

**THE ENVIRONMENT**  
in the Principality of Monaco

DIRECTION DE L'ENVIRONNEMENT

**2010**



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64<sup>th</sup> session of the General Assembly of the United Nations in New York

# H.S.H. le Prince Albert II

## a committed Head of State

### H.S.H. le Prince Albert II at the “Peace with Water” Conference

In February 2009, H.S.H. the Prince took part in the “Peace with Water” conference at the European Parliament in Brussels, with the aim of establishing a memorandum defining the common goals and financial resources for a world water protocol. The Sovereign Prince declared: “Problems linked to water affect all the organisations of human societies in all their aspects, whether economic, humanitarian, geopolitical or social (...) We cannot settle water-related conflicts through bilateral agreements. We will advance by making water a tool in the service of harmony, an instrument for the development of populations”. After taking the example of the Mediterranean Basin where

30 million people do not have access to clean water, the Prince stressed: “in the face of such disparities, how can we hope to make peace around water if we do not make peace with water? How can peace be durable if it is to prosper on misery and injustice?” and pointed out that, “if water is often a tragic problem, it is always the solution, as well.”

### Expert Seminar on the Arctic region

On Tuesday 3<sup>rd</sup> March 2009, H.S.H. Prince Albert II presided over the meeting organised by UNESCO which focused on: Climate Change and Arctic Sustainable Development: scientific, social, cultural and educational challenges.



## Monacology 2009

The Department of the Environment took part in the 5<sup>th</sup> edition of Monacology, organised by the Monegasque NGO Act for Nature and Stars n'Bars, presenting the action implemented by the Government of Monaco with regard to sustainable development and the environment. It also hosted several workshops including:

- the "food chain", which gave children the chance to guess "what eats what", presented within the scope of World Oceans Day,
- "smart eating" in which school children were able to do their shopping in a mini-market where they could learn all about responsible buying.
- calculating your ecological footprint,
- "sea clues", in which the type of species had to be discovered based on clues found on the beach.

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Expert Seminar on the Arctic region

In all countries the world over, there has emerged a generosity as diverse as it is rich. Great philanthropists and small donors alike, more and more of our fellows are offering their time and money to help preserve our common future. And these fraternal gestures towards future generations are also wonderfully efficient (...) This favourable climate should spur each of us, at our own level, with the resources we have at hand, to show determination and forge further ahead. (...) This is the true significance of today's meeting, at least as I see it: building sustainable development thanks to science, as well as collective action, action that is social, cultural and educational in our own countries, less directly concerned, but equally responsible. It is a duty of reciprocity that must lead us to prevent the catastrophes predicted for the Arctic, in particular by providing support to local populations, while at the same time fighting the causes of these upheavals everywhere by creating a common destiny. That too, is something we can achieve, above all, through knowledge, widespread awareness, the widest possible dissemination of scientific work, as well as of our discussions today." Following the ceremony, H.S.H. the Sovereign Prince held a private audience with Mr Koichiro Matsuura, Director General of UNESCO.



HSH Sovereign Prince and the President of Turkey HE Mr. Abdullah Gul

## 5<sup>th</sup> World Water Forum on the topic “Bridging Divides for Water”

In Istanbul in mid March, various Heads of State and Government met for the 5<sup>th</sup> World Water Forum. On this occasion, the Sovereign Prince touched on the challenges relating to the water issue. He stressed: “it is a moral duty and at the same time a major test: the water issue questions our ability to act together for the sake of our planet (...) I am delighted that this fifth World Water Forum is revealing to us ways of obtaining concrete solutions. In this respect, the call for action, which is at the heart of our work, constitutes an extremely promising basis. The three key words – solidarity, security and adaptability – are the foundation for every responsible policy.”

Following the meeting, H.S.H. the Sovereign Prince and H.E. Mr Abdullah Gül, President of the Republic of Turkey, held talks at the Presidential Palace.

## Commemoration of the 50<sup>th</sup> anniversary of the signing of the landmark Antarctic Treaty,

At the beginning of April, H.S.H. Prince Albert II travelled to Washington for the commemoration of

the 50<sup>th</sup> anniversary of the signing of the Antarctic Treaty.

After an address by Ms Hillary Clinton, the American Secretary of State, and by Mr Jonas Gahr Store, the Norwegian Minister of Foreign Affairs, the Washington Ministerial Declaration on the International Polar Year was adopted, as was the Forever Declaration marking the Treaty’s 50<sup>th</sup> anniversary.

Signed on 1<sup>st</sup> December 1959 and entering into force on 23<sup>rd</sup> June 1961, the Antarctic Treaty regulates relations between the signatory States for all matters relating to Antarctica.

The main objective of the Treaty is to ensure, in the interests of all mankind, that Antarctica continues to be used for peaceful purposes only and does not become the scene or object of international discord.

## 6<sup>th</sup> FEMIP Conference

On the occasion of the opening of the 6<sup>th</sup> Conference of the Facility for Euro-Mediterranean Investment and Partnership, in mid May, H.S.H. Prince Albert II made the inaugural speech, affirming “... the water issue is a matter of awareness, political will and resources. This takes us back to key decisions, decisions of





## H.S.H. the Prince in Antarctica

In April 2009, H.S.H. Prince Albert II invited Monegasques and residents of the Principality to a presentation evening on the voyage he made across Antarctica in January 2009.

The evening was marked by the screening of the film "Antarctica 2009: a continent in a state of alert" which gives an account of the journey, the meetings with scientists and the continuous findings made on this continent.

Following the screening of the film, H.S.H. the Sovereign Prince, together with several scientists, answered questions put forward by the Principality's youth.

civilisation (...) All over the world, it is understood that sustainable development is not in conflict with economic momentum, but offers a different, simply more coherent and more responsible model, which sacrifices neither the prosperity of today, nor the security of tomorrow. (...) What we need to come up with is a truly sustainable economic, political and social system. For that, we need to initiate substantive work and your thoughts today will help with this. All intelligence must be called into play. This is one of the keys to success. (...) It is by basing ourselves on the reality in the field, by referring to the actual situations of the men and women who live by the shores of this sea and for whom water is a vital issue, that we will be able to change their situation and consequently, gradually, create long-lasting equilibrium. In order to achieve this, we need intelligence, responsibility and generosity."

## H.S.H. the Sovereign Prince in the Mercantour Park

As part of World Environment Day, on 5<sup>th</sup> June 2009, the last bearded vultures were released from the village of Roubion. This was an important event as it successfully concluded the programme to reintroduce these birds into the Southern Alps, initiated in 1993 in the Parc National du Mercantour alternately

with the Parco Naturale Alpi Marittime. The birds were released in the presence of H.S.H. Prince Albert II and Ms Chantal Jouanno, the French Secretary of State for Ecology.



Commemoration of the 50<sup>th</sup> anniversary of the signing of the landmark Antarctic Treaty



Symposium "Sea and Overseas 2009"

## Symposium "Sea and Overseas Territories 2009"

During the opening of the symposium "Sea and Overseas Territories 2009" in June 2009, H.S.H. the Sovereign Prince stated "We must not let ourselves be blinded by the unrealistic desire for power over the world. As was the case a century ago, we must bear in mind that our greatest wealth – the condition of our life on earth – depends less on what we transform from Nature than on what we preserve of her (...). I would like to assure you today that the Principality of Monaco, which has worked alongside France for many years to preserve our common Mediterranean heritage, chiefly with the RAMOGE agreement and the Pelagos Sanctuary, will stand by you in this vast undertaking, every time that it is necessary. For issues that are of such importance, which extend beyond borders and individual interests, we must do everything in our power, together, to achieve tangible results".

## H.S.H. Prince Albert II opens the meeting of the International Research Group devoted to "the biodiversity of coral reefs"

At the beginning of September 2009, H.S.H. the Prince presided over the opening of the meeting of the International Research Group (GRDI), devoted to "the biodiversity of coral reefs", which brought together scientists and experts from across the globe, on the initiative

of the French National Centre for Scientific Research (CNRS). The Prince pointed out: "Coral reefs illustrate the notion of biodiversity perfectly, as they provide a home to more than 30% of all marine life over the small surface they cover, i.e. less than 0.2% of the oceans (...). From the point of view of sustainable development, nature cannot be dissociated from man and the coral reefs show to what extent their destinies are tied. Indeed, the lives of half a billion human beings in over one hundred countries are dependent on them". The Prince stressed the importance of research conducted by the Monaco Scientific Centre, "a pioneer in research on the physiology of corals and culture techniques under monitored conditions".

## 3<sup>rd</sup> World Climate Conference

On Thursday 3<sup>rd</sup> September 2009, H.S.H. the Sovereign Prince took the stand in Geneva before the participants of the third World Climate Conference (WCC-3), placed under the aegis of the World Meteorological Organisation (WMO). In front of several hundred delegates from the world over, the Prince stated: "This third World Climate Congress marks an important phase in raising awareness of climate change (...). We have now entered the era for action, the era where time is running out and where we have all the necessary elements at hand to come up with adequate solutions (...). We need to act fast: we have barely a decade in front of us to reverse the spiral on which we have embarked (...). The Principality of Monaco has already become deeply involved in this respect, not



HSH Prince Albert II opened the meeting of international research group devoted to “the biodiversity of coral reefs”

only at home but also through its cooperation efforts. And my Foundation, one of whose areas of action is precisely focused on the problem of the climate and energy, supports concrete projects aimed at raising awareness and taking action, in particular as far as energy efficiency and the promotion of renewable energies are concerned. These are the first steps; many others will be necessary.”

