COUNCIL OF EUROPE

CONSEIL DE L'EUROPE

Strasbourg, 16 April 2015 **T-PVS (2015) 7**
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CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE
AND NATURAL HABITATS

Standing Committee

35th meeting
Strasbourg, 1-4 December 2015

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Workshop on the "Feral ungulates and their impact on Island Biodiversity in the Mediterranean and Macaronesian Regions"

La Gomera, Canary Islands (Spain)
23-24 March 2015

- MEETING REPORT –

Secretariat Memorandum
prepared by
the Directorate of Democratic Governance

The Workshop on the "Feral ungulates and their impact on Island Biodiversity in the Mediterranean and Macaronesian Regions"was held in La Gomera (Canary Islands, Spain) from 23 to 24 March 2015.

The Standing Committee is invited to:

1. Thank Canarian Conservation authorities for their warm welcome and the excellent preparation of the meeting;
2. Take note of the report of the meeting and examine and, if appropriate, adopt the draft recommendation in Appendix 4 to the report.

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CONTENTS

1. OFFICIAL OPENING

The meeting was opened by Ms Ventura del Carmen, Island Minister of Environment and (by videoconference) by Ms Gusimara Medina, Regional Vice-Minister of Environment. Both welcomed participants, expressed the support of their governments to fighting invasive alien species. They were both eager to read the conclusions of the workshop so they may apply them in appropriate places.

The Council of Europe Secretariat, represented by Mr Eladio Fernández-Galiano, thanked Canarian Conservation authorities for their warm welcome and the excellent preparation of the meeting. He explained that the technical workshop was organised in the framework of the long-term involvement of the Bern Convention in the issue of invasive alien species, a work guided by the Group of Experts on Invasive Alien Species (IAS) created in 1993 and the adoption in 2003 by the Standing Committee to the Convention of the European Strategy on IAS.

A programme of the workshop is presented in appendix 1 to this report and a list of participants in appendix 2.

2. PRESENTATIONS

The following presentations were delivered, followed by questions and technical discussions (summaries of presentations can be found in appendix 3 to this report):

- Charter on Conservation and Sustainable Use of Biological Diversity in European Islands;
- Feral ungulates in the Mediterranean and Macaronesian Islands [document T-PVS/Inf (2015) 2];
- Feral goats in the Natura 2000 Network in the Canary Islands;
- Impact of introduced feral herbivores on the native flora in La Gomera (Canary Islands). Progress of control programmes;
- Impacts on biodiversity by feral goats and other introduced mammals on Adriatic islands of Croatia;
- Feral goat population in Montecristo Natural Reserve (Italy): conservation and control;
- Biological invasion on Mediterranean Small Islands, the case of mammal and Ungulates, an example of contribution at Regional Scale;
- Viability of eradication of alien mammals in Azores;
- Strategy for Invasive Alien Species in the Canary Islands.

3. PROPOSALS TO THE STANDING COMMITTEE TO THE BERN CONVENTION

The Group emphasised the importance of dealing with the severe effects of feral ungulates in fragile island ecosystems, suggested the Standing Committee to the Convention and its Group of Experts on IAS continue work on the topic, and proposed for possible adoption by the standing Committee the draft recommendation found in appendix 4 to this report.

Annex 1

PROGRAMME

Opening of the workshop

- Official opening of the workshop by Regional Conservation authorities (Mrs Ventura del Carmen, Island Minister of Environment) and Council of Europe (Mr Eladio Fernández-Galiano, Head of the Democratic Initiatives Department)

- Presentation of the "*Charter on Conservation and Sustainable Use of Biological Diversity in European Islands*"
  by Mr Eladio Fernández-Galiano (Council of Europe)

- Presentation of the report "Feral Ungulates in Islands of the Mediterranean and Macaronesian Regions"
  by Mr Joan Mayol (CoE expert, Regional government of the Balearic Islands)

Session 1: Experiences from different regions

- Feral goats in the Natura 2000 Network in the Canary Islands
  by Mr Juan Carlos Rando (Freelance professional)

