Department of the Environment

THE ENVIRONMENT2014in the Principality of Monaco



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Contents

Preface

This edition of "The Environment in the Principality" remains faithful to its structure, by first summarising H.S.H. the Sovereign Prince's main commitments to sustainable development over the past year.

The subsequent chapters present the key policies of the Government and its departments to conserve biodiversity, along with the Energy and Climate Plan and the sustainable city, and its initiatives to increase the involvement of the people of Monaco.

As we know, the Principality of Monaco was the first country listed in Annex I Parties of the United Nations Framework Convention on Climate Change (UNFCCC) to submit its acceptance instruments for the second period of the Kyoto Protocol (2013-2020).

In the context of this second commitment period, Monaco is continuing its efforts to reduce its carbon emissions by 30% for 2020 compared with its emissions in 1990. These objectives were made in accordance with the announcement of H.S.H. the Sovereign Prince during the Copenhagen climate conference in 2009, then restated in Durban in December 2011 and in Doha in November 2012. The Principality has set an extremely ambitious commitment to reduce greenhouse gases. This includes the objective to reduce its emissions by 80% as well as achieve carbon neutrality by 2050.

To achieve these objectives the Government has implemented an Energy Climate Plan. In 2014, this was rewarded with the European Energy Award, a certification which aims to consolidate and enhance the steps already undertaken to achieve the objectives in the Energy Climate Plan and more widely, sustainable development.

At the end of 2015, Paris will host the 21st Conference of the UNFCCC. The challenge of this major event for our planet is to reach an overall agreement to fight climate change. The Principality is already committed to this approach.



H.S.H. PRINCE ALBERT II, A COMMITTED HEAD OF STATE

H.S.H. Prince Albert II at the public conference of Geneva, in Geneva, 24 April 2014

THE 2014 ENVIRONMENT DIARY OF H.S.H. PRINCE ALBERT II OF MONACO

San Francisco – 24 and 25 February 2014 **Commonwealth Club of California** and World Ocean Summit 2014

H.S.H. Prince Albert II participated in two international events in San Francisco, where He spoke on the issues facing the Oceans.

On 24 February, at the invitation of the Commonwealth Club of California*, H.S.H. the Sovereign Prince gave a speech on "the state of the Oceans in the modern world" and presented His environmental

commitment through the work of the Prince Albert II of Monaco Foundation.

On 25 February, the Sovereign Prince spoke at the 2014 World Ocean Summit**, organised by The Economist, in partnership with National Geographic and presented the basis of "sustainable strategies for the Ocean" in front of world leaders from politics, the corporate world, international organisations, NGOs, think tanks and academics.

Alongside these events, H.S.H. the Sovereign Prince held discussions with many high ranking officials, such as Mrs Irina BOKOVA, Director General of UNESCO and HE José Maria FIGUERES, former President of Costa Rica.



Conclusions Marine Academy at the Oceanographic Museum, Monaco, 25 March 2014

Through these two events, in front of a high-level international audience, H.S.H. the Sovereign Prince restated His personal commitment and that of the Principality to the environment and sustainable development, especially with respect to protecting the Oceans.

Geneva - April 24, 2014 Public conference on the theme: "Is sustainable development possible on a planet in the midst of global warming?"

H.S.H. Prince Albert II provided some answers to this question posed by this conference, in the company of two other eminent speakers: Prof. Jean-Pascal VAN YPERSELE, Vice-Chair of the Intergovernmental

* The Commonwealth Club of California is an apolitical club established in 1903 which has 16.000 members from the business world, non-profit organisations academic communities and local business leaders within the Bay area. This club organises approximately 400 presentations and conference per year.

** The World Ocean Summit 2014 was held from 24 to 26 February 2014. This summit brought together world leaders from different horizons for the 2nd time in order to continue the discussions begun in Singapore at the 2012 summit Mr John KERRY, US Secretary of State, Mr Anibal Cavaco SILVA, President of the Portuguese Republic, and Ms. Sri MULYANI Director of the World Bank were among the notable figures invited to talk during this World Ocean Summit 2014.





4th Euro-Mediterranean Energy Efficiency Forum at the Grimaldi Forum Monaco, 24 and 25 March 2014

Panel of experts on Climate Change (IPCC), as well as Mrs Sunita NARAIN, Director General of the Centre for Science and the Environment (NGO based in India) and member of the board of directors of the Prince Albert II of Monaco Foundation, on 24 April 2014, at the Palais des Nations.

The discussions were moderated by Mr Mark HALLE, Vice-Chair of the International Centre for Trade and Sustainable Development, and notably drew on recent data published by the IPCC to support the preparation for its 5th assessment report.

This event was held at the headquarters of the United Nations Office at Geneva, in partnership with this Office and the Prince Albert II of Monaco Foundation.



Reception of the Consulate of Portugal at the Yacht Club of Monaco, 27 March 2014

Washington – 16 and 17 June 17 2014 "Our Ocean" Conference

At the invitation of Mr John KERRY, US Secretary of State, H.S.H. Prince Albert II delivered a speech at the "OurOcean" conference, organised at the State Department, in Washington, on 16 and 17 June 2014.

This conference brought together more than 350 participants (policy makers, scientists and NGOs) to discuss a range of topics including acidification, pollution of the oceans and sustainable fishing.

Other figures, also very concerned by these issues, such as the President of Kiribati, the President of Palau and the New Zealand Minister of Foreign Affairs, had confirmed their attendance.

Furthermore, H.S.H. the Sovereign Prince held a working meeting with Mr John KERRY on protecting the oceans, on 16 June before lunch.

In his capacity as Head of State, H.S.H. the Prince Albert II has always been involved in this issue in order to build the awareness of both the general public and policy makers.

The Prince Albert II of Monaco Foundation, which today supports more than three hundred projects throughout the world, is particularly active in this area.

Kenya – 26 June 2014 **Conference of the United Nations Environment Programme**

H.S.H. Prince Albert II travelled to Nairobi in Kenya for the Conference of the United Nations Environment Programme (UNEP), in which He participated alongside the President of the Republic of Kenya, HE Uhuru KENYATTA, and many authorities, on Thursday 26 July 2014.

Delegations from more than 150 countries began the week by discussing the links between world economic development and the environment.

The 11th edition of the UNEP Yearbook examined ten new challenges highlighted in the previous reports over the last ten years, including the plastic waste in the oceans. The 2014 Yearbook gave an update on each question along with options for action.

H.S.H. the Sovereign Prince spoke for the first time as President of the Sport and Environment Commission of the International Olympic Committee (IOC) in order stress the close ties between the UNEP and this forum, after twenty years of partnership.

The Prince notably held talks with Mr KEINO, Char of the Kenyan Olympic Committee Kenyan and member of the IOC, and Mr PAU, Secretary of the Kenyan Olympic Committee.

The Sovereign also participated in the press conference of the "Global Ocean Commission".

Chile, 30 July – 2 July 2014 5th "Monaco Blue Initiative"

On 30 June in Valparaiso, the Sovereign Prince visited the facilities of the Chilean navy's military base and more specifically, its oceanographic school and museum in the company of HE Bernard FAUTRIER, Managing Director of the Prince Albert II Foundation and Mr Robert CALCAGNO, Director general of the Oceanographic Institute, Foundation Albert I Prince of Monaco.



Palace reception, 10th anniversary of the Climate Group, Geneva, 24 April 2014

He then participated in a gala dinner given in honour of the Chilean AMADE (World Association of Children's Friends).

On 1 July, in Santiago Chile, He attended the launch of the 5th "Monaco Blue Initiative" (MBI) which was held over two days.

Some fifty political decision makers, scientists, representatives of the civil society and non-governmental organisations and high-level ocean experts answered the invitation from the "Monaco Blue Initiative" in order compare their experiences and share solutions and good practices.

This year, this international platform for communication and discussion, which has the objective of developing a more sustainable management of the oceans, focussed on themes of financing mechanisms for Marine Protected Areas and the management of the high seas.

H.S.H. the Sovereign Prince also had a meeting with Mrs Michelle BACHELET, President of the Republic of Chile, before giving the closing speech of the MBI Conference.

Greece - 26 and 27 July 2014 The Prince's engagements in the Mediterranean

On 26 July, H.S.H. the Sovereign Prince visited the island of Mykonos in Greece to attend a presentation of a programme set up by His Foundation and the World Wildlife Fund (WWF) Greece aimed at protecting monk seals.



Preparation of the 2015 Universal Exhibition, Milan, 16 September 2014

CHAPTER 1 | H.S.H. PRINCE ALBERT II. A COMMITTED HEAD OF STATE

On 27 July, the Prince travelled to the island of Gyaros in the company of scientists to observe the status of this endangered species, then He met the team of the Tara yacht, who updated him on the on-going studies.

Beijing – 19 August 2014 Inauguration of the new premises of the Prince Albert II Foundation

On the occasion of His state visit to China, the Sovereign inaugurated the building that will be home to the Principality of Monaco in the Chinese capital. Provided in the context of a partnership signed between the Parkview group and the Prince Albert II Foundation, these premises will house the Consulate general of Monaco in Beijing and will provide new opportunities to promote the Principality, via its dedicated exhibition area, the "Salone Monaco".

These facilities will therefore be used by the Embassy of Monaco and the Principality's different entities, notably the Prince Albert II Foundation to organise events, exhibitions, conferences and meetings as part of its environmental programme, within the People's Republic of China.

As part of this inauguration, the Embassy of Monaco in China hosted a reception, and several meetings were held between H.S.H. the Sovereign Prince and the Chinese authorities. The Prince also talked with the Chinese winners of the Prince Albert II Foundation award.