## 64<sup>th</sup> United Nations General Assembly in New York

On Wednesday, 23<sup>rd</sup> September, after attending the opening of the United Nations General Assembly debate, H.S.H. Prince Albert II headed to the Rockefeller Foundation to take the floor at a round table session organised as part of Climate Week NYC, in the presence of key figures from the business world. The Prince reiterated the goals of the Copenhagen conference, emphasising “You who experience economic competition on a daily basis, know better than anyone else: innovation emerges from constraint, not from comfort. In this field, as in others, it is the difficulty of our task that will force us to show courage and be inventive. That is why we have to be confident and determined”.

H.S.H. the Prince took the stand at the 64<sup>th</sup> General Assembly, pointing out “More than ever, the General Assembly must be a “centre for harmonising the actions of nations in the attainment of these common ends,” as defined in Article 1 of the Charter. (...) Several hundred

thousand people benefit today from my country’s efforts in international aid in the sectors of health, education and the fight against poverty. This is why I asked that our effort be pursued to devote 0.7% of our GDP to public aid for development by 2015. Such aid for development must be accompanied by long-term investments aiming to reinforce developing countries’ capacities, in particular through the transfer of appropriate technologies in view of respecting the imperatives of sustainable development. (...) In recent months, the global economy has been seriously shaken. Despite the emergence of signs of recovery, we must draw the lessons of this dismal year. Globalization of the economy and the resulting interdependence make it indispensable to reform the international financial and monetary system. (...) Together, we must rebuild solid foundations for capitalism with a heart to boost growth and social development. Current circumstances provide an opportunity for us to create a ‘green economy’ combining job creation and dissemination of new technologies for a sustainable recovery. (...) Monaco will continue working with our partners, by which I mean each and every one of you, to implement best practices regarding protection, international assistance and reinforcement of capacities with the sole objective of saving human lives. The Principality will also continue responding through solidarity to emergency humanitarian situations; in particular for the benefit of women and children whose vulnerability is manifest, unfortunately, in the context of crises.”

## The Aspen Institute’s Arctic Commission

In September 2009, H.S.H. the Prince attended the press conference for the Aspen Institute’s Arctic Commission, which is actively involved, alongside the Prince Albert II of Monaco Foundation, in raising the awareness of leaders of the climatic issues at stake and informing the public about this topic. H.S.H. the Prince declared: “in the face of the unforeseeable impact on the climate, we must act. We have no choice. We must protect Arctic ice, enable it to continue to act as an essential temperature regulator for the planet. (...) We must not forget that in the Arctic, there are four million people representing thirty different cultures, all intimately related to the natural environment. (...) Therefore we appeal to the eight Arctic governments. We solemnly ask them to work together to find effective and fast measures to reduce greenhouse gas emissions, and to set up an observation and monitoring network capable of measuring and preventing, in real time, changes to the Arctic ice.





H.S.H. the Sovereign Prince, Doctor Honoris Causa of the University of Nice



## H.S.H. the Sovereign Prince awarded the Teddy Roosevelt medal

In October 2009, H.S.H. the Prince was awarded the Teddy Roosevelt medal in recognition for his action to save the environment. The distinction was awarded to the Prince during a dinner organised by the International Conservation Caucus Foundation, attended by approximately 200 prominent figures: members of parliament, representatives of major environmental associations and the business world. On presenting the Teddy Roosevelt medal to the Sovereign Prince, she stressed the importance of his resolute action in the area of the conservation of endangered species and drew attention to his commitment towards protecting the blue fin tuna, which she said, was shared by the United States. In his thank you address, H.S.H. the Prince spoke of the memory of Theodore Roosevelt, the 26<sup>th</sup> President of the United States from 1901 to 1909, who set up the national park system, national forests and nature reserves, by introducing more sustainable and fairer water management.

## H.S.H. the Sovereign Prince paid tribute at the University of San Diego

In late October, H.S.H. the Sovereign Prince was awarded the "Roger Revelle" Prize at the University of California. The distinction was awarded to the Prince at a dinner held at the "Scripps Institution of Oceanography" and attended by three hundred prominent figures

from scientific, university and economic circles. The Sovereign Prince is the second personality to receive this distinction, awarded for the first time in 2008 to the former American Vice-President, Mr Al Gore, and which honours politicians or individuals from the private sector for their eminent contribution towards advancing and promoting activities for the benefit of the oceans, climate and earth sciences.

During his speech, the Sovereign Prince paid tribute to Roger Revelle, an eminent scientist who was one of the founders of the University of California-San Diego, currently one of the most reputable in the United States. He directed the "Scripps Institution for Oceanography" whose work, among other things, on the interaction between CO<sub>2</sub> emissions and the greenhouse effect was a determining factor, half a century ago, for raising awareness of global warming and its consequences.

## H.S.H. the Sovereign Prince, Doctor Honoris Causa of the University of Nice

For his action in favour of the oceans, climate and earth, H.S.H. Prince Albert II received the title of Doctor Honoris Causa of the University of Nice – Sophia Antipolis in November 2009. During the ceremony, the President of the University, Mr Albert Marouani, recalled the commitment of the Princes of Monaco towards the environment, whilst Professor Jacques Spindler pointed out "You advocate equity and ethics: all the values we endeavour to communicate to our students".



## Condamine and Volabelle

On the occasion of World Environment Day, on Friday 5<sup>th</sup> June 2009, H.S.H. Prince Albert II and Ms Chantal Jouanno, the French Secretary of State for Ecology, released two bearded vultures into the Mercantour.

The two female birds, named Condamine and Volabelle, were released into a natural cave, close to the hamlet of Vignols. Three months old, they were to be fed for a while by park wardens before being released permanently into the wild.

The bearded vulture, a necrophagous bird of prey, whose wingspan can reach 3 metres, has been the focus of a reintroduction programme in the Mercantour natural park since 1993.

H.S.H. Prince Albert II had already released two bearded vultures into the Mercantour Park in May 2007.

Professor Denis Allemand, Director of the Monaco Scientific Centre, concluded "You are the only Head of State to have set foot upon both the North and South Poles". You have become the spokesperson for scientists". H.S.H. Prince Albert II said that he was "particularly happy and touched by such praise" calling for a "break with the current growth model, with the consumption frenzy. This implies that we all need to re-evaluate our ways. New global governance is necessary, a financial system which is not disconnected from the realities and needs of the people".

## The Copenhagen Summit

During the fifteenth United Nations Climate Change Conference in Copenhagen, H.S.H. the Sovereign Prince attended various meetings organised in cooperation with the partners of his Foundation. Taking the stand at the Summit, the Prince declared "the presence here of a large number of Heads of State and Government is a strong sign of our determination to bring about a political solution and mark out the way for a common global interest (...). My country, at its own level, is taking action and intends to contribute to the international effort. The Principality's emissions dropped by 9% in 2007 compared to 1990, putting us on the right path to meet the commitment made in Kyoto. For the new period of commitment, my country is ready to reduce its greenhouse gas emissions by 30% by 2020 and by 80% by 2050 compared to 1990 levels. At the same time, the Principality aims to be carbon neutral by 2050 (...).

Furthermore, starting in 2010, the Principality of Monaco will contribute to the fund for the adaptation of the Kyoto Protocol and has already included the transfer of technology in its cooperation policy. My country also devotes a large part of its emergency humanitarian aid to the victims of climatic disasters and, in the future, will make this a key area of its intervention policy (...). I can assure you that my country is determined to implement, at home and internationally, the measures necessary to combat global warming effectively. The Principality of Monaco is also convinced that the international community must demonstrate its solidarity with the most destitute countries that lack the resources to prepare for the future. Such sharing has an ethical dimension; climate change has set us a new challenge. I have faith in our ability to rise to this challenge together".





# Natural Heritage Management: a priority

Natural heritage management is one of the cornerstones of the Government of Monaco's sustainable development policy, alongside the Energy-Climate Plan and action to promote a sustainable city.

The preservation of Monaco's biodiversity has a twofold goal: to pass on ecological heritage to future generations and to comply with international conventions to which the Principality is a party.

As such, every year the Department of the Environment sets up inventory and monitoring programmes for the marine and terrestrial species found on its territory. Consequently the quality of any given environment, together with the relevance of the management measures implemented, can be assessed.

## MonacoBiodiv

This inventory and research campaign concerning Monaco's fauna and flora is the result of the partnership agreement established between the Prince Albert II of Monaco Foundation, the Government of Monaco, the Mediterranean National Botanical Conservatory in Porquerolles, the Mediterranean Institute of Ecology and Paleocology and the University Paul Cézanne Aix-Marseille III. The inventory campaign began in 2006 with a census of wild flora in the Principality of Monaco.