- Impact of introduced feral herbivores on the native flora in La Gomera (Canary Islands). Progress of control programmes
  by Mr Ángel Fernández-López (Director National Park of Garajonay)

- Impacts on biodiversity by feral goats and other introduced mammals on Adriatic islands of Croatia
  by Mr Goran Sušić (Croatian Academy of Sciences and Arts)

- Feral goat population in Montecristo Natural Reserve (Italy): conservation and control
  by Mr Stefano Vagniluca (Montecristo National Park)

Session 2: Experiences from different Regions

- Biological invasion on Mediterranean Small Islands, the case of mammal and Ungulates, an example of contribution at Regional Scale
  by Mr Mathieu Thévenet (Conservatoire du littoral, France)

- Viability of eradication of alien mammals in Azores
  by Ms Sandra Hervias (SPEA, Madeira)

- Strategy for Invasive Alien Species in the Canary Islands
  by Mr Juan Luis Rodríguez Luengo, (Regional Government of Canary Islands)

Session 3: Priorities Conservation

- What way forward? What to propose to the Standing Committee to the Bern Convention?
  Conclusions – End of the meeting

Annex 2

LIST OF PARTICIPANTS

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Appendix 3

SUMMARIES OF CONTRIBUTIONS

3.1 CHARTER ON CONSERVATION AND SUSTAINABLE USE OF BIOLOGICAL DIVERSITY IN EUROPEAN ISLANDS

by Mr Eladio Fernández-Galiano, Council of Europe

In 2011 the Standing Committee to the Bern Convention adopted its recommendation No. 153 (2011) on the Charter on the Conservation and Sustainable Use of Biological Diversity on European Islands. The Charter had been prepared by a consultant and a working group. The Charter tried to implement in the territory of the Convention a Programme of Work on Island Biodiversity adopted by the Convention on Biological Diversity (CBD) in 2006.

The Charter had the following objectives: (i) improve Network conservation work on European islands; (ii) contribute positively to the island programme of work of the Convention on Biological Diversity by bringing the views, expertise and problems of European islands; (iii) assist Bern Convention governments on specific conservation issues of European islands; (iv) propose common guidelines and tools that may be used to improve conservation of European islands; (v) analyse threats to biodiversity that may present greater challenges on islands than on the continent; (vi) foster national conservation work on islands;

Whilst the principles and recommendations captured in the Charter could apply to most, if not all, islands worldwide, the Charter focused specifically on the marine islands of the European and Mediterranean states which are parties to the Bern Convention. The Charter applies to all forms of biological diversity in the terrestrial, marine, coastal and freshwater realms, unless specified.

The Charter was complemented by a separate plan of action detailing the corresponding recommendations and implementation means and measures.

The Standing Committee asked Contracting Parties to take note of the Charter on the Conservation and Sustainable Use of Biological Diversity on European Islands as a source of inspiration for their policies and practice, to promote its use also with sub-national and regional authorities and to devote special attention to island biological diversity in the implementation of their international obligations and also in the achievements of the 2020 targets adopted in the framework of the Convention of Biological Diversity;

The 13 points of the Charter are the following:

1. The biological diversity of European islands is an important part of Europe's natural heritage and warrants protection for both its intrinsic value and because the services it provides are a fundamental pillar of local socio-economic development
2. Renewed targeted efforts are needed to conserve and manage sustainably both species and natural habitats on European islands, especially those with the greatest and most threatened endemic biodiversity, but also noting the significant conservation potential of small uninhabited islands
3. The conversion, modification and disturbance of natural habitats continues to be a significant threat to biodiversity on many European islands, wherefore spatial planning should give biodiversity full consideration
4. Invasive alien species represent one of the leading threats to island biodiversity; invasive species must be prevented from arriving on islands, detected, eradicated or controlled and measures be put in place to identify and manage pathways to prevent their introduction and establishment, particularly in priority sites and to safeguard highly threatened species
5. Water resources on European islands should be managed so that negative impacts on freshwater biodiversity are minimised, especially in light of the growing impacts of climate change
6. The direct and indirect impacts of climate change on the especially vulnerable biodiversity and living natural resources on European islands require concerted preventive action, including measures enhancing their resilience and facilitating their adaptation.