Heads of State Climate Summit at the UN Launch of the Climate Week NYC. New York, 23 to 25 September 2014

Milan - 16 September 2014 **Preparation of the 2015 Universal Exhibition**

On Tuesday, 16 September 2014, H.S.H. Prince Albert II, visited Milan in order to prepare for the 2015 Universal Exhibition, which has the theme: "Feeding the planet, energy for life".

The Sovereign Prince was welcomed by Mr Maurizio MARTINA, the Italian Minister of Agricultural, Food and Forest Policies, Mr Giuseppe SALA, Commissioner General of the Expo Milano 2015, and Mr Stefano GATTI, Director General of International Affairs of the Milan Exhibition 2015. He also attended the meeting of judges for the "Food Knowledge Programme", a research programme on food security, coordinated by



H.S.H. Princess Charlene attended the 7th "World Focus on Autism", New York, 25 September 2014

the Institute of Bari, in partnership with the Polytechnic University of Milan (METID). H.S.H. Prince Albert II of Monaco took the floor at the press conference to present this initiative, at the headquarters of the Cariplo Foundation.

The Universal Exhibition opened its doors in Milan on 1 May 2015. The Monaco Pavilion, built on a 1,010 m² site is ideally located on the boulevard of international Pavilions, between Saudi Arabia, Japan and Russia.

It has areas dealing with solidarity, sustainability and innovation.

The ecological architecture of the Pavilion was designed by the Italian Enrico POLLINI. The Pavilion was built by EKSO, the Monaco-based company specialised in innovative modular structures.

At the end of the Universal Exhibition, in partnership with the Monaco Red Cross and with the support of the Government of the Principality, the Pavilion will be rebuilt in Burkina Faso. Its architecture will be adapted to local climatic conditions and to its new use as a training centre.

New York – 23 to 25 September 2014 **Heads of State Climate Summit** at the UN Launch of the Climate Week NYC

H.S.H. the Sovereign Prince participated in the Climate Summit of Heads of State at the UN, on 23 September in New York and, as part of his activities of His foundation, also attended the launch of the Climate Week NYC 2015.



the opening of the Clinton Global Initiative, New York, 25 September 201

H.S.H. Princess Charlene accompanied the Sovereign Prince to the plenary session of the Clinton Global Initiative.

At the invitation of Mrs BAN Soon-Taek - wife of Mr BAN Ki-Moon, the Secretary-General of the United Nations - and the charity "Autism Speaks", H.S.H. Princess Charlene attended the 7th "World Focus on Autism", on Thursday, 25 September.

Portugal – 29 and 30 October "Biomarine Conference"

H.S.H. the Sovereign Prince visited Cascais to attend the "Biomarine Conference", which was held from 29-30 October 2014.





Awards Ceremony, Prince Albert II Foundation and Conference on the oceans, Palm Springs, 11 October 2014

On his arrival, H.S.H. Prince Albert II met with HE Anibal Antonio CAVACO SILVA, President of the Portuguese Republic.

At the end of this working meeting, He met Mrs Dilek AYHAN, Norwegian Secretary of State for Trade, Industry and Fishing, as well as Mr Jaber AL SHEHRL, Deputy Minister of Fisheries for the Kingdom of Saudi Arabia.

On 30 October 2014, the Prince gave a speech at the "Biomarine Conference" which was held in the presence of Prof. Manuel PINTO DE ABREU, the Portuguese Secretary of State for the Sea, in the Palacio Estoril Hotel.



MANAGING THE NATURAL HERITAGE : **A PRIORITY**

OINMULE

The four pillars of the Principality of Monaco's sustainable development policy are based on managing the natural heritage; implementing the Energy Climate Plan; a range of actions to promote a sustainable city and getting the People of Monaco more involved.

Managing the natural heritage involves protecting marine and terrestrial biodiversity, but also managing water resources, monitoring the environment and controlling pollution.

Biodiversity: a priority

The Princely Government is strengthening its policy for the conservation and protection of the environment, by become a signatory to many international Conventions on the subject, including: the Convention on Biological Diversity, the Washington Convention (CITES), the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS), the Alpine Convention, the RAMOGE agreement, the PELAGOS Sanctuary and the Barcelona Convention. These last four are specific to the issues in the Mediterranean basin. In fact, despite a small, densely urbanised territory, the Principality of Monaco is proactive in preserving its biodiversity, which is surprisingly rich.

Understanding

The first component of this policy consists of building knowledge about the ecosystems, particularly by conducting regular inventories of species and habitats. These surveys are performed not only to draw up an exhaustive list, but also to monitor the richness of the biodiversity over time: thus making it is possible to identify potential bio indicator species. By surveying these species and studying their change, it is also possible to assess the effectiveness of the conservation or recovery measures in line with a policy of ecosystems conservation.

This approach can therefore be used as the basis for managing the ecosystem and can be an essential tool when adapting the regulations. Many inventories are therefore being conducted in the Principality, by following the recommendations of various international Conventions to which Monaco is a party. Special attention is paid to heritage or protected species, remarkable habitats and Marine Protected Areas (Larvotto and Spélugues).

These biological indicators (bio-indicators) are a species or group of plants or animal species, whose presence provides information on certain physical, chemical or biological characteristics of the environment or the existence of certain practices. The effects are therefore observable at the individual level and produce changes to the morphology (including cellular structure), behaviour and physiology of a species or even an ecosystem.

The role of these bio-indicators is to detect disturbances to the environment, measure the effects and assess the

Conference of the Parties to the Convention on Biological Diversity

From 6 to 17 October 2014, the Republic of Korea hosted the 12th Conference of the Parties (COP) to the Convention on Biological Diversity, as well as the 1st Conference of the Parties serving as the Meeting of the Parties to the Protocol of Nagoya.

The conference in Pyeongchang was an opportunity to conduct a mid-term review of the implementation of the 2011-2020 strategic plan for biodiversity and the Aichi objectives, adopted in 2010 at the 10th Conference of the Parties in Nagoya.

More than 10,000 representatives of governments around the world attended, i.e., 193 signatory Parties, including the delegation of Monaco. This Convention has three objectives: the conservation of biodiversity, the sustainable use of its resources and the fair and equitable sharing of benefits arising from using the genetic resources.

changes in environmental conditions that may result from stopgap measures. They are used as forecasting, decision-making tools and are indispensable when performing an ecological audit. These bio indicators are based on using a keystone species or biological models sensitive to ecosystem disturbance (pollution, invasive species, climate change). This data can only be effective if the coastal waters are monitored for chemical or physical changes at the same time, and ensure that the management measures necessary to maintain and protect the entire territory of Monaco are adapted.

By mapping marine and land ecological populations, a huge amount of data on the spatio-temporal distribution of species can be collected. These studies give a precise positioning of the different substrates, habitats or species and also provide information on distribution areas. They give a qualitative and quantitative indication of the health and biodiversity of the living world.

These tools, which provide a precise inventory of species and habitats, play a role in enriching the heritage of the Principality, but above all help the State make decisions when implementing its strategy for biodiversity, monitoring and protection as well as its territorial spatial planning policy.



Protecting and managing

> The marine environment

The Principality's policy of sustainable environmental management, including its coastal resources is based on creating two marine protected areas (Larvotto Marine Reserve and Spélugues Marine Reserve). In creating Marine Protected Areas, the aim is to both maintain the ecosystems in their entirety and protect species. In 1908, the first steps were taken to protect of the marine area of Larvotto beach and, in 1978, this led to the creation of Monaco's first marine reserve.

This reserve, covering an area of 33 hectares, is listed as a Specially Protected Area under the Barcelona Convention and as a site in the RAMSAR Convention (Convention on wetlands of international importance).

Half of the Larvotto Reserve is a field of posidonia sea grass. The Posidonia, a spermatophyte that is endemic to the Mediterranean, is regarded as an indicator species of the overall quality of coastal waters.

In 1986, a second marine reserve was created: the Spélugues Reserve. This area of approximately 2 hectares near the entrance to the Hercules harbour contains a site that is unique in an urban setting: a coralline drop off, thirty feet deep. This natural feature promotes the growth of red coral colonies, an iconic species in the Mediterranean.

These protection measures were strengthened, in 1993, by prohibiting the fishing of the brown grouper, a placid species, which is very appreciated for its flesh. The level of protection for this endangered species has proved effective in the Principality, with a significant increase in the number of fish in the Monegasque waters over the last twenty years.

Following the mapping of ecological communities in the Marine Reserve of Larvotto that began in 2002, the lower limit of the fields of posidonia sea grass has been identified, the different ecological communities around this limit have been mapped and the different types of habitat identified. 48 permanent markers have been placed around the entire lower limit of the posidonia fields, to ensure that its health status, currently stable, a sign of the good quality of the marine environment in the Principality, can be monitored over the long term.

In 2006, the ichthyological (fish) inventory identified 224 species of fish grouped into 87 families in the waters of Monaco. This inventory was supplemented in the same year by an inventory of the brown grouper, a protected species in the Principality. In total, 83 fish were counted during this study, compared to 15 during the first count in 1998. These regular inventories every three years show the effectiveness of the conservation measures taken by the Government as of 1993 to rebuild the populations of this iconic fish in our waters. In 2009, 105 individuals were counted and 75 in 2012. The decrease recorded during the last inventory appears to be due to a change to the inventory programmed for 2015.