Following this ground-level inventory, which was completed in 2008, researchers turned their focus onto underground insects in the Principality. A small team, made up of entomologists and biospeleologists,

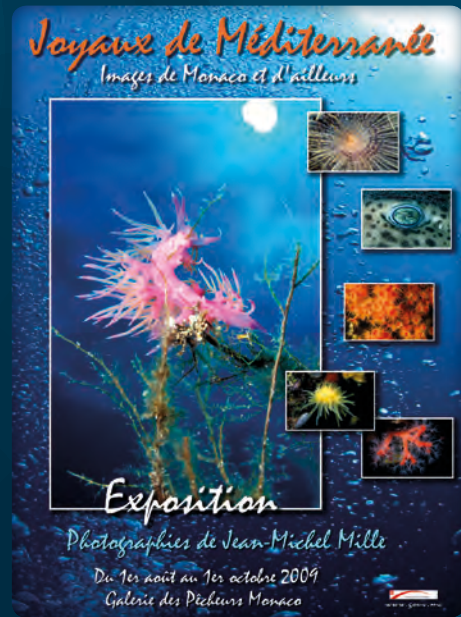


## Gems of the Mediterranean

"Gems of the Mediterranean: images of Monaco and elsewhere", an exhibition held at the Parking des Pêcheurs Gallery from 1<sup>st</sup> August to 1<sup>st</sup> October 2009, featuring 30 large format prints by the professional photographer Jean-Michel Mille, revealing the intimacy of the undersea world through his eyes.

This series of portraits, stances and snapshots of fauna evoke the wealth of the underwater heritage of Monaco and the Mediterranean, which has no cause to be envious of the tropical seas.

© J.M. Mille



explored the subterranean soils of the Prince's Palace, placing traps which enabled them to capture various specimens of invertebrate. Certain extremely rare species of Springtails - small "primitive" insects without any apparent mouthparts and undergoing no metamorphosis - were captured and are currently being studied by these specialists.

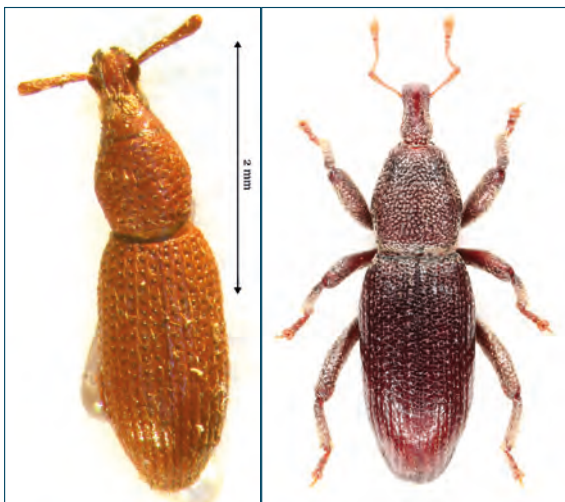
During the inventory, other species of high natural heritage value were collected, such as the blind weevil belonging to the Troglorhynchus genus. Just one specimen, found in Nice and on display at the Natural History Museum in Paris, was described in 1895.

Therefore, the Principality is currently home to two species of extremely rare weevil, since an example of Torneuma was found on the site of the Marie spring in 2008. This insect develops in the bulbs of certain plants.

### Grouper

As far as marine biodiversity is concerned, the study of the dark cavities of the breakwater and the census of pen shells in the Larvotto Reserve continued throughout 2009.

© P. Ponel



▲ Troglorhynchus

▲ Torneuma grouvellei



© J.M. Mille





The "Groupe d'Etude du Mérrou" team

In October, the Department of the Environment began a census of the population of brown grouper along the Principality's coastline. The purpose of the operation was to monitor developments in the grouper population in Monegasque waters since the last census carried out in October 2006. The inventory was based on a protocol established and used for many years by the Groupe d'Etude du Mérrou - GEM -, chiefly in the Port-Cros National Park Reserve and the coast of Corsica.

Ten or so scientific divers from GEM, with the support of divers from the Prince's Company of Carabiniers, and volunteers from Monaco's underwater exploration club and the Télémaque diving club in Roquebrune-Cap-Martin, inspected the Monegasque seabed in detail.

In conclusion, 109 grouper were listed: this figure has slightly increased since 2006, when 83 grouper were counted.

However, these figures are very much higher than those of the first two campaigns (1995 and 1997) when the number of grouper found was less than 20.

Such high growth in the population of grouper underlines the beneficial effects of the protection measures implemented for the species in our waters since 1993, as well as the great care taken in development work over the past few years, which appears to have created new habitats for it.

Although most of the grouper found measured a total length of between 40 and 70 cm, we noted the presence of small individuals (less than 5 cm) and a few very large specimens (between 90 and 110 cm, proof of the good health of the grouper population).

### **RINBIO 2009 Campaign**

This three-yearly campaign was conducted in the Western Mediterranean region between the 26<sup>th</sup> March and 18<sup>th</sup> April 2009 by IFREMER's oceanographic ship, the Europe, in partnership with the Rhone-Mediterranean and Corsican Water Agency. The objective is to achieve a good ecological status of water bodies, an objective set by the European Water Framework Directive (WFD).





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## A day for the Oceans

The United Nations General Assembly officially designated the 8<sup>th</sup> June as World Oceans Day. The Government of Monaco and the Oceanographic Museum of Monaco joined forces to celebrate this event, by organising activities conducive to thought, dialogue and raising awareness of environmental issues.

One of the key events of the day was the exclusive screening of "Antarctica 2009: a continent in a state of alert", a film recounting H.S.H. Prince Albert II's journey across Antarctica, during which he visited various research stations.

As in 2006, the Principality of Monaco, via the Department of the Environment, is taking part in this monitoring campaign in order to assess the quality of its coastal waters based on an integrated cooperation approach at regional level.

Monitoring changes in the quality of the waters is one of the imperatives that make it possible to gauge the efficiency of coastal management activities. Consequently, several types of operation involving various scientists have been scheduled as part of this multi-disciplinary campaign.

These include the setting up of 75 artificial mussel stations, 3 of which in Monegasque waters, to determine the chemical contamination level of the water.

These organisms are in fact excellent bio-indicators: by filtering the sea water, the mussels concentrate in their tissue the various substances present in the marine environment (metals, oils, PCB,...) and after being kept for a few months, the concentration measures of these substances in these organisms show the quantities of such substances present in the sea environment.

The goal of the campaign is to confirm the results obtained in 2006, which showed that the Monegasque coastal waters are of a good quality. The waters are monitored on a continuous basis throughout the year by the Department of the Environment, with samples of the bathing waters taken more frequently during the summer season.



© JM. Mille



## Face to face with jellyfish

Published in 2009 by the Oceanographic Museum with the cooperation of the Government of Monaco, "Face à face avec les méduses" (Face to face with jellyfish) is a practical guide on the species found along our coastline which deals with, in an educational manner, the biology of these animals, the reasons for the invasions recorded over the last few years, as well as the behaviour to adopt in the event of being stung.

The brochure was available to bathers over the summer period at the first-aid station on Larvotto Beach.

During the course of the campaign, and in order to supplement the chemical measurements provided by the biological indicators, samples of sediment were also collected. A great deal of information concerning the quality of the environment was obtained by assessing its eco-toxicological potential and studying the biology of the organisms living on the sandy and silty seabed.

### Ostreopsis Ovata

Since 2007, the toxic alga *Ostreopsis Ovata* has been monitored with particular attention. The algae, which usually live in the warm waters of the tropics, appreciate rocky coastlines from where they detach themselves to float in suspension on the sea surface in the form of a brownish gelatinous mass. In certain

conditions, this microalga can also disperse into the atmosphere. The toxin it produces, palytoxin, if inhaled, can cause discomfort including cold symptoms, coughs, fever, breathing difficulties... The symptoms appear after a few hours and usually diminish within 24 to 48 hours with no complications.

In order to prevent any incident of this type, the Department of the Environment has implemented weekly monitoring of the Larvotto Beach for the third year running.

The monitoring has shown that the alga was still present on our coastline in 2009; however, the samples taken never revealed, during the summer period, levels above the pre-alert limit of 30,000 cells per litre of water. The maximum concentration level recorded during the summer of 2009 was 8,700 cells per litre of water in June.

### Washington Convention

International conventions ratified by various countries are also essential tools to achieve the biodiversity conservation goal.

The Convention on the International Trade in Endangered Species of Wild Fauna and Flora, or CITES, is a perfect example. Signed on 3<sup>rd</sup> March 1973 in Washington, CITES entered into force on an international level on 1<sup>st</sup> July 1975. It is one of the agreements for the conservation of species with the greatest number of Parties: namely 175 at present.



Its aim is to protect wild species from commercial overexploitation, partly responsible for the decline in world biodiversity. Such trade is thought to concern hundreds of millions of plant and animal species.

Close to 33,000 species – 5,000 animals and 28,000 plants – are protected by CITES in three appendices.

The species concerned range from the most emblematic, such as the whale, elephant, polar bear and tiger, to the most discreet, such as invertebrates, frogs and aloes.