7. On many European islands the intensification of agricultural, pastoral and silvicultural practices and the abandonment of traditional low-intensity farming may have major effects on island species and habitats.

8. Recognising that many European islands offer important opportunities for renewable energy generation, the potentially serious effects of some forms of renewable energy make it imperative that impact assessments fully consider potential effects on island biodiversity.

9. The management of waste presents a real challenge to many European islands and requires concerted action to prevent harmful long-term effects on biodiversity, ecosystems and the wider environment.

10. The situation and characteristics of islands require the development and application of specially-adapted approaches and tools for problem analyses and response measures.

11. The knowledge and sharing of scientific data on the biodiversity and living natural resources of European islands, including on the threats they face and their conservation status, remain limited, and renewed efforts should be made to fill the priority gaps.

12. Biodiversity conservation and natural resource management on European islands require adequate financial means and institutional capacities, recognising that by affording greater means to islands, more may be achieved for biodiversity than by analogous investments in continental settings in Europe.

13. To achieve the conservation and sustainable use of biodiversity on European islands it is fundamental to enhance local awareness and ownership.

3.2 FERAL UNGULATES IN THE MEDITERRANEAN AND MACARONESIAN ISLANDS
by Mr Joan Mayol Serra

See document T-PVS/Inf (2015) 2

English :
https://wcd.coe.int/ViewDoc.jsp?id=2311433&Site=&BackColorInternet=B9BDEE&BackColorIntranet=FFCD4F&BackColorLogged=FFC679

French:
https://wcd.coe.int/ViewDoc.jsp?id=2311421&Site=&BackColorInternet=B9BDEE&BackColorIntranet=FFCD4F&BackColorLogged=FFC679

3.3 FERAL GOATS IN THE NATURA 2000 NETWORK IN THE CANARY ISLANDS
by Mr Juan Carlos Rando

The Canary Islands are a volcanic archipelago without native herbivores mammals. The endemic plants evolved in absence of ruminants, so lack defences against these alien mammals. The goats, sheep, pigs, dogs and mice were introduced into the islands by the aboriginal peoples around two millennia ago. From then -and until now- the goats remained as an important resource in the economy of all the islands. The number of goats in the Canary Islands is high, in 2008 there were 368.000 farm goats in the archipelago, 125.000 only in Fuerteventura (More than 75 goats/Km^2 in this island).

The goats are exploited mainly by two systems: intensive livestock (housed in enclosures) and semi-extensive livestock (goats spend a part of their time housed in enclosures for be milked and another part of the time free in the wild). In addition, on Fuerteventura an important number of goats live in the wild without any control ("*cabras de costa*"). One or two times by year are captured and marked by goatherds. Some of them are sacrificed for meat while the others are released again. This kind of exploitation (extensive) is an important popular tradition on the island.

Currently, the feral goats (without owners and without any exploitation) are present in all of the seven main islands. The strongest impacts on Natura 2000 network are those produced by extensive and feral goats (goats without any control). The negative effect of feral goat on native species of flora and fauna has been mentioned in 80 spaces of Natura 2000 in the Canary Islands (Lanzarote 8, Fuerteventura 10, Gran Canaria 16, Tenerife 16, La Gomera 15, La Palma 10 and El Hierro 5).

The ruminants are one of the biggest threats for 92 species of endangered native plants. 97% on these plants (89 species) are endemic of the archipelago, 82% (76 species) are endemic of only one island, and 22% (20 species) survive only with one population. In addition, the goats have been mentioned as a threat for 3 species of giant lizards, 1 grasshopper and 8 land snails endemic of the archipelago and 4 species of birds in zones of special conservation in the archipelago.