Begun in 2008, the mapping of noble pen shells has resulted in 650 individuals being identified within the Larvatto Reserve. "Sentinel" individuals have been marked and are being monitored over time (for growth and mortality) in order to assess the health status of this population over time. This iconic mollusc of the Mediterranean maritime environment is a protected species that is particularly sensitive to pollution. It is a bio-indicator of the good overall quality of marine waters.

In 2010, the Environment Department conducted sonar mapping of the sea floor between 0 and 100 m in depth. This mapping, aimed at filling in the knowledge gaps for certain areas of the territory, was combined with a 3-D bathymetry and included identifying the nature of the seabed along the entire coastline of Monaco. This mapping provided a view of the relief on the seabed and identified several areas with a strong

ecological potential, including an important colony of corallene located in the east of the Principality. It ended in 2014, by identifying the different marine habitats present in the waters of Monaco for the sea floor between 0 and 100 m in depth.

Over the last ten years, the Environment Department has set up monitoring programmes of bioindicators for demographic parameters, population growth, health and necrosis indicators (gorgonians, echinoderms, etc.).

The pillar of the lee breakwater in La Condamine harbour has hidden cavities that may provide habitats suitable for introducing cavernicolous fauna. Since 2005, a long-term monitoring programme of the development of these species introduced was set up.

The exploration of the Roches Saint Martin, located off the great dike at a depth of 60 m, resulted in identifying a cluster of sponges, large colonies of gorgonians, as well as red coral. The colonies on these rocks are perfectly healthy, notably thanks to a regime of cold, choppy water. Among the species identified on this site, more than thirty are regarded as remarkable or determinative by the french network of Sites of Ecological Interest, Fauna and Flora (ZNIEFF, sea).



Other than the creation of the Marine Protected Areas, the artificial reefs are one of the most effective tools for integrated management of coastal resources. In the Principality, the first artificial reefs were sunk in the 1980s on the initiative of the Association Monégasque pour la Protection de la Nature au sein de la Réserve du Larvotto (Monaco Charity for Nature Conservation in the Larvotto Reserve).

These reefs are currently being reviewed to assess their effectiveness and to develop the future monitoring programmes. These different shaped structures, which have been sunk over the last 30 years, achieve many goals, such as creating biodiversity and biomass, restoring habitats and developing economic or leisure activities. These three components were the subject of a Government strategy to develop artificial reefs in the Principality and the visible achievements are a result of this cycle of several years of studies and assessment.

The detailed mapping of the Principality's seabed between 0 and 100 m in depth which began in 2010, found new sites potentially capable of hosting a modular project with scientific objectives. These were then developed from 2011, and the first reefs were sunk in 2013. This pilot project, directed by the Department of the Environment, will monitor



the colonisation of these structures over time by the marine wildlife and flora, but it will also conduct experiments in transplanting species in order to monitor their development.

The project's feasibility study involved finding a new site for the wreck of the Toulonnais, before moving this vessel. This project, conducted in collaboration with the Departments of Maritime Affairs, the Environment, the company Prodive and Mr Pierre FROLLA, has created a new, attractive dive site in the Principality.

In parallel, in February 2014, the *Société d'Exploitation des Ports de Monaco* (Monaco Port Company), the Departments of Maritime Affairs and the Environment launched a project to reintroduce the ecological function of harbour areas. The artificial reefs known as "Biohuts" installed by the company Ecocean, should take on the role of nurseries, usually performed by shallow waters.

These different projects will provide useful results as part of developing an integrated management policy for the Principality's coastal area.

> Land habitats

The land inventories conducted since 2006, have identified and revealed a rich and previously unknown biodiversity.

For land flora native to the Principality's territory, 347 species and subspecies have been identified, including 6 endemic species and 18 species of significant scientific interest. *Acis nicaeensis* (Nice Snowflake), a rare and very endangered species, endemic to the Nice region has been found at 4 sites in the Principality. 10 hotspots of Mediterranean biodiversity have been discovered in the Principality. These results confirm Monaco's remarkable biodiversity. The cliffs of the Rock, with their island habitat in a marine environment, provide the richest diversity.

The inventory of entomofauna (insects), conducted from 2008 to 2011, has provided very interesting results, by counting no less than 330 species of coleoptera (beetles, ladybirds, weevils) and 101 species of heteroptera (shield bugs), with the discovery of two species entirely new to science: an Anobiidae from the Synanobium genus, and a cave dwelling weevil species from the Troglorhynchus genus, called *Otiorhynchus (Lixorrhynchus) monoecirupis n.sp.*





The ornithological inventory undertaken in 2010 and 2011 also helped identify 60 species of birds and to highlight a nesting site of the peregrine falcon. In addition, the green spaces and planter boxes in the Principality form a weft of green confetti which all add to the habitat for birds. In 2014, in keeping with this inventory, two specific studies have been carried out on the demographic change in the population of yellow-legged gulls and common shags.

The inventory of herpetofauna (reptiles and amphibians) conducted over 2012 and 2013, was deliberately focussed on the search for species with nocturnal habits in the hope of discovering the presence of species with a very strong heritage value (European leaf-toed gecko). This strategy has achieved some success since it has been able to identify a large population of Mediterranean house geckos (hemidactylus turcicus).

In 2014, the inventory of entomofauna was supplemented by a study of the soils of the green spaces in the Principality of Monaco, focusing particularly on four classes of arthropods: Springtails (collembola), insects especially beetles, isopoda (woodlice) and miriapoda (millipedes, centipedes). The initial results are encouraging, and point to the excellent health of the soil. The results are still being analysed in 2015, but six species of beetles have already been added to the initial inventory, including one invasive species, *Altaenius picenus*, as well as the smallest hive beetle in the world, *Ptinella mekula Kubota*. A rare species has been found in the garden of the Villa Sauber: *Trechus fairmairei*, a ground beetle.

Furthermore, since 2011, the Principality has joined the "Bee, sentinel of the Environment" programme of the Union Nationale de l'Apiculture Française (UNAF, National Union of French Beekeepers). Bees play an important role in pollinating more than 80% of our plant species. More than 20,000 threatened plant species have been saved thanks to them, while 40% of human food (fruit, vegetables, oilseeds) depends on their work. Six hives have been installed on the roof-terrace of the Musée des Timbres et des Monnaies (Museum of stamps and coins) in Fontvieille. In addition, in partnership with the Office National des Fôrets (ONF, National Office of Forests), an insect hotel has been set up in the Saint Martin gardens.



These reproduce the specific habitat of certain species such as solitary bees. This facility is used to study and monitor the lives of these pollinating insects. These programmes are made possible by the Urban Amenities Department's policy of managing urban open space ecologically, eliminating the use of pesticides and creating nectar-filled flowerbeds.

A framework partnership agreement between the Government of the Principality, the Mercantour National Park, the Natural Park Alpi Marittime and the Prince Albert II of Monaco Foundation, was signed in 2008. These two parks, which have outstanding natural ecosystems are today threatened, particularly due to the effects of climate change. This cooperation is intended to improve the knowledge and understanding of biodiversity development in this natural area, promote exemplary management, particularly in terms of sustainable tourism, and encourage experiences to be shared at the international level.

One of the projects in this partnership is to carry out one of the most ambitious natural inventories of living world ever carried out, since it covers the entire territory of two nature parks, in other words, nearly 2,450 km². This inventory, which began in 2008, relies specifically on hosting and managing international teams of scientists, but also local naturalists, who possess some of most site-specific knowledge. This knowledge of the living world could lead to the creation of "biodivesity reservoirs", places where natural and notably forest environments can be monitored and develop naturally.

This Framework agreement also includes a tourist component entitled "Spending time in nature without destroying it". The Government of the Principality, together with the Mercantour National Park have committed to a programme of redeveloping visitor centres in the mountains to create information and activity centres.

The work carried out by the Parks, which are already included on UNESCO's provisional list of Word Heritage sites, is also supported by Monaco. The application was filed in 2013.

Monitoring environments and controlling pollution

Maintaining biodiversity is closely linked intrinsic quality of the (marine and terrestrial) environments, hence the need for special vigilance when setting up monitoring networks.

Managing water resources

In some regions of the world, fresh water has become a major problem due to its rarity, its uneven geographic distribution, or growing demographic pressure.

Most of the water used in the Principality comes from France (Vésubie and Roya valleys). The Principality of Monaco also makes use of its local resources (Alice, Mary, Testimonio, Fontdivina and Ingram springs), which contribute between 30% and 50% of drinking water depending on the year (rainfall).

The Société Monégasque des Eaux (SMEaux, Monaco Water Company), via a concession from the State, manages the treatment and quality control of this water, before it is injected into the water supply. The streamlining and reduction in water use is still one of the major challenges in sustainably managing the resource. Over the past fifteen years the water consumption has decreased by an average of 1% per year, thanks to the efforts of the private sector and residents and the actions carried out by the State, such as using valley water to clean roads, and an optimised management for watering green spaces.

Waste water treatment

All the wastewater from the Principality and the town of Beausoleil, as well as a part of the water from the municipalities of Cap d'Ail and La Turbie are collected into the Monegasque sewerage system and taken to treatment plants for purification.

All this wastewater is taken to the Usine de Pré-Traitement des Eaux Résiduaires (UPTER, wastewater pre-treatment plant), which physically treats the effluent: removing large objects, screening, removing grit and sand, removing fat and grease. With a treatment capacity of 2,000 l/s, it can handle all the wastewater collected. Once pre-processed at UPTER, the wastewater is taken to the Usine de Traitement des Eaux Résiduaires (UTER, Residual Water Treatment Plant), located in the basement of an industrial building in Fontvieille, which handles primary and secondary treatment of the water.