## Interview with Cyril Gomez, Director of the Environment

### **Two years after its establishment, how would you sum up the initial results of the Department of the Environment?**

The Department of the Environment was established in January 2008 following the reorganisation of two divisions within the Department of Facilities, the Environment and Urban Planning. It was created in order to meet the increasingly high demands of public policy in the fields of sustainable development and the environment, mainly by proposing concrete goals to attain in the short and medium terms and by drawing up the appropriate action programmes. Furthermore, the Department contributes towards informing and raising the awareness of a very wide audience. The Department of the Environment's team is currently fully involved in all the above missions.

### **What action has most marked the first two years?**

Many projects have been initiated, whether in terms of natural heritage management or the implementation of the Energy-Climate Plan, but I think that the draft Environmental Code submitted to the National Council in December 2008, stands out most probably as the key event of these first two years.

### **What is the focus of the work to be undertaken by your Department in the years to come?**

The focus of our work will include: the Administration's eco-responsibility, the sustainable management of the country, international action and information.

The Administration's eco-responsibility is an important project. Last year, we produced a guide on eco-responsible behaviour. Today, a network of advisors has been set up in each division in order to list examples of good practice and, wherever possible, bring them into general use, so that our Administration achieves an exemplary standard.

### **What do you mean by the sustainable management of the country?**

Today, this means meeting the challenges posed by greenhouse gas emissions, waste management, mobility, preservation of biodiversity,... All these issues must stir us into action. The Energy-Climate Plan meets the Principality's commitments regarding the reduction of greenhouse gases and the improvement of energy efficiency. Sustainable



Cyril Gomez

management that is also concerned with the quality of life in the Principality by carrying out environmental monitoring and nuisance control.

### **What is your role as far as international action is concerned?**

The Department of the Environment is responsible for producing the studies and documents – technical and regulatory – required by international processes of an environmental nature to which the Principality is a Party, such as the Kyoto Protocol. Our priorities with regard to our participation in international meetings, concern all issues relating to energy and the climate (UNFCCC, Kyoto, IRENA), the Union for the Mediterranean, the Barcelona Convention and its protocols.

### **Do your priorities also include information and the raising of awareness?**

Very much so. We attach particular importance to informing the widest audience, because everybody's support in all these environmental issues is essential to the success of our public policy. Therefore, this brochure will enable each one of us to understand the various aspects of the commitment made by the Principality with regard to sustainable development. A more technical report will be available shortly grouping together all the data collected by our Department. In the medium term, we are also working on setting up a website.





# Monaco: a city State

## for sustainable development

The State's policy regarding sustainable mobility is based on the following: optimised traffic management and road classification; a parking policy encouraging less use of the car; the development of public transport, both intracity and for travel to the neighbouring towns and regions; the promotion of soft modes of transport; the optimisation of intracity freight transportation and the promotion of clean and cost-effective vehicles.

### The Principality: an example in terms of "ecological" vehicles

For almost twenty years, the Principality of Monaco has been a pioneer as far as the use of the electric vehicle is concerned. Today, close to 500 two and four-wheeled

vehicles of this type, electric and hybrid-electric, are used in the Principality by the administrative services, companies and individuals.

This represents significant progress, since 1.28% of the fleet of vehicles registered in Monaco concerns this type of vehicle. As the website [www.clean-auto.com](http://www.clean-auto.com) points out "If all European cities had the same proportion of electric vehicles as Monaco, this would represent over 1,000,000 electric vehicles".

For the record, the Principality is a founding member of CITELEC, an association grouping together approximately 60 European cities interested in electric vehicles and of which Monaco was Chair for six years.

The Government of Monaco implements various measures to encourage the purchase and use of



## Mitsubishi Partnership

Within the framework of a partnership, four electric Mitsubishi i MIEV vehicles have been delivered to the Post Office, the Public Car Parks Department and the Prince Albert II of Monaco Foundation. The goal of this operation is to test the use of such vehicles in the European environment and adapt them to the market. The Principality is therefore a test station for new generation electric vehicles.



"ecological" vehicles, firstly, by offering a grant to anybody wishing to buy a new electric or hybrid vehicle.

For an electric vehicle, the State grant (with an upper limit of 9,000 €) amounts to 30% of the vehicle's purchase price, on condition that it is registered in the Principality. For a hybrid-electric vehicle, the purchase subsidy ranges from 1,500 € to 3,000 €.

Secondly, incentive measures have been introduced, such as the installation of electric sockets in public car parks in order to provide season ticket holders free charging of their electric vehicles, and a free registration stamp for owners of this type of vehicle.

Furthermore, an acquisition policy for ecological vehicles has been set up by the State. All administrative services are already under the obligation to substitute, as far as possible, any internal combustion engine vehicle with an "ecological" vehicle.

Furthermore, Monaco is continuously seeking innovative solutions for clean mobility by organising events dedicated to "ecological" vehicles: EVS 21 in 2005, a world event organised in turn in Asia, America and Europe, and the EVER Event hosted in the Principality since 2006. The Principality also takes part in evaluation trials for new generation electric vehicles with tests: Cleanova in 2006 and Mitsubishi in 2009.





## New rates for public car parks

Since 1<sup>st</sup> April 2009, the rates charged in public car parks have been adapted to the various categories of user: tenants of state-owned property, residents, commuters and occasional visitors.

One of the flagship measures is a 15% reduction for all season ticket holders who own a petrol-engine vehicle releasing less than 130 g of CO<sub>2</sub>/km, and with a particle filter fitted for diesel-engine vehicles. Furthermore, tenants of state-owned property are able to park their bikes free of charge in the underground car parks of all state-owned buildings.

As for residents, they can benefit from a car park subscription coupled with a free annual pass for the Monaco Bus Company. Those making the effort to leave their vehicles in the car park, limited to two vehicles per household, are granted a 15% reduction retroactively if they take their vehicle out a maximum of 10 times/month on working days between 7.30 a.m. and 6.30 p.m. and a 10% reduction for 15 times/month.

For “work/day” subscriptions, a new package is available offering 100 hours of parking per month for a tariff 20% to 40% cheaper than the traditional rates (depending on the category). This package is designed to encourage modal shift or car pooling practices.

Last but not least, for occasional users, a daily rate of 13 Euros is applicable for parking over 5 hours, whatever the duration, until 8 a.m. the next day. As for the hourly rate, this has been increased by 10 cents for every 20 minutes. “The new rates in our public car parks are adapted to the new approach towards mobility in the Principality, which promotes the use of public transport and soft travel” points out Mr Claude Boffa, Head of the Public Car Parks Department, adding that “with this approach, it is important to customise the offer according to the user profile and to encourage the use of low CO<sub>2</sub> emission cars”.

## Public transport: on the right track

The Government is modernising the resources and services of the Monaco Bus Company which recorded close to 7 million journeys in 2009, i.e. an increase of over 4% compared to 2008. Over the year, the Monaco Bus Company introduced the contactless smart card, offering season ticket holders the possibility of accessing the bus using the rear doors, as well as new generation information panels, on the buses themselves and at bus stops, which enable passengers to monitor the real-time progress of buses on their route.



**Nouveaux tarifs 2009**

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"écolo" ?*

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## Water in the Principality, a diversified supply

The Principality of Monaco has two resources for its drinking water supply: 70% of the water is imported from the Vésubie canal (France) and boreholes in the Roya river bed (Italy), 30% comes from local springs located on Monegasque soil (Ingram, Marie, Vaubelle) supplied by the catchment area above the Principality.

The quality of the local resource and distributed water is controlled on a weekly basis by the Monegasque health services, coupled with auto-checks by the Société Monégasque des Eaux, which is in charge of water distribution.

## Sustainable water management

As part of the measures implemented to control consumption, substantive action conducted by the State, industry and private players (chiefly SBM), led to an overall reduction of 3% in water consumption in 2008 and a 10% decrease since 2000.

Run-off water from the Noix Valley (the only valley in the Principality with a constant flow) is used, for example, by the SMA to wash the streets, which contributes towards the rational use of water.



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## An eco-school

An international environmental education programme, the Eco-school label is awarded to elementary and secondary schools that make efforts for the environment.

In schools that have volunteered to take part, the pupils, teachers, headmasters and staff work on five priority topics: food, biodiversity, waste, water and energy.

In the Principality, one school has been awarded this label, the Ecole des Révoires, and a second, the Ecole Saint Charles, will receive it very soon.

## 360 sockets in car parks

360 electric sockets have been installed in the Principality's public car parks for the free charging of electric vehicles. An incentive by the State to encourage the use of clean vehicles.

### For four-wheeled electric vehicles:

Agaves, Annonciade, Bosio, Carmes, Casino, Hôpital, Condamine, Costa, Centre Administratif, Digue, Ecoles (Fontvieille), Gare, Gastaud, Grimaldi Forum, Héliport, Industries, Jardin Exotique, Larvotto, Oliviers, Lou Clapas, Louis II.

### For two-wheeled vehicles:

Abbaye, Bosio, Carmes, Carrefour, Colle, Condamine, Costa, Centre Administratif, Digue, Ecoles (Fontvieille), Gare, Gastaud, Héliport, Jardin Exotique, Larvotto.

