

This incentive is guaranteed for 15 years, and may be granted to any owner of a planned or existing facility, whose installed capacity is greater than or equal to 3 kWp.

#### ADAPTATION TO CLIMATE CHANGE

By implementing the Energy Climate Plan, Monaco is committed to producing an adaptation strategy for global warming. This forward-thinking strategy has many objectives: preventing potential impacts, limiting their cost and taking advantage of local opportunities.

A detailed analysis of climate projections conducted at the global, then regional level, has enabled to

Principality to have an initial understanding of what the likely impacts of climate change will be. These forecasts point to temperatures rising by 1.4 to 2.5°C in the near term, while a rise of 4.1°C can be expected in Monaco by the end of the century.

This warming could translate into an increase in heat waves, but also by a decrease in the risk of cold and frost in winter.

There will also more than likely be a change in rain patterns. Given that Monaco is exclusively a coastal state, the rise in sea levels must also be considered when assessing its vulnerability.

According to the measurements taken in Monaco between 1999 and 2014, this level has risen twice as fast as that observed since 1900. By the end of the century, the sea level could have risen by 80 cm.

#### > VULNERABILITY ASSESSMENT AND ADAPTATION PLAN

An audit on Monaco's vulnerability to climate change flagged up the local impacts and effects that climate change will have in the following areas: natural disasters, water, energy, transport infrastructure, urban services, development of the building and business sectors, health and biodiversity.



An adaptation plan, including a climate action plan has laid out both strategic and operational objectives for each of the challenges around climate change: awareness building, training, knowledge building, including the effects of climate change in the risk prevention plan, assessment of thermal phenomena in the territory such as urban heat islands, etc.

## COOPERATION AND PARTNERSHIPS

### > PARTNERSHIP WITH THE COMMISSARIAT À L'ÉNERGIE ATOMIQUE ET AUX ÉNERGIES RENOUVELABLES (CEA) (FRENCH ATOMIC ENERGY AND RENEWABLE ENERGY COMMISSION)

The CEA and Monaco have been cooperating since 2007 within the competitive cluster CapÉnergie to develop a local dynamic energy policy aimed at promoting energy solutions that do not emit GHG.

This cooperation was further strengthened in 2013, by signing a Framework cooperation agreement in the sector of renewable energies, energy efficiency and sustainable mobility.

This Agreement has already given rise to two cooperation agreements, one for optimising the

heat and cooling district network and the other for optimising waste processing and CO<sub>2</sub> conversion.

### > COOPERATION AGREEMENT WITH EDF ON ENERGY

A Framework cooperation agreement was signed with Électricité De France (EDF) for an 'energy strategy' aimed at developing cooperation to meet the challenges set by security of supply, territorial competitiveness and sustainable development objectives.

This agreement covers five areas: power supply, environment and biodiversity, effective energy solutions, renewable energies as a solution to security of supply and the city of the future.

Through its subsidiary SODETREL, EDF has already signed a partnership with Monaco to set up the car-pooling service 'Mobeé'.



# THE SUSTAINABLE CITY

In 2016, the Principality had approximately 52,000 employees and 37,000 residents who travel around the territory of 2 square kilometers every day. In total, these people make almost 386,000 trips each day, across all modes of transport (lorries, HGVs, buses, 2-wheeled vehicles and pedestrians) and for all purposes (business, leisure, etc.).

The Government of Monaco is developing a sustainable city policy, focusing on preserving or enhancing a quality of life that is recognised and appreciated. This policy is centred around managing mobility as well as waste and wastewater, managing green spaces, pollution and risks.

## MOBILITY AND TRAVEL

The Government's mobility policy aims to reduce the negative impacts of road transport (traffic, air quality, noise pollution, etc.), but also aims to encourage alternative transport methods.

### > DEVELOPING PUBLIC TRANSPORT

One of the main focuses of this mobility policy is to encourage people to use public transport when moving around the city. The Compagnie des Autobus de Monaco (CAM) has improved its services by providing enhanced information to users, using GPS location and real time data, increasing the number of buses running, introducing incentive pricing as well as a night bus service on Friday and Saturday nights.

In order to encourage children and teenagers to use the public transport system in the city, schoolchildren in the Principality have been able to buy a free annual bus ticket (with just the administrative costs of 10 euros to pay), since the start of the 2014/2015 school year.

### > ENCOURAGING INTERCITY PUBLIC TRANSPORT

The Principality is served by the Côte d'Azur network of express buses, which run regular services between

Nice airport, Nice, Monaco and Menton. The development of these inter-city services led to the launch of the number 101 service, which ran between Eze-sur-Mer and Monaco-Roquebrune-Cap-Martin, during the morning and evening rush hours.

The State is also encouraging train/bus inter-modality, between the CAM bus network, SNCF, bordering towns and the French departmental bus services.

Thanks to the interoperability between the TER (Transport Express Regional) and CAM, a monthly season ticket and a concessional ticket available for those under 26, can be bought by those who travel both on the TER rail network and CAM's buses.

Inter-modality is also encouraged with the 'Carte d'Azur', a scheme whereby people can use both the buses in Monaco and those in the Alpes Maritimes department.

### > CAR POOLING

The Government is encouraging initiatives such as carpooling, to improve the way personal travel is managed. Created in 2006, the 'MonacoVoiturage.mc' car-pooling service has more than 1,200 members. Through special rates for car parks, sharing travel costs (fuel and motorway tolls), carpooling can substantially reduce travel costs.

### > SOFT MOBILITY

In the context of soft mobility, low impact transport methods (walking, cycling, etc.) are encouraged. Consequently, Monaco has 70 lift links, 35 escalators and 8 travellators. To help people move around the city, the 'Monaco Malin' guide includes all alternative modes to the car: bus stops, car parks that loan out e-bikes (electric bikes) free of charge to season ticket holders and residents, cycle lanes and lifts that accept bicycles (provided you push them).

### > PROMOTING ELECTRIC AND HYBRID VEHICLES

The Government has adopted a concerted policy to encourage clean or low emission vehicles, thanks to a subsidy scheme for:

- electric vehicles;
- rechargeable hybrid vehicles;
- hybrid petrol vehicles emitting less than 110g of CO<sub>2</sub> per kilometre (hybrid diesel vehicles are not covered by this aid).

The subsidy level for electric vehicles is 30% of the purchase price including VAT, capped at €9,000 for 4-wheeled vehicles and €3,000 for motorbikes.





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The regulation also requires certain vehicles, such as taxis, to have emissions less than 190 g of CO<sub>2</sub> emissions per km. The Public Car Parks Office provides more than 500 recharging sockets free of charge to users of electric vehicles and offers discounts on its car park season tickets. Electric vehicles are also exempt from vehicle registration and can park on roads free of charge.

In 2016, the number of electric and hybrid vehicles registered in the Principality accounts for 3.2% of total vehicles. This number is also constantly increasing within the Government and represents 35% of its fleet.

A partnership signed between the Metropolitan area of Nice Côte d'Azur and Monaco means users of electric cars who are members of the Principality's Public Car park scheme can charge their vehicles for free at the Auto-Bleue stations in Nice, provided that they register on the Auto-Bleue site first ([www.auto-bleue.org](http://www.auto-bleue.org)).

Furthermore, CAM and the Government have developed a pedal-assist bicycle (pedelec) service, which now has 17 stations in 2017 in the different districts of Monaco. Since 2011, CAM has also taken delivery of hybrid buses, in addition to its current park

running entirely on biodiesel. Since 2016, 11 new generation hybrid buses, make up this fleet.

#### > CAR-POOLING SERVICE

July 2014 saw the official launch of «MOBEE» a car pooling service for electric vehicles. This scheme set up by the Government and Sodetrel (subsidiary of EDF), has a fleet of 25 Renault TWIZYs. In order to facilitate the use of this service, a smartphone application geolocates and reserves the closest vehicle. This scheme is notable for its 'free-floating' or 'open loop' system, by which the user can return the car to anywhere in the Principality, without being required to return it to a specific parking space.