The purified water is then discharged into the sea by an outfall, located 800 m off the Fontvieille breakwater at a depth of approximately 100 m. A special feature of the treatment system in Monaco is that most of the sewage sludge is directly treated, along with household waste, by a waste to energy plant.

The RAMOGE agreement

Over the last forty years, the RAMOGE projects have unfailingly strengthened the cooperation between the Liguria, Provence-Alpes-Côte-d'Azur and Monaco aimed at conserving our shared rich marine environment. This area is a pilot area for integrated management of the coastline, as well as preventing and controlling marine pollution.

Therefore the biennium 2013-2014 under the Italian Presidency, wanted to intensify the pollution control actions by conducting two full-size exercises in order to train the teams of the three countries to work together and check the effectiveness of the RAMOGE plan. It should also be noted that the 47th RAMOGE Commission, which was held on 1 December 2014, also established the work programme for the next two years, including:

- Continuing the different studies to understand and monitor the development of protected species (Brown meagre, Noble pen shell, etc.) or harmful species (Ostreopsis ovata).
- Establishing a European protocol to assess marine debris on the Mediterranean beaches covered by the Agreement in order to test and launch the measures to prevent debris accumulation.

The quality of coastal waters

The Principality monitors the physical and chemical quality of coastal waters, based on repeated measurements of all elements in the marine environment (water masses, sediment and biota), but also through the knowledge of activities or natural and anthropogenic inputs likely to affect the quality of the environment.

The safety of swimming areas is monitored from early May to end September with each swimming area being tested on a weekly basis.

Since 2007, a monitoring programme, combining health and environmental monitoring with preventive management for risks due to the presence of the algae Ostreopsis ovata has been implemented around each of the coves at Larvotto beach.







ENERGY AND CLIMATE CHANGE

The 5th report of the Intergovernmental Group of Experts on Climate Change (IPCC), the first elements of which were published in September 2013, confirms the observation of global warming:

"Climate change is unequivocal, as is now evident from observations of increases in global average temperatures of the atmosphere and the ocean, the widespread melting of snow and ice, and the rise in the global mean sea level."

This report also confirms that this climate change is the result of the increase of the amount of greenhouse gases in the atmosphere due to human activities:

"The concentration of carbon dioxide, methane and nitrous oxide have increased sharply due to the human activities since 1750 and today has significantly exceeded pre-industrial levels [...] The global increase in the concentration of carbon dioxide is mainly due to the use of fossil fuels and land use changes, while the increased concentration of methane and nitrous oxide is primarily due to agriculture."

Aware of these challenges, Monaco became a signatory to the United Nations Framework Convention on Climate Change in 1992. In 1997, at the Conference of the Parties, which took place in Kyoto, the Principality was officially added to the number of countries listed in Appendix I of the Convention. In 2006, Monaco ratified the Kyoto Protocol, which set targets to reduce greenhouse gas emissions.

Earth Hour : one hour for the planet

At the request of H.S.H. the Sovereign Prince, the Principality of Monaco took part in the Earth Hour campaign on Saturday, 29 March 2014. From 8.30 to 9.30 pm the lights of the Prince's Palace and the lighting of public buildings (State Department, Tourist Office, Auditorium Rainier III, the army barracks and the fire service, etc) were switched off.

This Hour for the Planet, launched by the World Wide Fund for Nature (WWF) involves switching off the lights and unplugging non-essential electrical appliances for one hour, in order to promote energy savings and tackle climate change.



During the first commitment period of 2008 to 2012, the Principality of Monaco committed to reduce its overall emissions of greenhouse gases by 8%, compared with its emissions in 1990. By 2012, the Principality had reduced its emissions by 13.2%, thus meeting and exceeding this initial objective.

During the Climate Conference in Doha in 2012, the Principality confirmed its commitment over the second period of the Kyoto Protocol from 2013 to 2020, with the dual objective of reducing its GHG emissions by 22% on average over this period, as well as a reduction target of 30% by 2020. This is an ambitious goal, putting the Principality on target to reach the objective set by the Sovereign Prince of a reduction of 80% by 2050, in addition to achieving carbon neutrality within this time frame.

On 27 December 2013, Monaco became the first country listed in Annex 1 of the Kyoto Protocol, to have submitted acceptance instruments for the second commitment period (2013-2020). The Principality also announced its participation in the Green Climate Change Fund aimed at assisting developing countries.

To address climate issues and meet the objectives to reduce GHG emissions, the Monaco Government is implementing a specific and innovative policy through an Energy & Climate Plan. It addresses two issues:

- Securing the energy supply, by reducing the energy consumption and by encouraging local production of renewable energies.
- Tackling climate change by reducing the impact of activities that emit greenhouse gases.

This comes with quantified targets, and uses three main levers: regulations, incentives and the exemplary action of the State.

Energy security

As Monaco imports about 95% of the electricity it consumes, supply is therefore a strategic issue for the Principality's activities.

This supply depends almost exclusively a double high-voltage line (400,000 volts), serving the Eastern end of the French Mediterranean coast. This single transmission route represents a serious structural constraint. During peak loads in winter (heating) and summer (air conditioning), high energy demand may cause power outages. The French power grid operator, *Réseau et Transport d'Electricité* (RTE, Network and Transport of Electricity), is currently increasing the network of "high voltage" lines in the region. This upgrade is fully operational since April 2015.

At the same time, Monaco is currently building a third substation, to maintain the reliability of the electricity distribution network, for which work began in 2013. This infrastructure will support the two existing substations and will be installed underground in the bedrock in the Vallon de Sainte Devote. This new infrastructure should come on-line for summer 2017.



Contract Goals for energy security

In January 2011, the Principality of Monaco signed the Contract Goals for securing the power supply to Eastern Region of Provence-Alpes-Cote d'Azur (PACA), alongside the French State, the PACA Conseil Régional (PACA Regional Council), the Conseils Généraux for Alpes-Maritimes and the Var, RTE, the Agence de l'Environnement et de la Maîtrise de l'Energie (ADEME, French Environment and Energy Management Agency) and the Etablissement Public d'Aménagement de la Plaine du Var. The Principality committed to support and participate in the objectives of the contract.

Reducing the peak load capacity

To avoid disruptions in supply, the Monaco Government has set an objective to limit the peak load capacity, by keeping it at a lower level than in 2006, set at 97,500 kW by 2020.

The Principality is a partner of the EcoWatt programme (www.ecowatt-paca.fr), initiated by RTE, which aims to warn users of the risks of saturating the power network, and provides advice on how to moderate energy use.

Increasing energy independence

The development of renewable energies should help increase the country's energy security, with the objective, in 2020, of producing 20% of demand needs from renewable energy sources.

In Monaco, the local renewable energy sources are mainly in the following forms:

• The development of heat pumps using sea water which use the calories in sea water to produce thermal energy, heating and air conditioning. The process consumes around 4 times less energy than a boiler fired by conventional fuel to deliver the same amount of energy. The first heat pump was installed in the Principality back in 1963 and today Monaco has more than 70 heat pumps along its shoreline. These produce around 17% of the energy consumed in the Principality and save more than 15 000 tons of oil equivalent.

• Waste to energy, at the incineration plant for urban and industrial residues (UIRUI), the waste is used as fuel to generate electricity and steam. The thermofrigorific plant converts the steam and distributes heat and cooling to the Fontvieille district. In order to supply the new districts, this power plant

"Mobee" Car-sharing service

"Mobee" the electric car-sharing service was launched on 1 July 2014

This scheme comprises a fleet of 25 Renault Twizy electric cars for hire. The objective is to increase the number to 50 vehicles by 2016. Residents and companies can geolocate the closest vehicle available using a smart phone application 24/7.

The vehicles can be charged using a network of more than 450 EV charging stations in the car parks of the Principality. In addition, the special feature of this scheme is that it is a Free Floating" open loop operation, which means users can return the vehicle anywhere they choose. Subscribers can park these vehicles free of charge on roads or in partner public car parks (Fontvieille Shopping Centre, Casino, Larvotto beach, Visitation, Square Gastaud, Carmes, St. Laurent, Grimaldi Forum, Saint-Charles, Railway Station and Colle).

"Mobee" subscriptions can be bought on the site of the Compagnie des Autobus de Monaco: www.cam.mc

For more information visit: mobee.tm.mc



Ministerial Conference of the Union for the Mediterranean on Environment and Climate Change, in Athens

Mrs Marie-Pierre GRAMAGLIA, Minister for Public Works, The Environment and Urban Development, participated in the Ministerial Conference of the Union for the Mediterranean on the Environment and Climate Change which was held in Athens in May 2014.

Under the auspices of the co-presidency of the Union for the Mediterranean (UpM) and of the Greek presidency of the Council of the European Union, this high-level meeting focused in particular on the "Horizon 2020" initiative aimed at pollution reduction in the Mediterranean sea, climate change, and sustainable consumption and production.

Mrs Marie-Pierre GRAMAGLIA renewed the Principality's commitment to the Union for the Mediterranean, by recalling that a sustainable financing mechanism for Marine Protected Areas (MPA) in the Mediterranean, has been set up jointly with France and supported by Tunisia. The Prince Albert II of Monaco Foundation is also a stakeholder of this commitment.

has had its generation capacity increased by adding sea water heat pumps. This upgrade supplies heat and air conditioning to the new buildings built on the grounds of the old railway, the technical high school and all the housing in the Jardins d'Apolline et Helios.