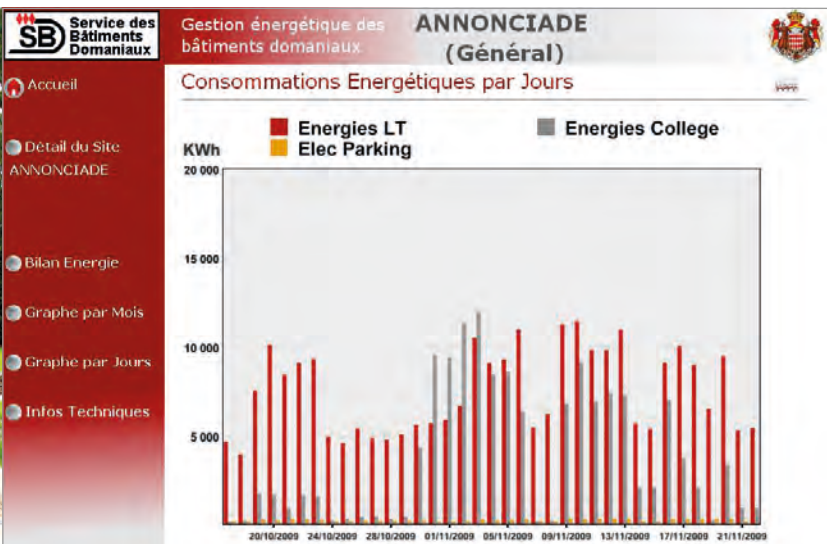


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Terminals for selective sorting



## Urban waste water management

All the Principality's urban waste water and part of that from the neighbouring towns is collected and undergoes purifying treatment before being disposed of at sea.

Treatment is shared out between: the pre-treatment plant (UPTER), located under the Rocher, which carries out the primary treatment of wastewater: screening, sifting, sand and oil removal, and the waste water treatment plant (UTER) located in the basement of an industrial building. Designed in the early 1990s, the plant was one of the first to use biological filtration according to the biocarbon process.

UTER is situated immediately next to the urban waste incineration plant (UIRUI), which fosters the waste-to-energy process for sewage sludge. In 2008, 6 million Euros was spent on upgrading UTER so as to improve the capacity of the sludge withdrawal process and its transfer to the incineration plant, which has increased from 4,000 to 8,000 T/year.

## Selective waste sorting

Waste management is also a key aspect of the policy to promote a sustainable city. For the past three years, selective waste collection has been intensified with the implementation of fifty or so voluntary disposal points for glass, paper and household packaging. Today, a dozen of these containers are placed below ground.

In 2009, approximately 88 tons of paper, newspaper, magazines and 91 tons of glass were collected each month. In 2007, the monthly average was 16 tons for paper and newspapers and 42 tons for glass. Concerning recyclable household packaging,

much lighter, 12 tons were recovered on average each month.

Waste sorting efforts also involve companies and the Monegasque Administration with the implementation of collection systems for paper, glass, used batteries and printing cartridges.

## Waste-to-Energy incineration

Equipped with a cutting-edge flue gas purification system, the incineration plant treats household waste, as well as industrial and commercial non-hazardous waste. It also receives, via injection into its furnaces, sludge produced from the purification of waste water treated in the neighbouring Waste Water Treatment Plant.

The energy from the incineration is recovered through the production of electricity and amounts to the power consumed by the Principality's street lighting. Urban heating and cooling are also produced and serve one of the Principality's main development areas.

## Monitoring of public buildings

Within the scope of the Energy-Climate Plan, a Demand-Side Management (DSM) policy for the State's building heritage has been in force since 2006.

Implemented by the State Property Division, this type of management of power consumption consists of installing computerised micro-servers onto the electricity metres in buildings. The micro-servers send information concerning the building's electricity consumption to a database. Subsequently, areas using



the most energy can be identified. Today, this type of system is fitted in 17 buildings in the Principality, including the Annonciade school complex and the Saint Charles school.

These systems handle a large number of parameters and various functions using information collected by the micro-servers. For example, the system enables the automation of lighting functions and the regulation of heating, according to the building occupancy at any given time, or even a cut to the supply of certain sockets that are not used.

The information collected can then be used, in cooperation with the users, to implement the integrated management of electricity consumption. Based on these tangible results, substantial energy savings were made possible for a relatively small investment. In certain public car parks, a saving of approximately 30% was achieved by installing more efficient lighting and radar detectors.

Lastly, the real-time performance of this monitoring system was optimised in two test buildings, the Villa Girasole and the Charles III School, through the installation of a Central Technical Control System.

Since 2006, this type of monitoring has resulted in a reduction of the annual energy consumed by public buildings of over 2 gigawatts.

## HQE approach for public building projects

The State is setting the example and has applied, for already close to three years, the High Environmental Quality approach to all public building projects, such as Monaco's future Technical and Hotel School, designed to replace the Annonciade School.



## A solar chalet

Built by the Department of Urban Planning, the chalet next to the Larvotto beach volleyball court is powered 100% by solar energy. The 400 watts produced per hour cover all the needs of this 9m<sup>2</sup> area.

The new school will be situated on the Prince Pierre block in place of Monaco's former railway station.

The establishment will accommodate 600 students and will group together hotel catering, tertiary, industrial and pre-vocational courses.

The building was developed following the High Environmental Quality (HQE®) approach, thanks to the assistance of a building contract manager, entrusted to the group of engineering firms CVS CONSULTANT / INGETEC. The guidelines provided by the HQE® assistants were taken into consideration for each phase of the project management study.

Within the framework of this approach, the four environmental priority targets chosen are as follows: energy management, acoustic comfort, the quality of the ambient air and the setting up of a "green building site". Last but not least, it is planned to connect the school to the urban heating and cooling network and to install solar panels to reduce the energy requirements of the building.

The school is scheduled for delivery in the 4<sup>th</sup> quarter of 2011.





# Energy and climate change

## The Energy-Climate Plan

Aware of the threats hanging over future generations due to the effects of climate change, and determined to honour its commitments vis-à-vis the Kyoto Protocol, the Principality of Monaco has pledged to implement an energy policy which incorporates sustainable development goals.

Within this context, the Government of Monaco has implemented an Energy-Climate Plan which addresses two key issues: the fight against climate change and the country's energy security.

As far as the fight against climate change is concerned, Monaco has undertaken to reduce its greenhouse gas emissions by 30% by 2020, compared to those in 1990.

Concerning energy security, Monaco has set itself the goal of improving energy efficiency by 20% by 2020, and of consuming 20% of its final energy from renewable energy sources.

With this aim, the Energy-Climate Plan is being implemented by means of technical, regulatory and financial measures, in addition to steps to increase public awareness. These measures concern various sectors such as the building industry (State property and private buildings), energy supply and territorial planning.

In the building sector, several measures have been undertaken, including the energy auditing of State buildings and the application of the High Environmental Quality approach for all new public building projects.



## Carbon inventory

The Department of the Environment carried out a carbon inventory (Bilan Carbone®) of its activities in 2008.

This takes into consideration all greenhouse gas emissions (GHGs) resulting from the Department's activity, including the energy necessary to produce the raw materials used, commuter travel of state employees and officials, and emissions deriving from the waste generated by office and laboratory activities.

The purpose of the Carbon Inventory is to define the areas that release greenhouse gases and the measures possible to monitor and reduce such emissions.

Measures are then put forward to reduce the impact of the areas concerned. Their implementation should result in an estimated saving of between 5% and 15% of the overall Carbon Inventory.



Another example is the ban on domestic fuel oil in all new buildings, already implemented in 2003. Since 2008, a 30% subsidy is available to home owners who wish to replace a fossil heating system with a solar heating system.

Regarding energy production, heat pumps have been developed since the 60s and now represent 17% of all annual energy consumed in the Principality. Furthermore, the co-generation system installed in the urban waste incineration plant produces electric power and feeds a heating and cooling production network supplying the Fontvieille district. Finally, a few experimentations for solar, thermal and photovoltaic energies exist in the Principality.

With regard to road traffic in the Principality, the interface between the Urban Distribution Centre and the Logistics Park in Saint Isidore has enabled more effective management of the flow of lorry deliveries in the Principality. The development of public transport to serve Monaco and the implementation of a series of measures to promote transportation methods other than those using fossil energy, have also been reinforced.



## Earth hour

H.S.H. the Sovereign Prince was eager for the Principality to take part in the United Nations initiative "60 minutes for the Planet", by urging everyone to turn off their lights for one hour between 8.30 p.m. and 9.30 p.m. on Saturday 28<sup>th</sup> March 2009. Sixty or so countries and more than seventy major cities also participated in the event. The event, on the initiative of the World Wildlife Fund (WWF), was lent the support of the United Nations Organisation which also turned off the lights in all its premises across the world

## Spotlight on the **SMEG** concession

For over a century, the Société Monégasque d'Électricité et de Gaz (SMEG) has been running the public distribution network for electricity and gas throughout the Principality of Monaco. Upon expiration, the SMEG concession was renewed on 1<sup>st</sup> January 2009 for a 20-year period.

With this new concession, several goals are being pursued: to continue to improve the quality of service, to secure the energy supply and for SMEG to be actively involved in the State's environmental policy.



By means of an environmental section in the agreement, SMEG has made a commitment, alongside the Principality, to pursue a sustainable energy policy including, for example, monitoring consumption patterns and performing energy management diagnoses. A range of tools are to be implemented, including the roll-out of smart meters for all consumers in the Principality.