Members can therefore park free of charge and return their TWIZY to a car park, in the 2 or 4-wheel spaces, or in the public car parks of the scheme's partners.

#### // WASTE MANAGEMENT

The Principality's waste management policy aims to reduce waste at source, optimise collection, waste recycling and disposal, notably via resource recovery. The Government is therefore working to intensify selective recycling and develop recycling awareness building campaigns with residents.

In 2017, by updating the waste disposal plan, it will be possible to increase consistency and coordinate all measures required to manage the waste generated in the territory economically and ecologically by 2030.

#### // WATER MANAGEMENT

##### > MANAGING WATER RESOURCES

The Principality's policy for managing waste resources meets efficient environmental objectives related to preserving resources and waste water treatment. Streamlining and reducing water use is still one of the major challenges to sustainably managing water resources. Over the last few years, increased awareness of households, and companies & public bodies in the Principality has resulted in a considerable drop in water use in Monaco. Thanks to the State's policies, the private sector and households, drinking water consumption has been decreasing by on average 1% per year over ten years. Most of the water used in the Principality comes from France (Vésudie and Roya valleys). The Principality of Monaco also uses its local resources (Alice, Marie, Testimonio, Fontdivina and Ingram springs), which depending on the year, provide between 30 and 50% of the domestic water supply.

##### > WASTE WATER TREATMENT

All the waste water in the Principality, Beausoleil and a large part of the water from the municipalities of Cap d'Ail and La Turbie are collected and treated. The treatment of residual water is separated into two distinct sites:

- An underground sewage pre-treatment plant (usine de pré-traitement des eaux résiduaires-UPTER), located under the Rock of Monaco, which physically treats the effluent: removing large objects, screening, removing grit and sand, removing fat and grease;
- a residual Water Treatment Plant (UTER), located in the basement of an industrial building in Fontvieille which handles primary and secondary treatment of the sewage. It was designed to meet specifications for compactness and absence of noise pollution.

The Government is working to optimise the sewage system and its treatment in order to limit pollution in natural environments and health impacts on humans.

##### // MANAGING GREEN SPACES

Green spaces are managed using environmentally friendly practices, by stopping all chemical treatments, using organic fertilizers and pest controls. It also manages water use, by optimising hydraulic facilities



and equipment including renovating the old networks, using equipment that reduces water-use and planting Mediterranean plants that require little watering.

Thanks to these innovative and rigorous management methods, put in place by the Department of Urban Development, three sites in the Larvotto sector and the Princess Grace Rose Garden have been awarded the Espace Végétaux Ecologique (EVE) certification (Ecological Green Space). This international award represents a real recognition of the policy for managing public green spaces implemented for many years.

**// MANAGING POLLUTION AND RISKS**

The Department of the Environment continuously monitors the quality of the environment throughout the year, through the air, water and noise pollution quality monitoring networks to tackle two priority challenges: countering pollution and improving the quality of life in the Principality.

In a territory of around 2 square kilometres, the Principality of Monaco has a dense monitoring network of different measured parameters, enabling it to have a robust sample of the variations in an urban environment.

This monitoring network of different environments is supplemented by a monitoring network of natural

hazards, which has to provide the Principality with reliable local data, while keeping in constant contact with the data and alerts defined by the monitoring networks in the bordering region.

The risk monitoring network comprises:

- a system of seismic sensors;
- a tide gauge in cooperation with the Navy's Hydrographic and Oceanographic Department (SHOM) ;
- an environmental radioactivity detection system.
- a network of 3 meteorological monitoring stations to collect data on temperature, precipitation, wind, humidity and solar radiation;

Each year, the meteorology and climate Focus published by IMSEE provides an analysis of the average temperature and rainfall data recorded annually compared to the climatic standards calculated over the period 1981-2010. This data is recorded at the meteorological station in the Jardin Exotique, and processed jointly by the Department of the Environment and the Institut Monégasque de la Statistique et des Etudes Economiques (*Monaco Institute of Economic Studies & Statistics*).

**> AIR QUALITY**

The Principality began monitoring air quality in 1991. It is carried out via an automated network of 5 stations (quai Antoine 1<sup>er</sup>, rue Grimaldi, place des Moulins, Fontvieille et boulevard Charles III). This network provides continuous measurements, issues alerts when there are pollution peaks and monitors long-term changes in air quality.

The pollutants monitored are: nitrogen dioxide, fine particles and suspended particulates, lead, sulphur dioxide, ozone, carbon monoxide and benzene. The data recorded is compared to the thresholds set by European directives.

In the Principality, the annual change in air quality shows an ongoing improvement of the readings recorded by the monitoring network. The encouraging situation has a lot to do with the Principality's mobility policy: most cars are relatively new, and therefore less polluting, in addition, there is a growing number of electric and hybrid vehicles, an efficient urban transport network, maximum traffic speeds are limited to 50 km/h in the city and its industrial sector has a low pollution impact.

**> PARTNERSHIP BETWEEN THE GOVERNMENT AND AIR PACA**

In December 2015, the Principality signed a Framework cooperation agreement on air quality and climate. This partnership mainly concerns:

- changes in air quality readings;
- network maintenance;
- monitoring indoor air quality;
- developing an inventory of greenhouse gas emissions
- modelling and forecasting air quality;
- building awareness of the atmospheric environment

**> NOISE ABATEMENT**

The main sources of noise pollution in the Principality are building sites, road transport, the heliport, noise from night clubs & bars and neighbourhood noise.

The Government is focussing on two aspects: monitoring noise pollution and noise abatement for building sites.

The noise pollution monitoring network includes 3 fixed continuous noise measurement stations (Fontvieille, heliport and rue Grimaldi) and 2 multi-sensor mobile stations (weather-noise) sited in 'sensitive areas'.



The Department of the Environment has set up a 'noise observatory' in partnership with the association, 'ACOUCITE', a centre of expertise in urban environmental sounds. The aim of this observatory is to assess what actions are needed to facilitate the integration of the noise abatement issue across multiple sectors (traffic plan, appropriate urban development, clean building sites, setting up a network to build awareness and provide information, etc.), and have a forward-looking vision on this issue.

#### > BUILDING SITE NOISE ABATEMENT

Given that there are many, sometimes highly complex building sites, the State makes every effort to reduce disturbance and the inconvenience such sites may cause in the immediate vicinity.

Efforts to reduce building site noise has been strengthened with the enforcement of the Ministerial Order No 2010-500 as amended in 2014, concerning building site operational hours.

In 2011, a circular was issued to the construction industry requiring it to factor in noise abatement when planning building projects. Furthermore, the Public Works Department is setting up a sound-level monitoring programme for public works sites.

#### // GETTING THE MONEGASQUE COMMUNITY INVOLVED

The policy of the Government of the Principality in favour of sustainable development is fully reflected in the commitment and involvement of everyone in the community of Monaco and the different stakeholders in the private and voluntary sectors.

The Principality sees itself as a sounding board for major environmental issues: with many meetings, debates, conferences taking place over the year. Therefore, at the initiative of H.S.H. the Sovereign Prince, the Prince Albert II de Monaco Foundation, the Oceanographic Institute and the Albert I Foundation, the 'Monaco Blue Initiative' was set up in 2010, to protect the marine environment.

In addition, the *Centre Scientifique de Monaco* (Scientific Centre of Monaco) and the Environmental Laboratory of the AIEA have joined forces to organise workshops on ocean acidification. This problem resulted in the 2008 'Monaco Declaration,' co-signed by 150 scientists from 26 countries. This text, prefaced by H.S.H. the Sovereign Prince, aims to challenge political decision makers on this vital issue and encourage research in this field.

#### > ENVIRONMENTALLY RESPONSIBLE GOVERNMENT

Since 2009, the Government of Monaco has developed a network of environmental experts representing all the State's Ministries, Departments and Offices, to implement an environmentally responsible approach to include environmental considerations in all its work and aims to lead by example in its work through:

- increasing awareness and providing training programmes on sustainable development for State employees;
- a procurement policy of favouring environmentally friendly products;
- reducing the use of water, energy, paper;
- optimising waste management;
- improving asset management of both existing and future buildings;
- improving business travel management;
- reducing the carbon footprint of its activities.