Some recommendations for management are: (i) to maintain the semi-extensive livestock outside of areas where there are critically endangered species sensitive to grazing; taking into account that a part of the semi-wild goats of Fuerteventura (those from the west of the island) show morphological and genetic differences from other breeds of Canary Islands, (ii) it is necessary to isolate areas, of low conservation interest, with fences or other devices to conserve this breed, out of these areas, the semi-wild goats must be eradicated; (iii) install fences to protect the last populations of critically endangered species from feral goats; (iv) capture feral goats, in collaboration with local farmers ("*apañadas*"), to remove these animals from Natura 2000; (v) shots, periodically to keep the wild populations of goat in low numbers. All these actions need a careful planning and management for animal welfare issues to get a strong community support and avoid social opposition (mainly from groups of defence and liberation of animals).

3.4 IMPACT OF INTRODUCED FERAL HERBIVORES ON THE NATIVE FLORA IN LA GOMERA (CANARY ISLANDS). PROGRESS OF CONTROL PROGRAMMES

by Mr Angel B. Fernández, Director Conservador P. N. Garajonay

La Gomera Island, one of the smallest islands of the Canaries, suffers a silent but very important impact in its native flora and vegetation by the effects of feral ungulates, mainly goats and sheep.

The island maintain an impressive variety of native habitats and endemic species of flora, such as sub-desertic euphorbia scrublands in the lower vegetation belt, extensive juniper (*juniperus turbinata*) and palm groves (*Phoenix canariensis*) in the medium belt and superb laurisilva forests (cloud evergreen forests) in the summits. The whole island is a Biosphere Reserve with more than 50% of the territory included in a protected area and with a significant part of the laurel forests protected by Garajonay National Park, a World Heritage Site by UNESCO.

In addition of this, La Gomera is the first Important Area for Conservation of Endangered Species of Flora in Spain, being the main threat factor the impact of feral ungulates. In the last 20 years the feral ungulates have increased almost out of control in many areas of the island except in the National Park, where a control program has been implemented by means of professional shooters. In spite of this, the problem continues in some of its peripheral areas because of the continuous arrival of new animals from outside, since in the rest of the island none control activities have been implemented until recently. Finally, in the last 2 years, the local government has initiated a control program in some of the protected areas, also by means of professional shooters. These control activities found some difficulties due to the hard critics of the opposition political parties as well as some groups of local hunters.

Although this impact is evident and many areas and populations of endangered species of flora have suffered a clear regression, some monitoring and research has being implemented in the National Park, concluding that an important part of the native flora has a very limited capacity to tolerate the impact of herbivores, that a side effect of the herbivores is that facilitate the expansion of invasive alien species and that the controls clearly contribute to the regeneration of native flora and vegetation.

In conclusion, a key management decision for the future conservation of native flora and vegetation in La Gomera Island is the strengthening and implementation of a permanent control program of feral ungulates for the whole island, prioritizing their elimination in the protected areas network. These measures should be supported and complemented with communication activities, directed to local population in order to create an understanding of the problem, and effective control on registration, identification and health control of livestock and ranch operations to avoid irregular or illegal herding, that is the main source and origin of the problems created by feral ungulates.

3.5 IMPACTS ON BIODIVERSITY BY FERAL GOATS AND OTHER INTRODUCED MAMMALS ON ADRIATIC ISLANDS OF CROATIA

by Mr Goran Sušić

There are several ungulates between game species, introduced to Adriatic islands in Croatia. Hunters introduced Fallow deer, spotted (Axis) deer, wild-boar, mouflon, roe deer, white-tailed deer and Barbary sheep to not less than 25 Adriatic islands (all of them inside NATURA 2000 Network, and several are inside 2 Nature and 3 National parks). Programs of eradication are intentionally not implemented by hunting associations, supported by politicians, despite the order by the Minister. Ungulate species and Wild-boars have huge negative impacts on the biodiversity and present a serious problem, but any scientific research about the level of their influence was never made.