SMEG has also agreed to repurchase electricity produced in Monaco from renewable sources and to develop a communication policy focused on energy saving and energy efficiency.

Lastly, a sustainable development fund has been set up, supplemented by the sale of energy and controlled by the State, which will contribute towards funding activities to promote demand site management (DSM), to develop renewable energies and to reduce greenhouse gas emissions.

## Post-Kyoto, Copenhagen: a new strategic approach

On the occasion of his participation in the 15<sup>th</sup> United Nations Conference on Climate Change which was held from 7<sup>th</sup> to 18<sup>th</sup> December 2009, H.S.H. the Sovereign Prince unveiled the Principality's new strategic approach in this field.

Firstly, in terms of mitigation, and in accordance with the recommendations put forward by the members of the Intergovernmental Panel on Climate Change (I.P.C.C.), who advocate limiting the global average temperature rise to 2°C above the pre-industrial level, Monaco will play its part by cutting its greenhouse gas emissions by 30% by 2020 and by 80% by 2050 compared to 1990 levels.

## CN NET Network, the trophy

The Principality of Monaco, which has committed to becoming carbon neutral by 2050, was among the first 100 participants to join the CN NET network, set up by the United Nations Environment Programme in order to help public and private entities wishing to reach the carbon neutral target.

To mark this occasion, a trophy was awarded to the Department of the Environment by UNEP. The work, designed for CN NET's first anniversary in February 2009, was produced from recycled metal and glass by a group of artists from Kenya, the country housing UNEP's headquarters.





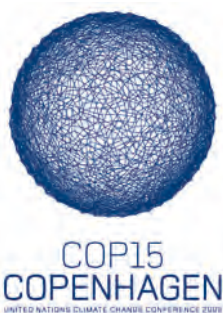


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Moreover, the Principality will achieve carbon neutrality by 2050.

Secondly, in terms of adaptation, Monaco will fund the implementation of projects, in the developing countries, that fall within the framework of flexibility mechanisms, and more particularly the Clean Development Mechanism. Consequently, the Principality is contributing towards strengthening the adaptive capacity of many African countries.

In addition, starting in 2010, Monaco will contribute towards the Kyoto Protocol adaptation fund, and has already incorporated the transfer of technology into its cooperation policy.



## IRENA

On 4<sup>th</sup> June 2009, the Principality of Monaco signed IRENA's (the International Renewable Energy Agency) statute. Set up in Bonn in January 2009 on the initiative of Denmark, Germany and Spain, the purpose of the agency is to promote the use of all types of renewable energy – solar, wind, biomass, geothermal and bio-fuels.

With an annual budget of 25 million dollars, IRENA provides practical advice and supports both the developed and developing countries, in order to help them improve their regulatory framework and to reinforce their utilisation capacity of such energies. The agency facilitates access to all relevant information, such as accurate data on the potential of renewable energies, examples of good practice,

## Hotspots

At the end of 2009, the beginning of 2010, a twin-engine plane equipped with an infrared scanner flew over Monaco in order to measure heat loss from the roofs of all buildings in the Principality.

The subsequent diagnosis will enable the appropriate measures to be taken in order to reduce, even eliminate, this thermal loss which has an impact on the Principality's energy bill.

efficient finance mechanisms and state-of-the-art technological expertise.

Close to one hundred countries have signed the agency's statute.

## Thermographic Study

As part of the Energy-Climate Plan implemented by the Government of Monaco, the Department of the Environment entrusted the Laboratoire National de métrologie et d'Essai (LNE) with producing the Principality's first thermal diagnosis.

During the night of 14<sup>th</sup> to 15<sup>th</sup> December 2009, a twin-engine plane equipped with an infrared scanner flew over Monaco in order to measure heat loss from the roofs of all buildings in the Principality. The initial data was subsequently supplemented and honed after a second 2-hour flight, carried out in the night of 6<sup>th</sup> to 7<sup>th</sup> January.

A report on the observations made will enable inhabitants of the Principality to gain a better understanding of any heat loss from their homes. Once the survey has been completed, the aim is to take the appropriate action in order to reduce, or eliminate, this calorific loss which has an impact on the energy bill.





## Regional & international **cooperation**, and **sustainable development**

In 2009, from Official Development Assistance of 8 M€, over 1.5 M€ was allocated to activities in the field of the preservation and development of natural resources.

Within the scope of its efforts, the Monegasque Cooperation endeavours to place man at the centre of its concerns; consequently, a number of intervention areas have been defined.

### **Crop irrigation** and the preservation of natural areas

As part of the efforts to combat desertification, over 600 hectares of degraded land has been developed to prevent the Niger River from silting up and 20 hectares of market gardens have been created to

enable nomads, currently sedentary, to cultivate their land.

Thanks to the restoration of 450 hectares of palm groves in Morocco, 300 families are once again farming their land after 30 years of drought and, in Tunisia, the Nefta palm grove, abandoned for 3 decades, has again become a dwelling place and stopping-off point for the local populations. The restoration of 3 other oases located in the south-east of Tunisia has enabled farmers to earn additional income.

### **Access to drinking water** and sanitation

Projects implemented in Africa now allow 170,000 people access to drinking water. In addition to the



## Tara Ocean Expedition

The Monaco Yacht Club and the Monaco Scientific Centre are involved in the 3-year voyage across the world's oceans of the schooner Tara, which left Lorient on 5<sup>th</sup> September 2009.

The main goal of the expedition is to study, during the trip, two of the most important life forms constituting ocean biodiversity: coral reefs and plankton. The Monaco Scientific Centre, together with a dozen laboratories across the globe, are involved in this venture, with a view to gaining a better understanding of reef biology and assessing the impact of climate change on these reefs.



restoration and construction programmes for wells initiated in Burkina Faso, Ethiopia and Mali, a water point is created for every school or healthcare centre built in a rural area.

Subsequently, in particularly isolated regions of Morocco, Burkina Faso, Madagascar and Mauritania, in addition to access to education and healthcare, the populations have drinking water, thanks to the installation of bore holes equipped with manual pumps or mini water supply stations powered by photovoltaic energy.



In Mozambique, in one of the most precarious districts of the capital, 21,000 people benefit from a programme to improve sanitation and health by means of a home waste collection service, to improve the rainwater drainage system and to raise awareness of good practice concerning health and hygiene.

### Biodiversity, eco-tourism and landscape planning

In Madagascar, in partnership with the Monegasque NGO Act for Nature, the Monegasque Cooperation is supporting the establishment of a protected area in the Andrafiarena region, to the north of the island, conciliating the protection of biological diversity with local development through eco-tourism. In Mozambique, in partnership with the World Bank and the Peace Parks Foundation, it is supporting capacity building for the management of the new Ponta Do Ouro – Kosy Bay protected coastal area, and the implementation of measures to study and monitor marine fauna.

The biodiversity research and protection programme in the Mediterranean coastal area and the Alpine region, is continuing to give very good results in Slovenia, as has the creation and management of marine protected areas in Tabarka, Tunisia.

Similarly, in 2009, the Monegasque Cooperation invested in the landscaping of a further 500 metres



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Coastal esplanade in the Tunisian tourist resort of Hammamet

on the coastal esplanade in the Tunisian tourist resort of Hammamet. The esplanade currently extends over 450 metres, also constructed thanks to funding from Monaco for the 2005-2006 period.

In addition to financial commitment, aid provided by the Principality includes technical assistance for the project design, by mobilising the expertise of the Department of Urban Planning (SDAU). This type of partnership is an acknowledgement of Monaco's savoir-faire in this field.

## The development of renewable energies

The focus here is cross-disciplinary: the electricity supply to facilities such as community clinics and schools in remote areas is provided through the use of (photovoltaic) solar energy.

## The fight against climate change

The Monegasque Cooperation is entrusted by the Government of Monaco with implementing carbon offsetting programmes worldwide via the Kyoto Protocol's Clean Development Mechanism (CDM).

The goal is to acquire 25,000 Certified Emission Reductions (CERs) by 2012. One CER represents an emission of one tonne of CO<sub>2</sub> equivalent, reduced or trapped thanks to an emission reduction programme in a developing country.

The purchase of emission reduction units through projects combining climatic, economic and social objectives for the benefit of the populations most



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## Planet Sea

During the summer of 2009, as part of the Pass'Sport Culture, the Department of National Education and the association "Destination Planète Mer", offered teenagers the opportunity to take part in a 12-day cruise aboard the sailboat "Le Garlaban".

Consequently from 10<sup>th</sup> to 23<sup>rd</sup> August 2009, 6 youngsters from Monaco boarded Paul Ricard Foundation's ship for an ecological and educational cruise, including various activities such as sailing, scuba diving and sea-themed visits.

This educational cruise also featured meetings with scientists from IFREMER and the CNRS, experts in marine fauna and flora, as well as with sea rescuers and a dog handler.



vulnerable to climate change, will be given priority by the Principality. This quantity of CERs will be added to the Principality's summary of achievements vis-à-vis its emission reduction obligations within the framework of the Kyoto Protocol and will supplement the measures implemented on a national level to reduce greenhouse gas emissions.