This environmentally friendly action plan has in particular led to the inclusion of environmental recommendations on the use of eco-certified products in maintenance service contracts for public buildings, constructing a range of ecologically designed offices

that meet the ISO 14001 standard and offering a wide range of green products.

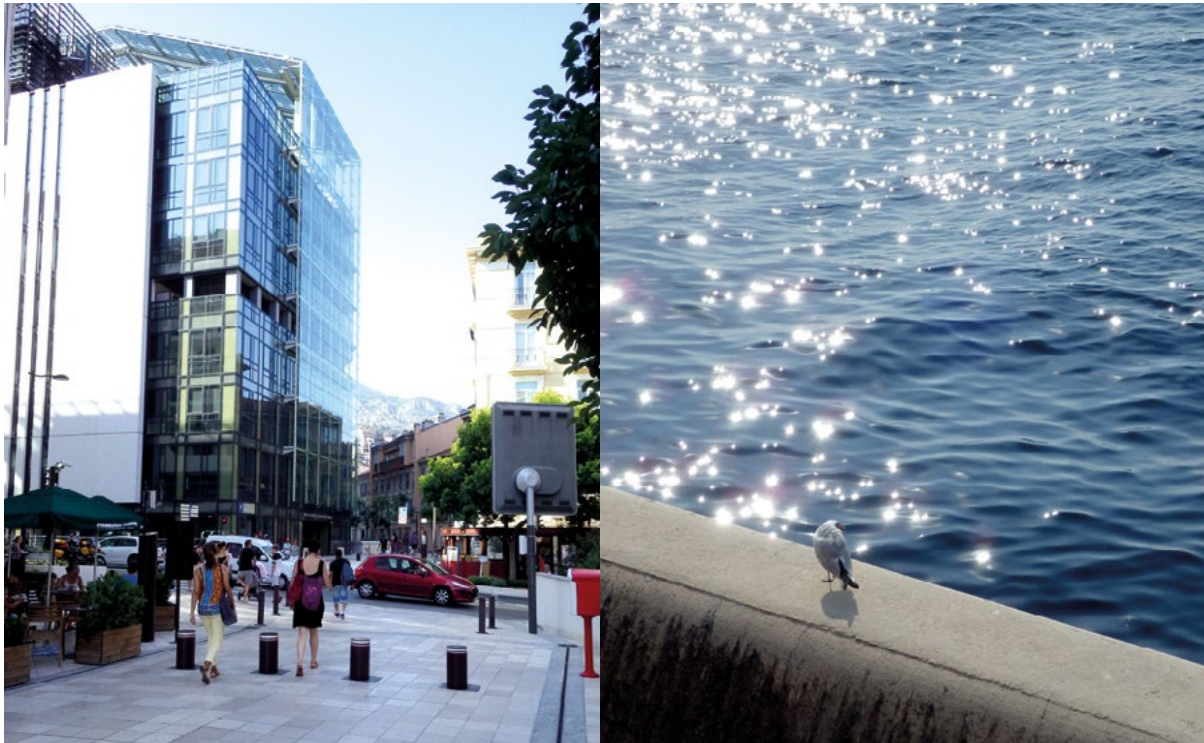
Implementing this approach within the Government has resulted in a marked decrease in its energy consumption, GHG emissions and more widely its environmental impact.

At the same times as reducing consumption, the Government is offsetting GHG emissions for all its official journeys as well as the GHG emissions produced by the meals in school canteens, via the 'Mco2 Monaco Carbon Offsetting' programme of the Prince Albert II de Monaco Foundation.

In addition to these awareness building campaigns and training related to sustainable development are offered by the Human Resources and Training Directorate of the Civil Service to all the States civil servants.

Since 1 January 2013, all canteens in public or private schools, after-school centres, health and care centres in the Principality are required to provide meals in which at least 10% of produce originates from organic farming. This proportion grew to 20% in 2015 (Act No. 1386 of 15 December 2011, Ministerial Decree No. 2012-578 of 4 October 2012).

Since 1 January 2015, the Government has signed up to SMEG's 'EGEO' guaranteed renewable energy tariff



for all the Government's electricity contracts, therefore encouraging the generation of renewable power.

Furthermore, in order to manage and reduce the impact of its activities on the environment, Government departments have committed to environmental management systems. Therefore, the Public Car Parks Office was the first office to obtain the ISO 14001 and 9001 certifications. The Department of the Environment has also just obtained the ISO 14001 certification for all its administrative, laboratory and field activities.

As for preserving biodiversity and natural resources, the Government is continuing to implement the campaign 'Monaco takes action against deforestation' initiated by the Prince Albert II Foundation, encourages the use of certified wood in new construction projects, and for any commercial activity using wood, and also promotes this sector within the Government.

#### > COMMITTED APPROACH TO RETAILING - BAN ON PLASTIC BAGS

In 2014, the Department of the Environment initiated the 'Committed Retailer' programme, which helps a government (or a region) to implement a sustainable consumption approach, by taking its specific issues

into account. Together with scalable specifications developed scientifically and in collaboration with the retailers and customers, the 'Committed Retailer' approach is intended to promote a local economy with less packaging, less waste and fewer greenhouse gas emissions.

Therefore,

- since 1 June 2016, all single use bags which are less than 50 micrometres thick and hold less than 25 liters have been banned from shops;
- since 1 January 2017, all single use plastic bags used to package goods in a point of sale, which cannot be composted and with less than 30% of materials sourced from biomass (materials from plant or animal biomass) are banned. This proportion will progressively increase to reach 60% in 2025;
- from 1 January 2020, all disposable plastic cutlery will be banned.

In order to support this ban, the Government is running an awareness building campaign which has the slogan: 'a bag for life' and has decided to give each household in the Principality a reusable fabric bag (organic cotton), along with a flyer.

In addition to this campaign, an animated film aimed at building people's awareness of the negative effects of plastic waste on marine biodiversity was broadcast.



The 'Committed Retailer' campaign is also aimed at encouraging environmentally responsible practices amongst the Principality's retailers and customers, in order to reduce waste and greenhouse gas emissions.

The next step is to introduce the 'Committed Retailer' certification label, developed in collaboration with retailers.

The certification aims to initiate concrete measures to increase recycling, reuse packaging and increase the recycling of glass bottles in restaurants and licensed bars in the Principality, in order to reuse and recycle them.

# THE YEAR IN NEWS



## 7 NEW HYBRID BUSES IN SERVICE 9 FEBRUARY 2016

A hybrid bus of the Bus Company of Monaco (CAM) was presented to H.S.H. the Sovereign Prince on 9 February 2016, in the presence of Ms. Marie-Pierre Gramaglia, Government Advisor - Minister of Public Works, the Environment and Urban Development, as well as Mr Jean-Joseph Pastor, Chairman of CAM's Board of Directors.

In 2016, 7 new generation hybrid buses were added to the existing fleet of Compagnie des autobus de Monaco (CAM), bringing the total fleet to 16. These most recent models are fitted with the latest technical improvements to reduce CO<sub>2</sub> emissions by as much as 45% compared to a conventional diesel bus. The new 'Stop & Go' technology enables the vehicle to run in electric mode when there is enough energy in the batteries (gentle gradients and downhill), at bus stops, the engine cuts out, and therefore does not emit any exhaust fumes.

In accordance with European recommendations, the middle section of these new vehicles has two wheelchair places and 6 seats available without people of reduced mobility needing to climb stairs. Tramway-type doors also make it easier to board.

## EARTH HOUR: ONE HOUR FOR THE PLANET - 19 MARCH 2016

At the request of H.S.H. the Sovereign Prince, the Monaco community was invited to join the Prince's Government and the Prince Albert II of Monaco Foundation for the 10<sup>th</sup> international 'Earth Hour' event on Saturday 19 March 2016, between 8.30 and 9.30 pm, under the theme 'Shine a light on climate action.'