• The development solar thermal and photovoltaic facilities: the Government is installing solar thermal and photovoltaic systems in its construction and renovation projects for public buildings and public works. Since 2008, a subsidy, aimed at developing solar energy in the Principality, is available to property owners to replace a thermal fossil fuel system by a solar thermal installation. In 2012, this subsidy was extended to the installation of any solar power generation system. The subsidy covers 30% of the installation cost and is capped at €30,000.

In 2014, to encourage the take up of photovoltaic energy, the Government introduced a feed-in tariff for power generated by solar PV. For any generation higher than 3 kwp (approximately 25 m²), the feedin tariff is \in 0.36 ex. VAT/kWh for power generated on flat roofs and \in 0.53 ex. VAT/kWh in other cases. This incentive is granted to individual power generators even if they use the power generated; once granted, the feed-in tariff is guaranteed for 15 years.

The implementation of this measure is financed through the sale of energy. In effect, the concession for distributing electricity and gas, signed in 2009 between the Government and the *Société Monégasque de l'Electricité et du Gaz* (SMEG, Monaco



Union pour la Méditerranée Union for the Mediterranean الإتحاد من أجل المتوسط Electricity and Gas Company), provides that the sale of electricity contributes to a dedicated fund for achieving sustainable development objectives in the Principality by implementing a policy to manage energy demand and develop renewable energy.

At the same time, with its E+ label which combines all its sustainable development services, SMEG, offers all users an "Egeo" service which guarantees the renewable source of electricity.

SMEG already has already signed up more than 200 domestic and business customers, many condominiums, the street lighting as well as many institutions such as the Prince's Palace, the Government offices, the City Hall and the Princess Grace Hospital.

In 2014, 11% of the power purchased in the Principality of Monaco was generated from renewable energy sources.

Increasing energy efficiency in buildings

In the Principality, buildings account for the highest energy use. A reduction target of 20% of unit energy demand in buildings by 2020, compared to 2007 has been set. Since 2007, the Government has applied the High Environmental Quality (HEQ) standard in all new State construction projects, and the *Très Haute Performance Énergétique* (THPE, Very High Energy Performance) or BBC (Low Energy Building) certification to its most recent projects.

The buildings of "Les Jardins d'Apolline", completed in 2013, were awarded the label THPE. The buildings are connected to the district heating and cooling plant of Fontvieille and are also equipped with 380 m² of solar thermal arrays producing 55% of domestic hot water needs for the 237 homes in the development. In parallel, 200 m² of solar photovoltaic arrays generate enough electricity annually to power 6 flats.



This programme, carried out by the Public Works Office, aims to improve the design of buildings by limiting their environmental impact as much as possible. This is achieved not only by selecting the right construction materials and factoring in the building's maintenance, but also by energy savings achieved.

For existing governmental buildings, the Public Building Maintenance Office is responsible for implementing the energy retrofit measures. These measures were initiated in 2006 with the energy audit of the Charles III secondary school. Following this, demand management measures were carried out on other buildings, such as the Saint Charles primary school and in some public car parks.

At the same time, the Public Building Maintenance Office has developed a remote management system, to centralise the energy demand data for some buildings via a computer network and perform corrective actions remotely.

Energy performance contracting market

In 2012, in partnership with the Energy Agency in Berlin, the Government set up an Energy Performance

ACCOBAMS: Workshop on the impact of climate change on cetaceans in the Mediterranean and Black Sea at the Oceanographic Museum of Monaco

On 11 June 2014, the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS) in partnership with the Oceanographic Museum, organised its workshop on the impact of climate change on cetaceans in the Mediterranean and Black Sea.

The purpose of ACCOBAMS is to promote and facilitate regional cooperation at all levels by implementing the necessary measures to ensure that cetaceans are protected. This workshop was responding to the request of the 23 countries Party to ACCOBAMS through the Resolution expressing their willingness to reduce the impact of anthropogenic noise on climate change and its consequences on marine biodiversity.







Contracting Market (EPCM) to renovate the energy installations in public buildings.

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

The first EPCM in Monaco was signed with the Johnson Controls Monaco and concerns a group of five public buildings (*Lycée Albert 1er*, the *Caserne des Carabiniers*, the *Centre de Rencontres Internationales*, the Rainier III Auditorium and the *Sûreté Publique*) whose total energy bill is more than €650,000 per year. The energy performance guaranteed is 27% over a contractual term of 12 years, with planned savings of around €170,000 ex. VAT per year.

This project will also contribute to meeting the Principalities objectives to reduce GHG emissions. Over time, a 35% reduction of GHG emissions from the buildings concerned is expected.

Lastly, the project will give the State a stock of increasingly energy efficient buildings, while respecting the budgetary constraints of public expenditure.

14 november 2014 : The Principality receives the EEA Award

In 2011, under the impetus of H.S.H. the Sovereign Prince, the Princely Government committed to the European Energy Award certification process.

At the end of this process the European Energy Award Forum awarded the Princely Government the EEA certification for 4 years. Mrs Marie-Pierre GRAMAGLIA accepted the award at the award ceremony on 14 November 2014, which took place in Monaco, at the same time as the annual EEA Forum.



Certifying the Principality's Energy Climate Plan

In 2012, the Government committed to a programme of environmental certification through the European Energy Award (EEA), programme. This programme, adopted by approximately 1,000 municipalities in Europe, led to producing a review of the Energy Climate Plan's implementation and an action plan for the next four years.

This certification programme rewards municipalities that have committed to a process of quality management, applied to the implementation of their energy climate policy. The European Energy Award is an interdisciplinary management and control tool, which helps identify strengths and weaknesses, as well as the potential for improvement in the areas of energy and climate. It also includes other environmental issues such as the management of water, waste, mobility, etc.

The assessment required to obtain the label is structured into six areas: urban development, heritage, energy-water-sanitation, mobility, internal organisation, awareness building - cooperation.

For each of these areas, an inventory of the buildings was carried out in 2012, and was followed in 2013 by producing an action plan. All the Government Departments have been involved in this programme. In November 2014, the Principality was awarded the "European Energy Award" certification, following an independent audit carried out using the Citergie criteria of the ADEME, which were adapted to the specific characteristics of the Principality.

The action plan for the next four years (2014-2018), must deliver continuous improvement. This approach is aimed at consolidating and enhancing the steps already undertaken to achieve the objectives set for Energy Climate Plan and more widely, sustainable development.

Tackling climate change

This second part of the Energy Climate Plan concerns the reduction of GHG emissions to minimise the effects of climate change. This concerns the Principality's international commitments with respect to the United Nations Framework Convention on Climate Change.

As part of the Kyoto Protocol, the Principality reached its target of reducing GHG emissions by 8%, for the first commitment period (2008-2012), and even exceeded this by achieving a reduction of 13%. For the second commitment period of the Kyoto Protocol, Monaco committed to achieve the target reduction of 30% in 2020, which represents an average decrease of 22% over the period (from 2013 to 2020).

Reducing direct GHG emissions

Direct GHG emissions identified in Monaco primarily concern the energy sector through the burning of fossil fuels (oil and gas), the incineration of urban and industrial waste and the consumption of petrol sold in Monaco for transport.

Among the measures taken since 2003 the Government of Monaco has implemented regulatory measures banning oil heating in new buildings. By abandoning this type of heating, urban renewal projects will play a significant role in the reduction of GHG emissions.

The waste management policy was enhanced in 2008 in order to limit the tonnage incinerated while guaranteeing the supply of energy to the district of Fontvieille. In addition, the selective recycling of waste, which began in Monaco in 1992 and has intensified since 2008, has lead to the materials recovery of approximately 11.5% of the waste in recycling centres. This system mainly concerns paper, glass and recyclable household packaging. The effectiveness of this recycling programme has been enhanced by increasing voluntary collection stations and by introducing recycling bins in buildings. More recently this selective collection has grown with the

UN: 20th Climate Conference from 1 to 12 December 2014

Mr José BADIA, Minister of Foreign Affairs and Cooperation, led the delegation from Monaco, which attended the 20th Conference of the Parties to the United Nations Framework Convention on climate change which was held in Lima from 1 to 12 December 2014.

This conference was a decisive step in developing a future agreement on climate change which must be adopted at the Conference of Paris in December 2015 and whose objectives are to restrict the rise in average temperature to less than 2°C.

The Government Minister confirmed the Princely Government's commitment to contributing €250,000 in funds to the Green Climate Fund. collection and recycling of cardboard boxes from shops and businesses in Monaco, thus contributing to reducing the tonnage of incinerated waste.

As for transportation, the Principality has opted for a policy encouraging low impact transport, public transport, intermodality and significant grants for buying hybrid or electric vehicles.

The regulation for transporting of goods in the city has been coupled with a logistics system which is still seen as a benchmark today and includes a consolidation platform, outside of the territory of Monaco, and an urban distribution centre in Fontvieille.









Mobility Week: "Travel differently"

As part of this week, Auto Moto 2000, BMW, Daimler-Benz, Volkswagen, Peugeot, Renault and Dolphin offered free trials of two and fourwheeled electric vehicles at Larvotto beach. The electric car sharing vehicles were also present along with the pedal-assist bicycles from Monaco and Mobee.

Several activities were also organised: bicycle games and minichallenges for small children, bicycle circuits for mothers, with the Institut Méditerranéen d'Etudes et du Développement Durable (IMEDD), an acrobatic bike show (BMX and MOUNTAIN BIKES) and a Bicycle Sunday.