These efforts will be intensified in 2012 in order to compensate all greenhouse gases released within the national territory and to reach the goal of becoming carbon neutral.

So far, a partnership has been initiated with the Tunisian Republic, which should enable Monaco to meet its target to purchase 25,000 CERs by 2012.

### Travel Offset

In 2008, officials from the Office of International Cooperation took part in 65 field missions and meetings. The 387,000 km travelled by air generated 181 tons of CO<sub>2</sub> equivalent, which were offset through purchasing an equivalent amount of carbon credit from the Prince Albert II of Monaco Foundation.

The carbon credit used to offset CO<sub>2</sub> pollution relates to emission reductions acquired from a programme to harness and burn methane at a landfill in Brazil.

### The Union for the Mediterranean

Mr Gilles Tonelli, Government Counsellor for Facilities, the Environment and Urban Planning, took part in the first ministerial meeting concerning sustainable development projects within the framework of the Union for the Mediterranean, UfM, in Paris on Thursday 25<sup>th</sup> June 2009. The meeting was co-presided over by Mr Jean-Louis Borloo, the French Minister for Ecology, Energy, Sustainable Development and the Sea, and Mr Rachid Mohamed Rachid, the Egyptian Minister for Industry and Foreign Trade and the inter-ministerial coordinator of projects under the umbrella of the Union for the Mediterranean.

The Paris meeting provided an opportunity to review the progress made on projects in four main areas: water and the environment, transport, energy and urban development.

During his address, Mr Gilles Tonelli renewed the firm commitment of the Principality of Monaco, and in particular of H.S.H. the Sovereign Prince, in favour of the Union for the Mediterranean. He also presented the partnership between the Principality of Monaco and the Republic of Tunisia, within the context of the Mediterranean Solar Plan which is one of the UfM's priorities. "The purpose of this project is to set up a water supply using photovoltaic solar energy for the



## Anguilla anguilla

Threatened with extinction, the European eel (*Anguilla anguilla*) was added to the list of protected species by the Washington Convention in its Appendix II in 2009. These measures mean that certain traders in the Principality, such as restaurant owners, caterers and import/export companies in the food industry, have to contact the Department of the Environment in order to obtain import and export licences.



First ministerial meeting concerning sustainable development projects within the framework of the Union for the Mediterranean

benefit of farmers who have no access to electricity. The goal is to equip, during a pilot phase lasting 3 years, the first 200 wells from a potential 9,000 wells, all of which are to be equipped by 2020, i.e. total installed power of 25 MW".

The UfM groups together 27 European Union member states and 16 countries from the Mediterranean region.

### Pelagos' conferences of the parties

The Pelagos Sanctuary, located in an area extending over 87,500 km<sup>2</sup> in the north-western Mediterranean, was created by the International Agreement for Mediterranean marine mammals, signed in Rome on 25<sup>th</sup> November 1999 by France, Italy and Monaco.

The aim of the Sanctuary is to implement joint action between the member countries for the protection of cetaceans and their habitat against all forms of threats and disturbances, whether of natural origin (climate change, epidemics,...) or human origin (fishing, sound disturbance, urbanisation, pollution, maritime traffic, collisions, accidental capture,...). The three member states of the Agreement met in Monaco from 19<sup>th</sup> to 21<sup>st</sup> October 2009 on the occasion of the 4<sup>th</sup> meeting of the Parties.

At the meeting, the three states decided to create a quality label concerning cetacean watching activities geared towards tourists. The label, on a voluntary basis, is aimed at promoting this economic activity without causing harm to the cetacean population.

Based on the results of its upcoming implementation in the Pelagos pilot area, the label will be proposed to all countries in the Mediterranean and Black Sea regions at the ACCOBAMS contracting parties meeting, which is being held in Monaco in November 2010.

In order to raise public awareness, the three states have set up a partnership charter between the local authorities and Pelagos. This charter will not only commit municipalities to intensify their good practice concerning the conservation of cetaceans but will enable them, with the technical support of the Agreement's organisations, to benefit from this brand image in their activities.

### Cetacean census

At the beginning of 2009, the first winter census of cetaceans in the Pelagos Sanctuary was initiated. Carried out by a plane specifically equipped for the





project, information was collected regarding the presence, distribution and abundance of cetaceans in January, a period for which information is insufficient.

The study will provide an estimation of the density and abundance of the two species found most frequently in the waters of the Sanctuary in winter: the striped dolphin and the fin whale, the largest cetacean in the Mediterranean.

The project was conducted by the Tethys Institute and took place in the waters of the Sanctuary, within the context of a research programme financed by the Italian Ministry of the Environment.

The results of the study are positive: 117 observations of the striped dolphin, four bottlenose dolphins, one Cuvier's beaked whale and one fin whale (source: [www.tethys.org](http://www.tethys.org)).



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Salon Ever, 2009

# Raising the awareness of Monegasque players

## The Administration's eco-responsibility

In 2009, the Monegasque Administration launched its eco-responsible approach.

For the State, eco-responsibility implies integrating environmental concerns into all its activities. This involves a certain number of practices, such as implementing a purchase policy to promote eco-products, cutting back on water, energy and paper consumption, improving movable and non-movable heritage, and setting up travel schemes for individuals.

A guide for the eco-responsible official was produced and distributed to officials and state employees in July 2009. An online version of the guide is also available





## The “Grand Départ du Tri”

For the start of the Tour de France 2009, a major selective waste sorting campaign was organised in order to treat waste generated during the event.

- 227 employees from the Société Monégasque d'Assainissement,
- 21 vehicles used day and night,
- 226 double containers distributed at all Tour de France venues,
- 150 two-part rubbish bins with sign posts located throughout the Principality,
- 47,600 bags attached to the barriers marking out the route,
- 5 containers and compactors installed at the Tour de France's private venues (catering...),
- 33 agents making up the “Sorting Brigade” in charge of spotting any waste sorting errors and pointing out where to dispose of the waste.



on the Government of Monaco's website. It lists the eco-friendly habits to adopt on a daily basis and concerns limiting the consumption of water, supplies and energy resources.

### Tour de France, Environmental Action

Since 2007, the organiser of the Tour de France has asked each stage town to implement a selective waste collection system. To this end, each stage town nominates a coordinator to identify areas likely to attract a large number of people and to make provisions for waste collection.

In the Principality, this operation was named “Le GRAND DÉPART DU TRI”: an operation that required 8 months of preparation work with the implementation of a selective waste sorting system on Monegasque soil during the event.

To optimise the operation, it was decided that plastic packaging, carton and cans would be sorted at all event venues, glass at refreshment points and paper in administrative areas.





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The efforts of all the partners involved, such as ComPlus, MS2, Marco Vivan, Promexpo and, in particular, the Société Monégasque d'Assainissement, the state utility company in charge of collecting and treating waste, resulted in 8,840 tons of waste being collected and then sent on to waste recovery facilities.

## Careers Day

Careers Days is organised every year by the Department of National Education, Youth and Sport. The purpose is to offer students the opportunity to obtain as much information as possible on the professions and jobs available in companies and the Administration in a relaxed setting. By meeting the various professionals, the students are able to create a personal careers plan more easily, essential for the school curriculum.

The Department of the Environment took part in the 15<sup>th</sup> Careers Day, which was held at the Collège Charles III on 5<sup>th</sup> February 2009, in order to explain its mission to the pupils, in particular that concerning the monitoring of biodiversity, the monitoring of the quality of the environment, as well as the Energy-Climate Plan and eco-responsibility.

## Alain Vatrican Prize, Ramoge

On 8<sup>th</sup> June 2009, World Oceans Day, the RAMOGE Agreement organised the Alain Vatrican prize-giving ceremony in Monaco. The Agreement is aimed at coordinating action by France, Italy and Monaco to preserve the marine and coastal environment.

The competition presents an award to an initiative, project or study relating to the protection of the marine environment or the raising of public awareness of these issues. For the "11-15 year old" category, whose subject was "Identify the main types of "produce" of macrowaste (companies, dumps, households...) and suggest an awareness campaign geared towards the latter in order to encourage the reduction of such pollution", approximately one hundred pupils took part.

The first prize worth 3,000 Euros was awarded to class 5D (second year pupils) from the François d'Assise Nicolas Barré Secondary School for creating an in-house television channel, as well as designing, producing and editing programmes on household waste.

The second prize worth 1,500 Euros went to class 6 (first year pupils) from the Marie Mauron Secondary





## Youth and Sustainable Development

For the fifth consecutive year, the association MC2D (Monaco Sustainable Development) in close collaboration with the Department of National Education, Youth and Sports organized the "Youth and Sustainable Development Meeting".

At these meetings, two teams of eight candidates have defended their ideas on the themes "Water, source of conflict or reconciliation? "And" Sustainable Mobility is it a fashion phenomenon or a genuine environmental measure?"

School, for their study on the quality of tap water and their presentation and charter aimed at urging the public to discontinue buying bottled water in order to reduce the amount of waste.

The third prize worth 750 Euros was presented to class II of the State Secondary School "Alfieri – Mazzini" for their study on household waste, their questionnaire designed to gain a better understanding of the habits of the people living in their town and for devising an awareness campaign.