Launched by the World-Wide Fund for Nature (WWF) in 2007, this 'hour for the planet' involves switching off the lights and disconnecting non-essential electrical devices for one hour in order to promote energy savings, reducing greenhouse gas emissions and therefore, build awareness about tackling global warming.

Last year, 172 countries, including the Principality of Monaco joined the event.

After the COP21 which resulted in a global agreement to limit global warming, building public awareness is all the more important since the latest data published by the *Institut Monégasque de la Statistique et des Etudes Economiques* shows that in less than 50 years, the average temperature has increased by 1.5oC in the Principality

More information: [www.earthhour.org](http://www.earthhour.org)



## THE WHITE PAPER ON THE MONACO'S ENERGY TRANSITION 23 MARCH 2017

On 23 March of this year, at the Monaco Yacht Club, in the presence of H.S.H. the Sovereign Prince, Ms. Marie-Pierre Gramaglia, Government Advisor - Minister of Public Works, the Environment and Urban Development, and Jean-Luc Nguyen, Director of the Mission for Energy Transition, presented the White Paper on the Principality of Monaco's energy transition to all stakeholders who were involved in its development.

In closing the presentation, H.S.H. The Sovereign Prince stressed how important it was for him that the Principality achieved its Energy Transition and met the commitments made to reduce greenhouse gas emissions: <50% in 2030, compared to 1990, and Carbon Neutrality by 2050.

These objectives imply reducing emissions 4 times as fast as has been achieved until now, and requires the commitment and the involvement of all the residents and companies in Monaco. The Government's policy encompasses 3 priority areas: mobility, waste treatment and building energy efficiency.

Therefore, incentives and a regulatory framework will be implemented in order to promote the vital behavioural changes needed for Monaco to achieve decarbonisation.

NB: the white paper can be downloaded from the 'Publications' section of : [www.gouv.mc/Action-Gouvernementale/L-Environnement/Publications/Livre-Blanc-de-la-Transition-Energetique-de-Monaco](http://www.gouv.mc/Action-Gouvernementale/L-Environnement/Publications/Livre-Blanc-de-la-Transition-Energetique-de-Monaco)





## MEETING OF ALPARC'S BOARD OF DIRECTORS – 7/8 APRIL 2016



Created in 1995, ALPARC, the Alpine Network of Protected Areas brings together 34 nature conservation bodies within the scope of the Alpine Convention. It is the largest federation of protected areas in the Alps.

The aim of ALPARC is to apply the Alpine Convention's protocol: 'Nature protection and landscape conservation.' 8 countries are signatories to this international treaty: Germany, Austria, France, Italy, the Principality of Liechtenstein, the Principality of Monaco, Slovenia and Switzerland.

The Principality participates and supports ALPARC's various projects and notably contributes to the project on biodiversity and the ecological connectivity, whose main objective is to

conserve, restore or recreate connections between the different habitats found in the Alpine Arc. The idea to set up an ecological Transalpine network is also covered in the work of the Ecological Network Platform created within the Alpine Convention, and of which Monaco is also a member.

Countries usually take turns in organising a Board Meeting in their country. The last meeting held in the Principality dates back to March 2012; Ms. Marie-Pierre Gramaglia, Government Advisor - Minister of Public Works, the Environment and Urban Development was very pleased to host the members of ALPARC, whose action is key in conserving protected species in the Alpine Arc, for a second time in the Principality. It is also an opportunity to discuss and talk to all members who share stewardship over this vast area.

Mrs Valérie Davenet, Director of the Environment and Member of ALPARC's Board of Directors, participated in this Board meeting, which took place on 7 and 8 April at the Novotel Hotel in Monaco. The Department of Foreign Affairs also participated, and the Tourist and Convention Authority provided their support.

## INVENTORY OF GROUPERS AND BROWN MEAGRES IN MONACO'S WATERS: RESULTS - 15 APRIL 2016

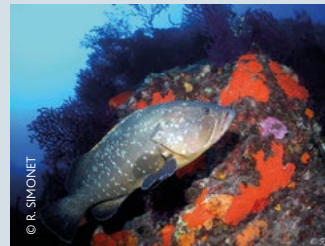
As part of the Prince's Government's policy for conserving biodiversity, the Department of the Environment carried out its 6<sup>th</sup> inventory of the dusky grouper, *Epinephelus marginatus*, in the waters of the Principality, from 15 to 19<sup>th</sup> October 2015.

Since in 2006, the Department of the Environment has carried out qualitative and quantitative assessments of the grouper population. The 2015 inventory was also the opportunity to carry out the second inventory of brown meagres, *Sciaena umbra*, in the Principality. These important species have been protected in the Principality since January 1993, through a ban on fishing. They are also protected on the French Mediterranean coasts, through moratoria renewed every 10 years for the grouper and every 5 years for the brown meagre.

In total, 193 specimens of between 20 to 120 cm were identified. These figures show a considerable growth in the population of dusky groupers, rising from 105 individuals in 2009 and 83 in 2006. The inventory of brown meagres also points to a population increase, increasing from 11 individuals in 2012 to 25 in 2015, for sizes ranging from 15 to 70 cm.

The increase in the number of dusky groupers is marked by a change in the demographic structure of the population, with 58 juveniles being counted. This indicates that the species is breeding locally and demonstrates the effectiveness of the Principality's conservation measures.

The next inventory is scheduled for October 2018.



## IN 2016, THE RAMOGE AGREEMENT CELEBRATED ITS 40<sup>th</sup> ANNIVERSARY



Since it was created in 1976, the RAMOGE Agreement has been a tool for scientific, technical and government cooperation between the Governments of Monaco, France and Italy, to encourage protection and conservation of the marine environment in the region of Provence Alpes Côte-d'Azur, the region of Liguria and Monaco. From the beginning, it was intended as a sub-regional application of the Barcelona Convention; setting up a Pilot zone to prevent and tackle pollution in the marine environment. Forty years later, RAMOGE is still positioned as a pilot zone and remains a Mediterranean exception. The Agreement is mainly structured around two core areas:

- tackling pollution, with an operational component in collaboration with the *French Préfecture Maritime de la Méditerranée*, the Spanish *Guardia Costiera* and the competent Monaco authorities;
- protecting biodiversity through its Working Group, which coordinates integrated management projects for the coastal zones.

To celebrate the 40<sup>th</sup> anniversary of the Agreement, several events were organised in 2016.

- on Tuesday 26 and Wednesday 27 April 2016: the RAMOGEPOL plan was amended to address the dangers of drifting objects to shipping, and then the operational aspects were showcased in tackling marine pollution and organising a RAMOGEPOL exercise simulating an oil spill in Monaco's waters.
- on Tuesday 20 September 2016: a conference at the Oceanographic Museum looked back at the Agreement's achievements over 40 years, and presented the results of the scientific exploration project conducted in the summer of 2015 in the hitherto unexplored deep waters of the three Signatory States, and finished by presenting the future focus areas for this Agreement.

More information: [www.ramoge.org](http://www.ramoge.org)

## BAN ON SINGLE USE PLASTIC BAGS 1 JUNE 2016

During the conference, 'Plastics in the Mediterranean: Now we know it is there, what can we do about it?' which took place in March 2015 at the Monaco Yacht Club, H.S.H. the Sovereign Prince announced the ban on single use plastic bags, in Monaco for 2016.

Therefore, since **1 June 2016**, the following bans have been in place, regardless of whether customers are required to purchase the bags:

- single use bags, partially or entirely made of plastic from fossil sources, of less than 50 microns thick or less than 25 liters in volume. Even if just one of these conditions is met, the bag is still banned.
- bags made of oxo-fragmentable plastic (which breaks down into invisible micro particles but still remains in the environment).

As of **1 January 2017**, the following are banned:

All other single use bags, for packaging goods at the point of sale (such as small bags provided to package vegetables in the fruit & vegetable section) which are not compostable and are made of less than 30% biosourced materials.

This proportion will progressively increase to reach 60% in 2025;

As from **1 January 2020**, all disposable plastic cutlery will be banned.