THE SUSTAINABLE CITY

The Principality has approximately 50,000 employees and 36,000 residents who travel around the territory of 2 km² every day. In total almost 386,000 trips are made each day, across all modes of transport (light and Heavy Good vehicles, bus, 2-wheeled vehicles and on foot) and for all purposes (business, leisure, etc.).

As a business and tourist destination, Monaco also attracts more than 5 million visitors per year. These figures clearly illustrate the importance of traffic flows and their impact on the city (www.infotrafic.mc).

The Government of Monaco has a sustainable city policy focused on preserving or strengthening a quality of life that is recognised and appreciated. This policy is centred on managing mobility, waste treatment, green spaces and noise pollution.

Mobility Policy

The State mobility policy aims to reduce the negative impacts of road transport (traffic, air quality, noise pollution, etc.), but also aims to offer alternative transport solutions. Actions taken encompass two strategies: implementing a master plan for urban infrastructure and implementing the Urban Travel Plan (UTP). The latter focuses on developing public transport, optimising freight transport in the city, encouraging electric and hybrid vehicles, and developing low impact transport methods.

Improving infrastructure

The average density of circulation is growing at a constant but contained rate year on year, from less than 100,000 inflowing and outflowing vehicles per day in 2007, to around 115,000 today. The road infrastructure master plan includes building the boulevard du Larvotto, known as the "dorsale" which follows the disused railway line from Saint Roman to Cap-d'Ail. It is a major road network aimed at facilitating travel between districts, especially by reducing the volume of through traffic in different parts of the Principality.

Constructing the Saint-Antoine infrastructure including opening the road between Fontvieille and Cap-d'Ail (Marguet link) helped ease inflowing and outflowing traffic, opening up the district of Fontvieille, one of the major business centres in the Principality.

This master plan also factors in the project to build an underground tunnel, which is due to be completed by 2017, to link the boulevard du Jardin Exotique to the boulevard Ranier III so that heavy goods vehicles and employees can access Fontvieille directly via the Marguet link.

One of the strategic actions aimed at improving Monaco's accessibility, involves catching as many vehicles as possible on the outskirts of the territory, by identifying suitable sites for large park and ride

On the initiative of the Department of the Environment, the Principality took part in the European Mobility Week from 16 to 22 September in order to encourage each and everyone to travel "differently": on foot, by bicycle, in an electric vehicle, with carpooling or by public transport.

The Public transport Day on 20 September was marked by providing free bus travel on the *Compagnie des Autobus de Monaco* (CAM, Monaco Buses Company) network.

> incentive car parks. This is the purpose of this "expresslink" project, which is currently being studied.

Public transport development

The Government is involved in modernising the resources in order to improve the quality of services provided by the Compagnie des Autobus de Monaco (CAM, Monaco Buses Company): increasing the frequency of bus services, installing digital information screens inside the buses and at bus stops, adding evening and night bus services, intermodality, implementing an operating system using geolocation giving passengers real-time information about buses (www.cam.mc). Since July 2011, the Principality has also added hybrid buses to its fleet, which now operate entirely with bio-diesel fuel.

The latest developments include the sale of tickets in ticket machines and on the internet (www.cam.mc), as well as a mobile application to find out the waiting time at any bus stop in real time.

Encouraging intercity public transport

The Government is focusing its action on mobility both within the city and for trips to neighbouring towns and regions. In September 2008, the State purchased five TER (Regional) trains in the Principality's livery, which are integrated into the French regional rail network. This investment of 50 million euros by the State of Monaco has helped employees who travel into Monaco each day. These trains have therefore helped to increase frequency of TERs (regional trains) arriving at Monaco train station to one every 15 minutes during morning and evening peak hours.

The intermodality and interoperability of the different public transport systems has been strengthened between the urban and interurban bus and regional train services. Today there is a combined rate for "work" season ticket holders and students can travel both on the TER network and the CAM bus. The "Carte d'Azur" ticket also gives free access to the bus services in Nice, Antibes, Sophia-Antipolis, the department of Alpes-Maritimes and in the Principality. In addition, users can buy the "ZOU" card, which covers all the ticket prices on the regional train network (TER, Regional Express services and *Chemin de Fer de Provence*). In order to encourage children and teenagers to use the public transport system to travel around the city, schoolchildren in the Principality can buy an annual bus ticket for 10 euros, since the start of the 2014/2015 school year.

With the aim of improving the bus network in the Principality, the Government has introduced the n°3 bus service, which connects avenue Hector Otto with Fontvieille.

Segregated public transport lanes

A preliminary study of this mode of transport is currently being carried out; it is studying its size and scalability by determining which public transport systems could use it, such as the SNCF train station, the CAM bus services and the inter-city services. It is envisaged to encompass all types of public transport technology (bus, tramway, metro, monorail, etc).





The specific difficulties to overcome include the extreme complexity of the topography in Monaco, the significant size of the existing infrastructure (tunnels, car parks, etc.) the high density of the buildings and the use of public space (notably the road network).

Urban Distribution Centre (UDC)

In 1989, the Government of Monaco set up an Urban Distribution Centre (UDC), in the district of Fontvieille. In 1999, the UDC was connected to a pre-consolidation platform in the Parc d'Activités Logistiques (PAL) in Nice Saint-Isidore, in order to reduce number of heavy goods vehicles coming into Monaco and optimise their loading rate. The PAL has therefore helped streamline the flow of goods and provided offsite storage space through shared logistical costs and haulage systems.

This haulage platform has led to a 50% reduction in road congestion by commercial vehicles and, according to a study by the *Agence de l'Environnement et de la Maîtrise de l'Energie* (ADEME, French Environment and Energy Management Agency), to reduce air pollution by 30 %.

Today the reception platform in Fontvieille is cramped and particularly constrained for high tonnage vehicles In the context of the continuing the redevelopment of the former SNCF land sites, the Department of Forward Studies, Urban Planning and Mobility (DPUM) has developed plans for a new UDC. In total, there are nearly 7,000 m² of logistical activities, which could be housed in this sector.

Carpooling

The Government is promoting many initiatives to improve the way transport is managed, in particular, the State encourages the active population in the Principality to use carpooling. Created in October 2006, the carpooling service (www.monacovoiturage.mc), can substantially reduce travel costs through special rates for car parks and shared costs for fuel and motorway tolls and carpooling.

Promoting electric and hybrid vehicles

The Government is managing a committed policy to encourage clean or low emission vehicles. The latest version of the grant scheme came into force on



1 September 2013. The changes from the previous scheme concern four points:

- •The creation of a specific grant for rechargeable hybrid vehicles.
- •The maximum threshold of CO₂ emissions was lowered from 150 to 110 grams per kilometre for petrol hybrid vehicles.
- Grants for diesel hybrid vehicles were removed.
- A cap of 3,000 euros for two-wheeled electric vehicles was introduced.

The subsidy level for electric vehicles remains unchanged at 30% of the purchase price including VAT, capped at €9,000.

The regulation also requires certain vehicles, such as taxis, to have less than 190 g of CO₂ emissions per km The public car parks office in Monaco manages 45 car parks which represent a capacity of more than 17,000 parking spaces for light vehicles out of a total of around 36,000 (public and private) parking spaces for cars. This office provides 450 recharging sockets free of charge to users of electric vehicles and offers discounts on its car park season tickets. Season ticket holders of public car parks in the Principality, who have electric vehicles, can also recharge their vehicle(s) free of charge at the Auto-Bleue stations in Nice, provided that they register on the Internet site (http://www.auto-bleue.org/). The electric vehicles are also exempted from vehicle registration and can park on roads free of charge.

At the end of 2014, there were 1,016 fully electric or hybrid 2 or 4 wheeled vehicles, in use by companies, Government Departments or individuals. The State and the City are showing the way: since almost all vehicles purchased today are either electric or hybrid.



Car-sharing

The Government also provides support to Monegasque stakeholders (associations, companies) in their efforts to promote clean vehicles, and is investing in partnerships with car manufacturers (Mitsubishi, Renault-Nissan, Smart, etc.). The Principality, a true full-size laboratory for car manufacturers, therefore benefits from innovations in the electric vehicle sector.

The car-sharing service "Mobee" has contributed to this political drive to encourage increasingly sustainable travel in the Principality.

Encouraging low impact transport methods

In the context of sustainable mobility, low impact transport methods (walking, cycling, etc.) are encouraged. Despite its topography, Monaco is remarkable for the percentage of pedestrian trips, notably with respect to internal trips. Out of the 235,000 trips within the Principality each day, most of them are on foot. Hence the importance of developing mechanised pedestrian links, which now include 72 lifts, 35 escalators and 8 travellators to facilitate travel. To help people move around the city, the "Monaco Malin" brochure includes all alternative solutions 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 accepts bicycles.

In addition, Monaco has a shared rental system for pedal-assist bicycles (pedelecs). This new service is the result of a trial period that helped to define the best possible system to suit the specific characteristics of the Principality. Interested users can buy a quarterly season ticket from the CAM for 15 euros. This season ticket, which is integrated into the CAM AZUR tickets for the departmental bus, or the SNCF's "ZOU", allows the user to use the bicycles free for 2 hours per day.

Waste management

The Principality's waste management policy has the following objectives: reduction of waste at source, and optimised collection, recycling, treatment and disposal, notably via the waste to energy plant.

Monaco is autonomous for daily collections and processing of waste that can be recycled into energy. Since 1986, a fully automated pneumatic refuse collection system is in operation in the district of Fontvieille: it covers 22 hectares with a network 6 km long. However, oversize refuse, incineration residues and hazardous waste representing a risk to safety or the environment (toxic or ultimate waste) are removed and treated outside of Monaco, which does not have the necessary facilities to treat them.