As far as the "21-26 year old" category was concerned, the Secretariat of the Agreement awarded prizes to students who could shed new light on studies currently under way in the RAMOGE area:

### First prize worth 3,500 €:

Mr P. Arthur Antonioli from the Centre of Oceanology in Marseille for his macro-physiological study of Parazoanthus axinellae within the context of global warming.

### Second prize worth 2,500 €:

Miss Stéphanie Cochu from the University of Nice - Sophia-Antipolis, Observatory of Villefranche, for her

study on the ecology and dispersion of a benthic toxic dinoflagellata, *Ostreopsis cf. ovata*, in the Northwest Mediterranean.

### Third prize worth 1,500 €:

Miss Manuella Baudana from the University of Genoa for her study on the swell: a reservoir of renewable energy - sustainability scenarios for the municipality of Ventimiglia using an energy approach.

## EVER Event

The fourth edition of the EVER Conference and Exhibition, which took place from 26<sup>th</sup> to 29<sup>th</sup> March 2009, met with great success among the 10,000 visitors and 90 exhibitors. Whilst the event mainly attracted professional and institutional players during the first two days, on the Saturday it welcomed the general public.

In his speech at the plenary session, H.S.H. Prince Albert II reaffirmed his support for action to promote sustainable development before officially opening the exhibition and the Sustainable Development Home, in the presence of Mr Christian Estrosi, Deputy

Mayor of Nice and Mr Louis Nègre, 1<sup>st</sup> Vice President of the Nice Côte d'Azur Urban Community and Senator for the Alpes-Maritimes.

The event featured various activities and sections:

- the Ride & Drive where 50 vehicles were available for a test drive;
- the Challenge Performance dedicated to electric bikes which is a competition reserved for the exhibitors of the event and which evaluates vehicle range and acceleration.
- Lectures and Round Tables during which various topics were discussed such as the vehicle of the future, eco-design, generation systems, ecodriving with Jean-Pierre Beltoise, former Formula 1 driver and winner of the Monaco Grand Prix, solar energy, and European Policy as far as sustainable transport is concerned, in which Patrice Drevet, the former weather presenter, took part;
- the medical congress Ever Ahead: on 27<sup>th</sup> March, 100 professionals from the medical sector met and made an assessment on the scientific and medical knowledge they had available concerning the impact of the air quality on health (interior and exterior pollution, allergies, cancer);

- Fashion Planet: An area of the exhibition dedicated to fashion and decoration including handbags made from recycled plastic or from fabric remnants in the shape of a dog, cardboard furniture, 100% silk duvets, 100% natural ecological coconut-based coverings...

## The Automobile Club of Monaco with the Monte Carlo Rally for Alternative Energy Vehicles

Initiated during the EVER event, in just three years the Monte Carlo Rally for Alternative Energy Vehicles has become a major event in its category.

Over the three editions, the number of entrants has increased by almost 65% with 96 participants in 2009, the year in which manufacturers including Ford, Daihatsu, Mitsubishi, Fiat and Tesla took part. The American brand "Tesla" entered 3 vehicles, one of which was driven by Mathieu Kassowitz, the famous film-maker, actor and director.

It was during this event that Tesla broke the world record for the longest distance with no recharge, driving 390 km of road in normal conditions, but mostly using mountain roads.



## Jeun'élec and AMAVE

Throughout the year, AMAVE organises various awareness activities, the key event being the Jeun'élec competition.

The annual drawing and slogan competition, geared towards secondary school students, raises the younger generation's awareness of the environment and use of the electric vehicle.

We cannot talk of the action carried out by AMAVE without also paying tribute to its founder and President, Mr Georges Dick, who sadly left us in July 2009.

An ardent supporter of the electric vehicle, he was eager to pass on his message to young people and set up the Jeun'élec competition. Mr Dick's affable character and expertise will be missed by all those involved in the world of the electric vehicle.



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The teams who entered the event confirmed the huge potential of these vehicles, not only in terms of consumption but also in terms of respect for the environment. In all, 11 categories featured on the list of best-performance cars published by the ACM, victory going to the Raymond Durand / Jean-Jaques Marcelin team who came first in the F.I.A. category with a Toyota Prius.

Later, the contestants gathered together in the Salle Empire at the Hotel de Paris for the Award Ceremony presided over by Mr Michel Boeri, President of the ACM and Mr Paul Masseron, Government Counsellor for the Interior.

## CleanEquity

CleanEquity Monaco, an Innovator Capital conference on clean technology for leaders of the industry, welcomed 40 new generation companies in the clean technology sector.

From across the globe, they presented their project to an audience of over 300 representatives from various sectors: investment, politics, building and the media. The programme included debates on international environmental policies, the main sources of renewable energy, developments in the field of

clean technology, as well as various presentations by innovative companies geared towards investors.

The annual conference concluded on Friday 20<sup>th</sup> March with the CleanEquity award ceremony.

The trophies, presented by H.S.H. Prince Albert II of Monaco and designed by Damien Hirst, covered three main categories.

The award for excellence in the field of environmental technology research was presented to General Fusion (Canada), a privately held development company commercialising magnetised target fusion (MTF) for energy production.

The award for excellence in the field of Environmental Technology Development Technology went to Solar ETC (United States), a development stage company that has developed a state of the arts advanced, scalable solar thermal power plant with long-term storage capabilities.

The award for excellence in the field of Environmental Technology Commercialisation was won by Biograde (Australia), a leading developer, manufacturer and marketer of biodegradable packaging resins derived from renewable sources for the global plastics packaging industry.





HSH Prince Albert II and the winners of His Foundation's awards

## Prince Albert II of Monaco Foundation Awards

On Saturday 10<sup>th</sup> October 2009, H.S.H. Prince Albert II presented his Foundation's 2009 Awards in the Grimaldi Forum.

H.S.H. the Sovereign Prince presented awards to 3 new key figures for their exemplary action in favour of the environment and sustainable development, in each of the Foundation's three priority fields of activity: the preservation of biodiversity, climate change, access to water and the fight against desertification.

The three winners were presented with a trophy specially created for the occasion, together with a cash prize of 40,000 Euros.

The Biodiversity Award was presented to Professor Edward Osborne Wilson. A professor at Harvard, twice Pulitzer prize winner, a biologist known as the leading expert on ants, he is, according to Time magazine, "one of the 25 most influential Americans of the 20<sup>th</sup> century". Edward Osborne Wilson introduced the term "biodiversity" to scientific literature. He is a fervent defender of evolutionary genetics.

The Climate Change and Energy Award was presented to Marina Silva, the former Brazilian Minister of the

Environment, for her involvement in the protection of the Amazonian rainforest. In 2007 she received UNEP's Champion of the Earth Award.

The Water and Desertification Award went to Mr Pan Yue, Vice-Minister of the environment and deputy-director of SEPA (State Environmental Protection Administration), who plays a key role in raising awareness of environmental issues in China, particularly in taking action to change the behaviour of Chinese industrialists.

During the ceremony, the Prince Albert II of Monaco Foundation awarded two special awards to Mr. Jacques Perrin, director of the film *Oceans* and Lord Nicholas Stern, a British economist and former senior vicepresident of the World Bank from 2000 to 2003. Lord Nicholas Stern is above all known for his report on the climate change economy published on 30<sup>th</sup> October 2006.

Another highlight of the ceremony was the world première screening of Jacques Perrin's film, *Oceans*, which had the support of the Government of Monaco, the Prince Albert II Foundation and the Oceanographic Institute – Albert I, Prince of Monaco Foundation.

Finally, during the gala dinner, H.S.H. the Sovereign





## Water: a precious resource

As part of an environmental project focused on water, the Department of the Environment helped to conduct an educational workshop on "water filtration" geared towards primary school classes from the Ecole des Révoires (ECO SCHOOL Label) in June 2009. The aim was to explain to the children all the phases of water filtration using three different materials, so that they would understand the processes implemented in drinking water production plants.

Prince presented awards to three young researchers in recognition of the quality of their work: Kelly Hogan, Young Researcher Award: climate change; Arnaud Catherine, Young Researcher Award: water; Pablo Cermeno, Young Researcher Award: biodiversity.

By so doing, the Foundation wishes to support them in their endeavours and help them carry out their research successfully, an essential part of the challenge to protect the planet.

### JCI Monaco: Corporate Social Responsibility Charter Awards for Sustainable Development

In cooperation with companies, associations and public services in the Principality, the goal of the Junior Chamber International of Monaco's (JCI Monaco) Environmental Commission is to promote a formal and voluntary code of conduct concerning the

attitude of companies and public institutions vis-à-vis sustainable development.

The Charter on Monegasque Corporate Social Responsibility (RSM) concerns three indivisible sub-sets: progress and social well-being, economic development and, quite naturally, the preservation of the environment.

For the second year running, the Charter on Monegasque Corporate Social Responsibility awards were presented at the Fairmont Hotel on 14<sup>th</sup> December 2009. The 2009 winners are as follows: for large-sized companies, Mr Robert Tordo – ETS (GSF Group), for medium-sized companies, Mr Christian Grimaldi - Limousine Tours, and for associations, Mr Pollano - Moto Club Monaco.



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