This ban is part of a wider approach for committed retailers. In 2014, the Government implemented this 'Committed Retailer' approach in order to encourage environmentally friendly practices with producers, retailers and consumers in the Principality. The action plans are now mainly focussed on improving waste recycling and supporting all retailers to prepare for the future bans.



## WORLD ENVIRONMENT DAY 5 JUNE 2016



In 2016, the theme of the World Environment Day was: 'Zero tolerance for Illegal Wildlife Trade.'

Conscious of the major challenges of hunting and trafficking wild animals, Monaco has been party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) since 1978). CITES aims to protect wildlife from excessive commercial exploitation, which is in part responsible for the decline of the global biodiversity, and provide greater protection for more than 35,000 species of fauna and flora.

This Convention requires that any import, export or re-export of a specimen, any animal or plant, living or dead on the CITES list of species has to be authorised through a CITES licensing document.

In the Principality, the Department of the Environment is in charge of issuing CITES permits and inspecting companies and individuals.



## WORLD OCEANS DAY - 8 JUNE 2016

As part of the World Oceans Day, the Prince Albert II de Monaco Foundation, the Fonds Français pour l'Environnement Mondial (FFEM) and Tara Expéditions organised a scientific conference on the topic of 'the role of marine and coastal ecosystems in regulating the climate' at the Domaine du Rayol.

H.S.H. Prince Albert II of Monaco and Mrs Hakima El Haite, Deputy Environment Minister, in charge of the environment for the Government of Morocco, and special envoy for COP22, also appointed a High-Level Climate Change Champion, reminded participants at the opening session of the need to make ambitious decisions to conserve the oceans, given their major role in regulating the climate.

Many eminent figures were at their side: Catherine Chabaud, Delegate for the Sea and Coastline, at the Department of the Environment, Energy and the Sea; Serge Ségura, Ambassador in charge of the Oceans; Xavier Sticker, Ambassador for the Environment; Maud Fontenoy, Vice-President of the PACA region; Philippe Vitel, MP for Var along with Pierre Soubelet, Prefect of Var.

In the idyllic setting of the Domaine du Rayol, owned by the Conservatoire du Littoral, the main theme was divided into three sessions: 'Plankton's role in regulating the climate', 'Coastal ecosystems, resilience and impact mitigation,' and 'From science to public policy.'

Speakers also reviewed the two years of effort at the IPCC (Intergovernmental Panel on Climate Change) to approve Monaco's proposal to produce a special report on the Oceans and the next steps in drafting the report.

Delegates also attended the opening of the exhibition, 'The Ocean, climate regulator,' in the presence of the artist Céline Bricard.

After a symbolic count, the highlight of the day was the launch of the Appeal for micro-initiatives to tackle plastic pollution. This campaign is part of the BeMed Taskforce headed by the Prince Albert II of Monaco Foundation and its partners: Tara Expéditions, Surfrider Foundation, Mava Foundation and the International Union for the Conservation of Nature (IUCN). The aim of this appeal is to provide financial support for NGOs, local authorities and small companies and therefore create a network of committed stakeholders to tackle plastics pollution. All the details for this appeal can be found on the BeMed internet site: (<http://www.beyondplasticmed.org>).



## ELECTRIC VEHICLES: AN INVOLVED GOVERNMENT 15 JUNE 2016

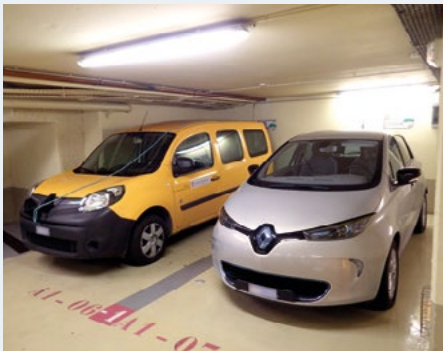


On 15 June 2016, His Excellency Serge Telle, Minister of State, His Excellency Bernard Fautrier, Vice-Chairman of the Prince Albert II of Monaco Foundation, and the members of the Government, presented the zero emission vehicles provided to them by the Government as part of the government's sustainable development policy.

In 2016, almost 1,300 electric and hybrid electric vehicles were in circulation in the Principality, i.e., 3% of the total vehicle fleet, which is a record in Europe. It should be noted that the market for new electric vehicles only accounts for 0.5% of European cars.

In Monaco, the public is encouraged to buy clean vehicles, through a grant of 30% of the net purchase price (excluding options and capped at 9,000 euros).

Also, included in this policy are benefits such as free charging in the public car parks and on public roads, parking on the streets and free road tax.



## APIDAYS: NATIONAL EVENT FOR BEES, SENTINELS FOR THE ENVIRONMENT 17 JUNE 2016

The 2016 event of APIDays, organised by the beekeepers of the Union Nationale de l'Apiculture Française (UNAF) in more than 80 towns and cities, took place on Friday 17 June in Monaco. This event, gave people the chance to come and discover the essential role bees play in conserving plant biodiversity and more generally, our environment.



On this occasion, the Year 6 pupils from Saint-Charles primary school discovered how to extract honey and attended awareness building workshops on the fundamental role bees play in pollination. Each pupil left with a pot of 'Made in Monaco' honey.

The partnership between Monaco and the 'Bee, Sentinel of the environment' programme, aims to alert people about the serious consequences of our disappearing bees and encourage us to protect them. Since 2011, when the Principality signed the Charter for this programme, the first bee hives have been installed on the roof terrace of the Museum of Stamps and Coins in Fontvieille.

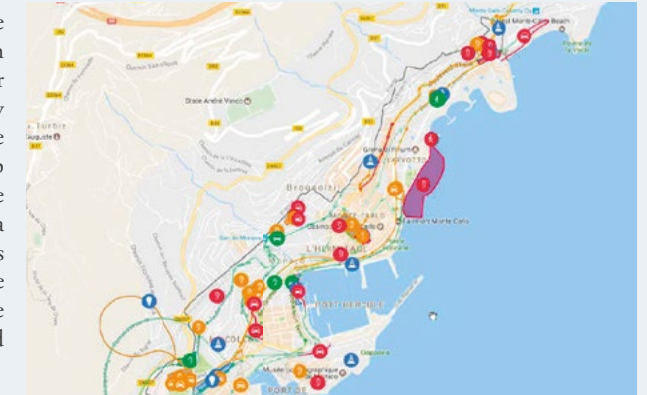


## PRESENTATION OF THE INTERNET SITE: WWW.INFOCHANTIERS.MC - 21 JUIN 2016

On 21 June 2016, Ms. Marie-Pierre Gramaglia, Government Advisor - Minister of Public Works, the Environment and Urban Development, presented the Internet site, [www.infochantiers.mc](http://www.infochantiers.mc), to the press, surrounded by Mr Olivier Lavagna, Director of Public Works, Mr. Jean-Luc Puyo, Director of the Urban Development, Mr. Christophe Pierre, Director of Electronic Communications, Mrs Angélique Alonso of the Future Urban planning and Mobility Authority, the IT Section of the Public Car parks, and all the team in charge of the project.

The site lists the public and private construction projects and the disruption that these may cause in the Principality (noise, visual or environmental pollution and traffic or mobility problems). The aim is to help Monaco's citizens and residents get a better understanding of the duration of the works, the level of disruption and the purpose of the project.

It is also possible to get real-time information about the road traffic in Monaco. It includes most of the major roads in the Principality, with priority given to the main thoroughfares. The published data comes from 'loop counters' installed on the road by the Centre Intégré de la Gestion de la Mobilité (CIGM). This system gives continuous information about the number of vehicles circulating on those roads fitted with the loop counters and therefore show traffic density.



## 2<sup>nd</sup> ANNUAL GENERAL MEETING OF THE ASSOCIATION POUR LE FINANCEMENT DURABLE DES AIRES MARINES PROTÉGÉES DE MÉDITERRANÉE – 22 JUNE 2016

The second Annual General Meeting of the *Association pour le Financement durable des Aires marines protégées (AMP) de Méditerranée* (Association for Sustainable Financing of the Marine Protected Areas (MPA) of the Mediterranean) was held at the Institut Océanographique de Paris on 16 June 2016. This meeting marks an important step in developing a trust fund for MPAs in the Mediterranean.