Waste to energy

Currently, most of the waste is processed in the Usine d'Incinération des Résidus Urbains et Industriels (UIRUI, Incineration plant for urban and industrial waste), to generate electricity and steam. This steam is converted into heat and cooling in a generation plant and distributed in the district of Fontvieille through a district network.

Materials recovery of waste

Since 2008, the selective collection of waste throughout the territory has been strengthened by introducing fifty voluntary collecting stations for glass, paper and household packaging. Since 2011, a system of collecting cardboard boxes in the Fontvieille district has also been launched. In order to facilitate and encourage the habit of waste recycling, containers have been installed in a hundred blocks of flats within the Principality. The latest comparative figures between the first halves of 2013 and 2014 show a steady progression in recycled waste.

Anti-pollution measures

The Department of the Environment permanently monitors environmental quality throughout the year through monitoring networks (air quality, quality of coastal marine waters and swimming water, noise pollution), in order to act on priority issues such as pollution and improving the living environment.

• Air quality

The growth of human, industrial and logistics activities, energy production and waste treatment, all discharge polluting substances into the atmosphere. Since 1991, an automated network of stations for monitoring air quality has been set up in the Principality (quai Antoine 1^{er}, rue Grimaldi, place des Moulins, Fontvieille school and boulevard Charles III) in order to avoid irritation or a risk to health and the environment.

This network provides continuous measurements, issues pollution alerts and monitors long-term changes in air quality. There are two types of monitoring stations: proximity, and background. The first are located close to the sources of pollution (road traffic), the second, also known as general ambience, are far from any notable source of pollution.

The pollutants monitored are: nitrogen dioxide, fine particles and suspended particulates, lead, sulphur



dioxide, ozone, carbon monoxide and benzene. The values measured are compared to the thresholds set by European directives.

In 2006, to improve treatment of flue gas from the incineration plant, works of around 20 million euros were carried out on the furnace boiler system, improving the purification process, adding another flue gas washing tower and installing a catalytic filter.

The flue gas from the plant is continuously monitored. The data from monitoring the emissions from the stack are compared with European standards. In addition, data collection programmes to monitor the impact of pollution in the neighbourhood are carried out regularly and the results indicate environments that have low or no pollution (equivalent to accepted urban or industrial noise thresholds).

Noise abatement

The main sources of noise pollution in the Principality are building sites, road transport, the heliport, noise from nightclubs / bars and neighbourhood noise. The Government is focussing on two aspects: monitoring noise pollution and noise abatement for building sites.

Monitoring noise pollution

The issue of noise pollution is an integral part of the quality of life in the Principality. The challenge for the Principality is to protect the living environment while engineering the economic and urban development.



Mrs Marie-Pierre GRAMAGLIA attends the "Innovative City" congress

In her speech at the "Innovative City" congress in Nice on 25 June 2014. Mrs Marie-Pierre GRAMAGLIA, Minister for Public Works, Environment and Urban Development, presented the measures that Monaco might implement as part of a smart city policy, which would cover four highly interconnected themes: strategic urban planning, mobility of persons and goods; the environment and living environment and managing the risks of the smart city.

The concrete actions carried out by the Principality over the last few years as part of the "Monaco sustainable, smart city" project relate to the development of the 3D digital model, managing and controlling energy use in all the 42 State buildings, proving 4G technology throughout the territory, managing the daily population flows via a proactive policy and various other actions: enhancing public transport, building road infrastructure, developing and promoting green vehicles.

Mrs Marie-Pierre GRAMAGLIA presented the partnership launched by the Government with the research institute EURECOM and Monaco Telecom to set up a laboratory for digital security to support the Smart City scheme. The noise pollution monitoring network includes three fixed continuous noise measurement stations and two multi-sensor mobile stations (weather noise) sited in "sensitive areas", in order to identify and protect calm areas.

Although the levels observed are consistent with a highly urbanised environment, the absence of heavy goods vehicles at night tempers the level of nocturnal sounds.

Furthermore, the speed limit on certain road sections has been reduced, and low-noise road surfaces are being trialled. In addition, under the Urban Transport Plan, the main road networks are now underground, which helps to reduce noise emission.

The noise pollution monitoring network also includes installing a noise monitoring system for the heliport. A psycho-acoustic study by the Government has led to a number of initiatives being implemented: restricting flights to test engines, new procedures for landing and take-off, authorisation for the closure of private loggias in the façades affected by the heliport, limiting the time a helicopter can remain on the ground with rotors running to 10 minutes.

Building site noise abatement

Measures for noise abatement on building sites were strengthened in 2010, with the promulgation of a ministerial decree amending the authorised working hours. Furthermore, in 2011 a circular was issued to the construction industry requiring it to include the issue of noise abatement when planning building projects. This circular requires prior completion of a noise study, assessing the sound levels in the immediate vicinity of the future site before work commences and producing a projected noise curve generated by the construction work. These measures are intended to promote the use of the most efficient techniques and equipment to reduce the sound impact.

Risk monitoring network

The risk monitoring network comprises:

- A network of 2 meteorological monitoring stations to collect data on temperature, precipitation, wind, humidity and solar radiation.
- A system of seismic sensors in collaboration with the Centre Universitaire Geoazur.
- A tide gauge in cooperation with the *Service Hydrographique et Océanographique de la Marine* (SHOM, Navy's Hydrographic and Oceanographic Department).
- Environmental radioactivity detection system.

Managing public green spaces

Green spaces in the Principality are managed by the Department of Urban Amenities (DUA) using environmentally friendly practices, by stopping all chemical treatments, using organic fertilizers and organic 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 less watering.

In 2012, thanks to innovative management methods, 3 sites in the Larvotto district received the certification *Espace Vert Ecologique* (EVE, Ecological Green Space): the Japanese Garden, the Gardens in the Villa Sauber and a group of gardens including le Portier, the central reservation (located to the right of the Japanese Garden and the Grimaldi Forum) and the flower beds around the Grimaldi Forum. This international award represents a true recognition of the policy for managing public green space implemented for many years by the Department of Urban Amenities.



To strengthen the Principality's policy to encourage a "green heritage", the Tree Code has been developed to define actions required to manage and conserve the Principality's tree heritage. It applies to all public and private green spaces. Consequently, more than a thousand trees have received the status of remarkable trees, based on a number of different criteria: biological, botanical, social and environmental.



INVOLVING THE Monegasque community

The policy of the Government of the Principality in favour of sustainable development relies on the commitment and involvement of the people of Monaco and the different stakeholders in the private and voluntary sectors.

The Government's environmentally friendly approach

Since 2009, the Government of Monaco has been working to implement an environmentally friendly approach, deploying a network of contact people representing all the State's departments. This approach involves including environmental concerns into all of its activities and aims to set the example by:

• 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.

Implementing the environmentally friendly action plan has in particular led to the inclusion of environmental recommendations on the use of eco-certified products in the maintenance service market for public buildings, building a range of ecologically designed offices that meet the ISO 14001 standard and offering a wide range of green products.

15th Jeun' Elect event

As part of this the 15th event, 424 Year 10 (aged 14) pupils in the Principality took part in a road safety day on 6 February 2014, and were able to test out electric vehicles including scooters, pedal-assist bicycles (pedelecs), cars and karts on the Quai Albert 1^{er}.

Organized by the Monaco Club of Electric Vehicles in close collaboration with the Department of Education, Youth and Sport and the Department of the Environment, this annual event aims to build awareness of Year 10 pupils in Monaco about the pollution problems caused by urban road transport and the solutions for reducing them. Pupils were also able to take part in a competition aimed at finding a "slogo" (a cross between slogan and logo) for electric mobility.

The top prize in this competition, an electric scooter, was presented to the winner by H.S.H. Prince Albert II, at the Ever Exhibition.

Since 1 January 2013, all restaurants in public or private schools, after-school centres, health and care centres are required to provide meals in which at least 10% of produce originates from organic agriculture. This proportion will increase to 20% in 2015.

In order to assess the impact of its actions and develop a carbon strategy, the Department of the Environment will reassess its greenhouse gas emissions across all the Government of Monaco's activities.

Alongside the reduction actions implemented by all departments since 2012. the Government offsets emissions generated from business travel, through the voluntary offsetting programme "MCO₂ Monaco Carbon Offsetting" set up by the Prince Albert II of Monaco Foundation.

In order to manage and reduce the impact of its activities on the environment, the 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.

Furthermore, in order to support all the stakeholders in the Principality in this environmentally friendly approach, the Department of the Environment launched the "Committed Trade" initiative. This tool



International Biodiversity Day

The United Nations has designated 22 May as International Biodiversity Day in order to foster understanding of the issues related to biodiversity and build awareness on this subject. In 2014, the Department of the Environment in partnership with the Mercantour National Park, have created two interactive science trails, to discover and identify insects and butterflies.



will support the territory of Monaco in developing sustainable consumption patterns, by taking its specific issues into account. It includes practical actions such as eliminating single use bags, encouraging reusable packaging, improving the sorting of residual waste.

When it comes to protecting biodiversity and natural resources, the Government is continuing to implement "Monaco against deforestation" a programme launched by the Prince Albert II Foundation. This involves the Government encouraging the use of certified timber within the Administration for new construction projects and for any commercial activity using wood.

The private and voluntary sector

The State's action must be extended to the different stakeholders within Monaco.