During this AGM, presided by His Excellency Xavier Sticker, French Ambassador, responsible for the environment, two countries (Albania and Morocco) and four regional bodies (CAR-ASP, MedPAN, WWF-Méditerranée, Initiative PIM) joined the Association. This now includes 5 countries from the Mediterranean rim (Albania, France, Morocco, Monaco and Tunisia), the four regional bodies mentioned and the Prince Albert II of Monaco Foundation.

The AGM approved the strategy and the roadmap which will enable the association to fund the first projects for the MPAs in a pilot phase, step up its fund-raising policy with its financial partners from both the public and private sectors, and continue the work on legal and financial structuring of the trust fund in the medium term.

The Association received €500,000 in financial support from the Government of Monaco, represented at this Annual General Meeting by Ms. Marie-Pierre Gramaglia, Government Advisor - Minister of Public Works, the Environment and Urban Development of the Principality. Other public and private investors have also shown their interest in supporting the development of this initiative. This financial support will make it possible to implement the strategy and the adopted roadmap.

## ST MARTIN CAVE AND GARDENS REOPENS TO THE PUBLIC - 30 JULY 2016



Located in the lower part of the St Martin garden on the Rock, this natural public space had been closed to the public since 1985. After Department for Urban Development (DAU) completed the works to renovate the pipelines, it was reopened in July 2016.

“These works involved redoing all the paths with a red paving stones and the stairs in small bricks. Hand rails were installed to make public access safer, especially on the lower section overlooking the sea,” stated Jean-Luc Puyo, Director of Urban Development.

“As for the plants, the invasive species have been removed, while heritage plants have been kept, and Mediterranean plants added» stated Georges Restellini, Manager of the Gardens sector at the DAU.

In collaboration with the Department of the Environment, the seismograph station, located in St Martin's cave, has been modernised.

On this site, you can discover heritage flora and fauna. Such as the peregrine falcon, the European Shag, the Mediterranean house gecko (*Hemidactylus turcicus*) and bats.

## A BAG FOR LIFE – SEPTEMBER 2016

Scientific studies show that, currently, no type of single use plastics bags (polyethylene, oxo-fragmentable, bio-degradable, bio-sourced bags, etc.), (even certified) is satisfactory when its life cycle is analysed.

The same applies to paper bags, regardless of whether they are PEFC certified. The key to reducing the ecological impact of bags is using them again. We therefore need to encourage the use and reuse of the bags made out of natural materials, or failing that tote-type plastic bags.

Based on this understanding, and to support the ban of providing free or paid-for plastic bases, the Government has launched an awareness building campaign on this ban and its issues, with the slogan, ‘A bag for life’.

This bag comes from a French-based company and its made of fair trade organic cotton grown in India. They were sent to each household, in the Principality, by post, together with a flyer to explain the campaign.



## 'TRAVEL DIFFERENTLY' IN MONACO 16/22 SEPTEMBER 2016

On the initiative of the Department of the Environment, the Principality joined forces with the European Mobility Week from 16 to 22 September 2016 in partnership with the Club des Véhicules Electriques (Electric Vehicles Club), l'association Monaco Développement Durable (MC2D), (the Monaco Sustainable Development Association) (MC2D) and the Mayor of Monaco. Throughout this week, Radio Monaco flew the flag for the European Mobility Week. The aim of the event was to encourage each and every one of us to travel 'differently': by foot, by bike, in an electric car, using carpooling or by using public transport.



On 17 and 18 September 2016, a mobility festival was held in Larvatto (Rose des Vents). Over these two days, the public was able to take free test drives of two and four-wheel electric vehicles, which had been provided by Renault, Tesla, Go Electric and the Auto Mobile Club (ACM). The public was also able to test out the pedal-assist bicycles (pedelecs) from the Compagne des Autobus de Monaco (CAM) and the Twizy from the car sharing service, Mobe. The Institut Méditerranéen d'Etudes et de Développement Durable (IMEDD) (Mediterranean Sustainable Development Institute) presented and organised mobility games; young children took part in Bio-Logika, a fun-learning game to build awareness about the different forms of mobility: cars, bicycles, buses, walking. And various recreational workshops. For children aged 5-13, several challenges were available: ‘The mobility race,’ on bikes or scooters, ‘Design your smart city,’ ‘LIM Quizz,’ ‘Describe your city by bike,’ etc.

On Saturday 17 September, for the Public Transport Day, buses were also free on the Compagnie des Autobus de Monaco's network, and a circuit of electric motorbikes for children (aged 4 to 15 years) was set up on the esplanade in Larvotto.

On 18 September, Bike Sunday was launched: for this occasion, the avenue Princesse Grace was closed to motor traffic so that everyone, big and small, could use this safe zone. Families and friends came with their bikes (electric or standard), on Rollerblades and even on skate-boards. At 2 pm, a ‘freeride’ show was set to music by professionals on electric motorbike.

More information : [environnement@gouv.mc](mailto:environnement@gouv.mc)

## A NETWORK OF MARINE PROTECTED AREAS IN THE INTERNATIONAL WATERS TO PROTECT OCEANS OVER THE LONG TERM – 9 SEPTEMBER 2016



A delegation from Monaco participated in the 2<sup>nd</sup> session of the Preparatory Committee for developing an international instrument relating to the United Nations Convention on the Law of the Sea, and covering conservation and the sustainable use of marine biodiversity in areas that are not covered by national jurisdictions.

During these negotiations, Monaco and Costa Rica worked together in order to propose a universal framework for creating new marine protected areas in international waters, which are the best tools for protecting biodiversity.

As part of an event organized by the PEW Charitable Trusts, Mr Florian Botto, the Third Secretary at Monaco's Permanent Mission to the United Nations, was invited to give a detailed presentation of this framework, aimed at identifying, adopting and setting up new protected areas in international waters.

These proposals, both during the negotiations and at the PEW event, was well received by all the attending delegations.

### SPEECH BY HIS EXCELLENCY SERGE TELLE, MINISTER OF STATE IN THE PRINCIPALITY OF MONACO, AT THE 71<sup>ST</sup> GENERAL ASSEMBLY OF THE UN – 22 SEPTEMBER 2016

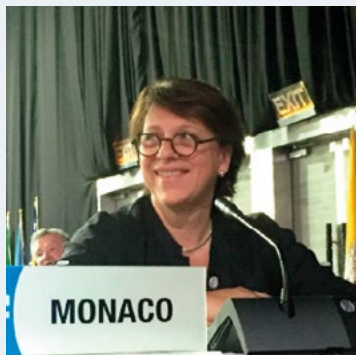
On 22 September, the Minister of State took part in the general debate at the 71<sup>st</sup> United Nations General Assembly which was held in New York.

In his speech, H.E Serge Telle, wanted to stress the need to “achieve a change of civilisation” since “we must now admit that it is through our ability to protect nature and accept its rules that we can build and achieve a future for Humanity.”

The Minister of State also insisted on the need to educate the younger generation to create a culture of sustainable development and gender equality.



### MONACO PARTICIPATES IN THE 17<sup>TH</sup> CONFERENCE OF THE PARTIES TO CITES (COP17) – 24 SEPTEMBRE AU 5 OCTOBRE 2016



A delegation from Monaco, led by Mrs Isabelle Rosabrunetto, Director General of the Department of Foreign Affairs and Cooperation, participated in the 17<sup>th</sup> Conference of the Parties to the Convention on International Trade in Endangered Species of Wild Flora and Fauna and Flora (CITES), which took place between 24 September and 5 October 2016 in Johannesburg, South Africa.

On 23 September, Mrs Isabelle Rosabrunetto took part in the Ministerial Lekgotla, an introductory meeting to the CoP 17, whose main theme covered the role CITES could play in implementing Sustainable Development Objectives (DDO), by raising awareness on poaching and the illegal traffic in protected species.

Mrs Isabelle Rosabrunetto also insisted on the urgency of tackling the illegal trade of wildlife species, which is not only endangering ecosystems, but also harming States' economic development and security. By calling for international collaboration, she praised the initiatives uniting different global stakeholders and paid tribute to those who risk their lives every day, with courage and determination to protect this biodiversity.



### THE INTERNATIONAL CIVIL AVIATION ORGANIZATION ADOPTS A MAJOR RESOLUTION TO PROTECT THE ENVIRONMENT – 6 OCTOBER 2016

Since the Paris Agreement does not specifically mention the aviation sector, the International Civil Aviation Organization (ICAO) has been charged to find solutions for reducing the industry's environmental impacts.

A historical agreement was therefore concluded on 6 October 2016, at the 39<sup>th</sup> Assembly of ICAO member countries, in order to reduce CO<sub>2</sub> emissions from international aviation.

The Principality of Monaco took an active part in concluding this Agreement, which opens a new chapter in international aviation.

The Monaco delegation, comprising Mrs Diane Vachon, General Consul of Monaco to Montreal and the Permanent Representative of Monaco to the ICAO, and Mr. Bruno Lassagne, Director of the Civil Aviation, worked in close collaboration with the other 43 countries of the European Civil Aviation Conference (ECAC) to carry out a comprehensive and coordinated approach within the Assembly, in order to provide a response to the growth of aviation emissions, set to increase by more than 300% by 2050. The unanimity and perseverance of this coalition resulted in the world's first sectoral agreement to combat CO<sub>2</sub> emissions and therefore reduce its environmental impacts.

65 States committed to voluntarily adopt this Global Market Based Measure to offset CO<sub>2</sub> emissions. As of 2021, other States will progressively join this coalition until 2027, the date when this GMBM will become mandatory. Around 80% of emissions will therefore be offset between 2021 and 2035. The GMBM contains a revision clause, which makes it possible to step up the measures in order to meet the Paris Agreement objectives.

This new Agreement is therefore a decisive step towards carbon neutrality for the aviation sector, which should encourage other sectors to commit to a similar path.



## THE PRINCIPALITY ASSERTS ITS EFFORTS TO PROMOTE SUSTAINABLE DEVELOPMENT WITHIN THE UN 10 OCTOBER 2016



On 10 October 2016, as part of the Commission's work on the UN's economic and financial matters, as well as when reviewing the agenda item on sustainable development, H.E. Mr. Isabelle Picco, Ambassador, Monaco's Permanent Representative to the United Nations in New York, recalled Monaco's 'concerted policy' to promote public health and a sustainable city.

In fact, through its environmental choices in transport, water and waste management, but also through its commitment to transition to more sustainable consumer modes, notably via its awareness-raising campaign 'A Bag for Life,' the Prince's Government is an acknowledged sustainable development pioneer.

Monaco's permanent Representative also informed the members of the Commission of the awareness-raising measures taken, notably to educate children in sustainable development issues.

Finally, after restating the Principality's commitment in promoting the role of science in climate change, H.E. Mrs Isabelle Picco announced that a workshop would be held in 2017, on the socio-economic impacts of ocean acidification. Organised by the Centre Scientifique de Monaco (Scientific Centre of Monaco), in collaboration with the Environment Laboratories of the International Atomic Energy Agency (IAEA), this workshop is part of the ocean acidification work of the Ocean Acidification International Coordination Centre, based in Monaco, under the aegis of IAEA.

## MONACO PARTICIPATES IN THE MEDECC (MEDITERRANEAN EXPERTS ON CLIMATE AND ENVIRONMENTAL CHANGE) WORKSHOP – 10 OCTOBER 2016

Ms Isabelle Rosabrunetto, Director General of the Ministry of Foreign Affairs and Cooperation, accompanied by Ms Chloe Petruccelli, Secretary of Foreign Affairs, took part in the opening session of the framing workshop of the MedECC initiative on 10 October 2016, in Aix en Provence.

Financially supported by the Prince's Government, MedECC is an open and independent network of almost 200 scientists from 21 countries, whose objective is to provide quality scientific information on environmental and climate issues. These international experts and scientists are also working to set up a 'policy-science' interface handling environmental issues in the Mediterranean basin.



In her speech, Ms Rosabrunetto stressed the magnitude of environmental threats that weigh on the Mediterranean, underlining the fact that this region, a priority for the Prince's Government's work, is also in a particularly vulnerable state.

Recalling the deep, long standing ties that unite the Principality to the community of ocean scientists, the Director General of the Ministry gave her assurances that the Prince's Government fully subscribed fully to MedECC's objectives to enhance coordination between the Mediterranean scientists and facilitate their access to scientific data.

She closed by expressing the hope that MedECC is able to raise any barriers between the scientific world and decision makers, so that ambitious political choices will enable our region to achieve a sustainable future.

## THE PRINCIPALITY SUPPORTS INCREASING THE FREQUENCY OF THE 100 BUS SERVICE NICE-MONACO-MENTON – 11 OCTOBER 2016

In terms of mobility, the Prince's Government encourages people to use public transport, both within its national territory and to enter the Principality. This policy is part of a close cooperation with the French authorities.

Therefore, in July 2014, the Prince's Government joined forces in a partnership with the Departmental Council of Alpes-Maritimes to launch the 101 bus services. This new service stopped at all the bus stops of the 100 bus service between Saint-Laurent d'Eze, Monaco and Carnoles.

The review for this service, as well as for the 100 bus service (Nice-Monaco-Menton), showed that it was used much less than expected, and that it did not improve the operations of bus service 100, during rush hours.

Following these results, the State of Monaco, the Departmental Council of Alpes-Maritimes and 'Transdev Alpes-Maritimes' decided to reallocate the resources of the 101 bus to increasing the frequency of the 100 service, in order to improve the public transport needs of employees between Nice and Monaco. The State has contributed an annual grant of €450,000 per year. For its part, the Department of the Alpes Maritimes will bear the cost of 2 additional articulated buses, in order to have standardised bus fleet.

This new service will notably include:

- 7 additional departures from Nice to Monaco, and an additional 8 for the return journey;
- more frequent services during rush hours, with buses running every ten minutes from Nice (direction Nice/ Monaco) between 6:05 and 8:25 am from Monday to Friday and more frequent services leaving Monaco from 4:45 pm;
- extended service times leaving Nice 30 minutes earlier in the morning, with the first service leaving at 5:35 am and leaving Monaco 20 minutes later in the evening, with the last bus at 9 pm.
- using 17 high capacity articulated buses.

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## CLEANING THE SAINT-NICOLAS ROCKS – 17/22 OCTOBER 2016

As part of its role to protect marine biodiversity, the Department of the Environment cleaned the St Nicholas Rocks between 17 to 22 October 2016.

These coralline algae rocks, located at the exit of Fontvieille harbour, are teeming with biodiversity. They are however, affected by many bulky waste items, mainly from leisure fishing activities (Fishing lines, hooks).

This cleaning work was the chance to bring together different local stakeholders for a shared environmental project and was organised into two steps:

- three days' work by professional divers to remove the large waste items (tires, batteries, etc.);
- three days involving the different marine stakeholders in Monaco to remove the small waste items by scuba diving.

This large scale participative event was made possible through the involvement of more than 40 people from:

- Palace guards
- Fire service
- Maritime and Airport police
- Department of Maritime Affairs
- Centre Scientifique de Monaco
- Ecole Bleue;
- Monaco Oceanographic Museum
- Monaco underwater exploration club
- Association Monégasque pour la Protection de la Nature.

This work was also supported by PROVIDICE, the underwater works company, to recover the biggest waste items, and the Société Monégasque d'Assainissement (SMA) (Monaco Sanitation Company) which provided a skip in order to collect and remove the waste collected by those involved.



## THE PRINCIPALITY IN THE GOVERNANCE OF THE EUROPEAN ENERGY AWARD (EEA) 18 OCTOBER 2016



In order to enhance its commitment to this scheme, the Principality joined the new governance of the EEA, as a decision-making member of the EEA Forum, along with France, Germany, Austria and Luxembourg on 18 October 2016, therefore consolidating the promotion of its ambitious climate policy.