The involvement of the private sector must be highlighted with, for example, the commitment of the Grimaldi Forum which has implemented a management system aimed at reducing the impact of its events on the environment. The Grimaldi Forum Monaco is one of the first convention centres in Europe to obtain the ISO 14001 certification for its environmental management system: natural thermal insulation, use of sea water for air conditioning and heating, sorting and recycling waste, low energy lighting, use of ecolabel products and service providers that use environmentally sensitive practices.

Anti-pollution exercise in the Fontvieille harbour

As part of the preventive actions implemented by the Government, the Department of Maritime Affairs organised an anti-pollution exercise on 18 April 2014. This annual exercise is alternately organised in the harbours of the Principality (Hercules and Fontvieille) and involves the Maritime and Airport Police Department, Monaco's Fire and Emergency Service and the Monaco Port Company. The Principality acquired the necessary facilities to deal with this type of accident 15 years ago.



10th Monacology

Launched by the Monaco-based charity "Act for Nature" Monacology aims to build awareness of the environment and biodiversity among children. Through educational workshops, the children can explore how they can play a role in sustainable development. This year the Department of the Environment ran a workshop on the theme: A well-arranged refrigerator not only helps keep food longer but also saves energy.



Another important example of this commitment by companies for the period 2013-2016 can be seen in the commitment by the Société des Bains de Mer to a second environmental charter relating in particular to environmental management, resource management, waste recycling, biodiversity and sustainable purchasing.

The voluntary sector is also active with around a dozen organisations currently developing action programmes. These organisations come together each year, in early June, as part of the environment awareness week: The "Monacology", event organised for children in Monaco.

Green and sustainable events

This high level of involvement is also reflected in the many events that punctuate the life of the Principality throughout the year, especially with respect to electric mobility with:

- the EVER exhibition for electric vehicles.
- · Jeun'Elec, an event that educates secondary school pupils about the environment and electric vehicles.
- •The Monte Carlo Rally of New Energies organised by the Automobile Club of Monaco and limited to vehicles emitting less than 115 g/CO₂/km.
- •The Monegasque company VENTURI, which has demonstrated the reliability of the electric engine over several expeditions without assistance on the Asian and African continents, but also by taking part in several challenges with vehicles powered by the company.

• The European Mobility Week, which takes place in the Principality each year in September.

Many scientific bodies are based in the territory of Monaco, and partnerships are created regularly, especially for joint awareness building campaigns.

Finally, through His foundation, H.S.H. Prince Albert II rewards celebrities, and young scientists for their exemplary actions and their work to encourage the Environment and Sustainable Development over the Prince Albert II Foundation's the 3 priority action areas: climate change, biodiversity and water.

The voluntary sector

The voluntary sector in Monaco is also involved in actions to encourage environmental protection of circles, mobility and ecological friendly behaviour. This dynamism in the voluntary sector reflects a growing collective awareness. Below is a non-exhaustive list of the Government of Monaco's partners.

Club des Véhicules Électriques de Monaco

Adress : Patio Palace, 41, avenue Hector Otto Tel: 97 77 54 21 - www.amave.mc



Association Monégasque pour la Protection de la Nature

Adress : 14, quai Antoine ler, Le Ruscino Tel : 92 05 61 70 - www.ampn-asso.mc

• École bleue, Académie Monégasque de la Mer Adress : Local AMAMM,

Esplanade du Larvotto, Avenue Princesse Grace Tel: 06 78 63 03 85 www.ecolebleue-monaco.com

MC2D Monaco Développement Durable Adress : Le Patio Palace, 41, Avenue Hector Otto Tel: 97 77 54 21 - www.mc2d.org

The calendar of environmental events:

- 22 March: World Water Day.
- 29 March: Earth Hour.
- 1st week in April: Sustainable Development Week.
- 22 May: International Day for Biological Diversity.
- 5 June: International Environment Day.
- •8 June: World Oceans Day.
- In June: Monacology.
- In September: European Mobility Week.

Relocating the Toulonnais wreck

On 21 March 2014 after two months of preparation work on the wreck, the *Toulonnais* tug was moved to its new home site, under the Oceanographic Museum.

Originally named Provencal 11, the Toulonnais was deliberately sunk at the entrance of the Hercules harbour by Comex, on 17 April 1991 in order to create an artificial reef for the Seabus submarine.

Located in the outer-harbour of the Hercules port since building the new harbour facilities, this relocation is aimed to return the wreck to its previous function of an artificial reef. This operation financed by the Government of the Principality, and supervised by the Department of Maritime Affairs, was conducted by Prodive.

The *Toulonnais* is now a new scuba diving site in the Principality The Department of the Environment will carry out studies on how marine species colonise the wreck.

5th honey harvest in Monaco as part of APIdays

As part of the APIdays programme, in partnership with the beekeepers of the Union Nationale de l'Apiculture Française (UNAF, National Union of French beekeepers) and more than 60 towns or cities which are home to beehives, the 5th Monaco honey harvest took place on 20 June 2014, in the presence of Marie-Pierre GRAMAGLIA, Government Minster for Public Works, Environment and Urban Development.

On this occasion, the pupils of the Saint-Charles primary school discovered the honey extraction process and attended awareness building workshops on the fundamental role bees play in pollination Each pupil left with a pot of "Made in Monaco" honey.



Some useful contact details

Direction de l'Environnement

3, Avenue de Fontvieille, MC 98013 Monaco Tel. : (+377) 98 98 80 00 / Fax : (+377) 92 05 28 91 E-mail : environnement@gouv.mc

Fondation Prince Albert II de Monaco

Villa Girasole 16, Boulevard de Suisse, 98000 Monaco Tel : 98 98 44 44 / Fax : 98 98 44 45 www.fpa2.com

CSM : Centre Scientifique de Monaco

Secrétariat général 8, Quai Antoine I^{er}, 98000 Monaco Tel : 97 77 44 00 www.centrescientifique.mc

CIESM : Commission Internationale pour l'Exploration Scientifique de la Mer Méditerranée

Villa Girasole, 16, Boulevard de Suisse, MC 98000 Monaco Tel : 93 30 38 79 www.ciesm.org

Musée Océanographique de Monaco Institut Océanographique, Fondation Prince Albert I^{er} de Monaco

Avenue Saint-Martin, MC 98000 Monaco Tel : 93 15 36 00 / Fax : 93 50 52 97 www.oceano.mc

RAMOGE Agreement

Secrétariat of the RAMOGE Agreement Le Michelangelo 7, avenue des Papalins Tel : 98 98 42 29 / Fax : 98 98 40 07 www.ramoge.org

ACCOBAMS : L'Accord sur la Conservation des Cétacés de la mer Noire, de la Méditerranée et de la zone

Atlantique adjacente

ACCOBAMS Permanent Secretariat Jardin de l'UNESCO, Les Terrasses de Fontvieille, MC 98000 Monaco Tel : 98 98 80 10 / 20 78 / Fax : 98 98 42 08 www.accobams.org

11 October 2014, cleaning operation in the Larvotto marine reserve

On 11 October 2014, a vast cleaning operation was organised by the *Association Monégasque pour la Protection de la Nature* (AMPN, Monacobased charity for the Protection of Nature) in the Larvotto Reserve.

The members of the charity and volunteers from the two Monaco-based diving clubs, the Departments of Maritime Affaires and the Environment and the employees of Fairmont Hotel collected 50 kg of rubbish from the beach and the sea floor in the reserve. This waste was then recycled by the Société Monégasque d'Assainissement.

Internet service for Monaco CITES document requests

Since 4 November, the Department of the Environment and the Department of e-Government and Public Information have made available an on-line procedure to request the CITES documents to any company or person concerned. This work is in the context of the creating a Digital Government.

The Convention on international trade in endangered species of wildlife and fauna, known by its acronym CITES or the Washington Convention, is an international treaty between States. It is intended to ensure that international trade in specimens of wild animals and plants does not threaten the survival of the species to which they belong.

This new online procedures means users can easily request the CITES documents in a secure way.

For more information on this online procedure:

http://service-public-entreprises.gouv.mc/En-cours-d-activite/Autorisations-ponctuelles/Formalites-CITES/Demander-un-permis-CITES





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5th Extraordinary International Hydrographic Conference in Monaco

The 5th Extraordinary International Hydro- In his opening speech, H.S.H. the the world of industry.

graphic Conference was held in Monaco Sovereign Prince reminded participants from 6 to 10 October 2014. It brought of the importance of hydrography, marine together the representatives of the 82 cartography and strengthening capacity member States of the *Organisation Hydro-* building in the sustainable management graphique Internationale (OHI, International of the seas and oceans. Under the German Hydrographic Organisation), international presidency of Dr Mathias Jonas, this governmental organisations, NGO's and conference took the theme of hydrographic data in a geospatial world.



The Department of the Environment certified ISO 14001

Friday 19 December 2014, Mr Christophe Prat, Director of environment, by complying with the regulations in force. Government Minister for Public Works, Environment and management. Urban Development.

the Environment was presented the ISO 14001 certificate The ISO 14001 standard is the most used standard in the in the presence of Mrs Marie-Pierre GRAMAGLIA, series of ISO 14000 standards concerning environmental

This certification attests to a system of environmental management that complies with the ISO standards and is in line with a sustainable development approach. More than a year of work, monitored by the auditor of the certification body DNV (Philippe PERIPHANOS) which covers all the administrative, laboratory and field activities, was necessary to achieve this result. This procedure was supported by the Expession group and its representatives Mr Jean TONELLI and Mrs Bernadette MONFORT.

This certification process reflects this desire of all the staff to set up a continuous improvement procedure in order to reduce and prevent the impact of its activities on the