The Department of the Environment in charge of implementing the Energy Climate Plan for the Principality of Monaco, participated in the Annual Assembly of the EEA, which was held in Lucerne in Switzerland, on 17 and 18 October 2016. This event also brought together all the decision-making members of the EEA certification, including the Principality, during the General Assembly of the EEA forum.

In November 2014, the Principality of Monaco's Energy Climate Plan was officially certified EEA for a period of four years. This certification rewards the commitment of the Principality in the quality of implementing its Energy Climate Plan, within its territory.

## THE SCIENTIFIC CENTRE OF MONACO BECOMES A WHO COLLABORATING CENTRE – 21 OCTOBER 2016

During the 3<sup>rd</sup> meeting of the Small European States organised by the World Health Organisation (WHO) and the Prince's Government, Ms Zsuzanna Jakab, WHO's Regional Director for Europe, announced that WHO had designated the Human Health Centre of the Biomedical Department of the Monaco Scientific Centre as a WHO collaborating centre for Health and Sustainable Development.

This designation recognises the centre's long-standing work on these issues.

The aim of the Monaco Scientific Centre is to increase knowledge transfer in the field of the environment, climate change and health, and assess the impact of climate change on health in coastal countries.



## THE PRINCIPALITY OF MONACO SIGNS UP TO THE COMMITMENT OF THE INTERNATIONAL MARITIME ORGANIZATION TO REDUCE GREENHOUSE GAS EMISSIONS - 24/28 OCTOBER 2016

During the meeting of the Marine Environment Protection Committee which took place in London from 24 to 28 October 2016, the International Maritime Organization (IMO) took several key decisions to reduce the polluting emissions of ships and to protect the marine environment.

With respect to greenhouse gases, the 174 IMO member and associate countries agreed a roadmap which plans to adopt an initial strategy of reducing emissions, including a list of short medium and long term measures in Spring 2018.

With this in mind, it was decided to set up a working group, which will continue negotiations between the environmental sessions. For the record, in order to facilitate reaching an agreement, the Principality of Monaco and 10 partner States (Germany, Belgium, Denmark, Morocco, Ivory Coast, Marshall Islands, Salomon Islands, Antigua, Barbados and Tonga) submitted a position document to the IMO proposing a method to make progress on the question of reducing greenhouse gas (GHG) emissions, for maritime shipping.

The international system of collecting fuel consumption data decided at the 69<sup>th</sup> session of the Marine Environment Protection Committee (MEPC), in April 2016, was definitively adopted. This system will provide a precise understanding of the marine sector's emissions, and will be an important base for implementing future regulation measures.

The IMO also set a specific timetable for collecting data as of Autumn 2020 which should make it possible to adjust the strategy for reducing emissions and the regulation instruments by no later than spring 2023.

In line with ratifying the Paris Agreement, the Principality of Monaco, welcomes the commitment of the international maritime community to step up its efforts to reduce greenhouse gas emissions in maritime shipping, and therefore play a role in conserving the marine environment.



## COP22: MARIE-PIERRE GRAMAGLIA AT THE WHO MINISTERIAL SUMMIT 15 NOVEMBRE 2016

From 7 to 18 November 2016, Marrakesh hosted the 22<sup>nd</sup> Conference of the Parties (COP22) of the United Nations Framework Convention on Climate Change, to which 196 States participated. H.S.H. Prince Albert II of Monaco attended, together with his delegation.

For the record, COP22 follows on from the world summits organised by the United Nations after the Kyoto protocol was adopted in 1997, which covered the period 2008/2012. Its objectives: set the application terms for the climate agreement signed in Paris at the COP21, as well as the schedule for negotiations.

On 15 November 2016, Marie-Pierre Gramaglia, Government Advisor - Minister of Public Works, the Environment and Urban Development, gave a speech during the ministerial summit on 'Health, Environment and Climate Change' organised by the World Health Organization (WHO). She expressed the wish that the COP22 meetings can be the basis for a fruitful collaboration between the health and environmental sectors, and assured Margaret Chan, Director General of WHO, of the Principality's unwavering support.



**MARRAKECH COP22 | CMP12**  
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## SIXTH MEETING OF THE PARTIES TO ACCOBAMS AND THE 20TH ANNIVERSARY OF THE SIGNING OF THE AGREEMENT – 22/25 NOVEMBER 2016

The sixth meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, the Mediterranean and contiguous Atlantic area (ACCOBAMS) took place from 22 to 25 November 2016 in Monaco. During this triennial meeting measures were adopted in order to improve knowledge on cetaceans, to mitigate the threats of human activity and increase the knowledge and techniques in the Parties' countries as well as collaborations with the other International organisations.

24 November was also notable for the:

- ACCOBAMS 20<sup>th</sup> anniversary Since its creation, this legal tool has united the vast majority of the coastal states in the Agreement's region, comprising all the maritime waters of the Black Sea, the Mediterranean Sea and the Contiguous Atlantic area to the west of the Straits of Gibraltar. It includes the Pelagos Sanctuary for marine mammals in the north-western Mediterranean, set up by France, Italy and Monaco.
- the launch of the 'ACCOBAMS Survey Initiative' project: this campaign to assess the population of cetaceans and their distribution throughout the Mediterranean and the Black Sea by observers on-board specially equipped planes or on boats was made possible thanks to the support of the MAVA foundation and the commitment of all the ACCOBAMS countries. It will make it possible to obtain reliable, standardised data at the regional level, in order to improve our knowledge on cetaceans to ensure their survival. A common protocol between the different international organisations will be studied, in order to manage whale beaching, adopting the principle of systematically carrying out independent impact assessment studies before any work that might generate harmful underwater noise to cetaceans and mitigating the effects of interactions between cetaceans and human activities, such as fishing.

On this occasion, ACCOBAMS would also like to encourage Party countries to implement its 'High Quality Whale Watching®' certificate, a unique certification which guarantees respectful whale and dolphin watching in the Mediterranean and the Black Sea.

More information: <http://www.accobams.org/fr>



## THE ALPINE CONVENTION CELEBRATES ITS 25<sup>th</sup> ANNIVERSARY 5 DECEMBER 2016



The Alpine Convention, which Monaco joined in 1994, is celebrating its 25<sup>th</sup> anniversary this year. This international treaty for the protection and sustainable development of the Alps was ratified by eight Alpine countries (Germany, France, Italy, Liechtenstein, Monaco, Slovenia and Switzerland) as well as the European Union,

On Monday, 5 December 2016, the culture of the Alps was very much showcased in Monaco, with the presentation of a panorama on the literature of mountain guides, in the presence of Marine Clarys, alpine guide, organised by the Club Alpin Monégasque in the Médiathèque Louis Notari.

## REPORT ON THE OCEANS AND THE CRYOSPHERE: THE IPCC ORGANIZES ITS FRAMING MEETING IN MONACO – 6/9 DECEMBER 2016

The framing meeting of the IPCC's Special Report on Climate Change and the Oceans and the Cryosphere\* of the IPCC (Intergovernmental Panel on Climate Change) which was held from 6 to 9 December 2016, brought together 103 experts from 40 countries.

H.S.H. Prince Albert II of Monaco and Mr Lee Hoe Sung, Chairman of the IPCC, both delivered a speech during the opening ceremony, after which they then met members of the press corps.

The IPCC which received the Nobel Peace Prize in 2007, aims to provide politicians with regular scientific assessments on climate change, its impact and future risks, and present mitigation and adaptation strategies. This report, which H.S.H. Prince Albert II, the Prince's Government and the Prince Albert II of Monaco Foundation have been working towards since January 2015 is a much-anticipated step in including the oceans in climate change issues. It should be published in 2019.

Other than the special report on Oceans and the Cryosphere, two other future reports were approved by the IPCC:

- the impacts of a 1.5o global warming compared to the pre-industrial era;
- climate change, desertification, changes of use of soils and food security.

(\* The cryosphere (from the Greek Kryos meaning cold and ice) is a term that collectively refers to the portions of the Earth's surface where the water is present in the solid state. It includes ice shelves, frozen lakes and rivers, regions covered by snow glaciers and frozen passes.



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