The presence of such species is the main reason for the use of poison in nature on the islands, against predators (wild boar) and only poisoned victims are griffon vultures and golden eagles. Examples include the wild boar - whose populations in the islands in Kvarner Archipelago are out of control, thus inflicting losses to the economy and changing the natural island ecosystems. The most recent introduced ungulate species Barbary sheep - introduced to Hvar and Tijat, and possible some more islands as well as on mountains along the coast.

The number of feral goat on the island of Mljet (National Park) and Dugi otok (Telaščica Nature park) has increased exponentially and could led to an extinction crisis of the islands' rare plant species as well as dissemination of invasive plants like one of the most dangerous invasive plant species silver – leaved nightshade *(Solanum elaeagnifolium).* This plant was found on the island of Plavnik where Fallow deer and feral goat were introduced by hunters.

3.6 FERAL GOAT POPULATION IN MONTECRISTO NATURAL RESERVE (ITALY): CONSERVATION AND CONTROL

By Mr. Stefano Vagniluca, Ms. Nicola Baccetti, Ms. Francesca Giannini, Ms. Camilla Gotti and Ms. Elisabetta Raganella

Montecristo is a rocky, almost desert island in the Northern Tyrrhenian. A Natural Reserve since 1971, it is included in the Natura 2000 network and is a part of the Tuscan Archipelago National Park It has been awarded with the European Diploma for Protected Areas in 1988

The island is quite a unique case of relatively large Mediterranean Island very far from the mainland, without significant human settlements, with severe public access restrictions and totally devoted to nature conservation since more than 40 years.

The goats that still live in the island of Montecristo (*Capra hircus Linnaeus 1758,* sensu *Giusti* 2005) form the only population that is living in a wild state in Italy since ancient times.

They were certainly introduced, although it is difficult to be sure of when it happened.

They are quite similar to the wild goat of Turkey and the Middle East (*Capra aegagrus* Erxleben, 1777), which suggests that their presence on the island dates back to the earlyest times of the domestication process, when the animal were quite similar to their wild progenitors. This period coincides with the introduction of the goats on Mediterranean islands, around the end of the 9th millennium B.C.

However also a number of subsequent, probably small scale introductions of domestic goats during the ages are known.

A systematic annual survey of Montecristo goat population was set up only since 2003. Before we have a single datum collected in 1992, with the direct counts that showed an estimated amount of 770, it was assumed that the population was too large, comparing to the carrying capacity of the Island. In the 1992 – 1997 period some 500 individuals were culled by shooting

The observed following decreasing of size suggested that the population is not as reproductive as it was supposed to be, and that a different kind of approach was needed, to preserve the goat from extinction.

In 2010 the LIFE Project "Montecristo 2010" was started. The main target alien species to eradicate were black rat and the tree of heaven. Some important interventions were implemented to preserve the goat population from risk of severe damage during the black rat eradication.

As the black rat eradication was performed by spreading baits containing rodenticide with a helicopter carried tool, even the goats could eat a certain amounts of baits, and so they ran the concrete risk of poisoning.

A large group of 42 goats were transferred in a previously built 25 hectares enclosure, to have a sufficient number of founders in case the population should suffer, unexpectedly, serious consequences from the rat eradication.

Before releasing, several months later, the goats have been marked with ear tag, and 13 of them were also equipped with VHF/GPS radio collars that recorded their position every 5 hours. Additionally 5 individuals (2 males and 3 females) were transferred to the Bioparco Zoo in Rome for *ex situ* conservation, and for divulgating the project to a larger audience.

Monitoring of goat populations was implemented and the results showed a significant decrease of the population size after the bait distribution, but a following increase had been recorded in 2014.

The on-going Life Project RESTO CON LIFE started in 2014 and has the main objective of island naturalization. It includes concrete actions for goat population management as it is considered an important entity to preserve, but also a thread for species and habitat.

The foreseen actions are:

1. Drawing up a management plan for Montecristo goats

2. Exclusion fencing

3. Carrying out *ex situ* conservation of the specie

A balance between goat preservation and the maintenance of a favourable conservation status for Montecristo habitats needs to be achieved. This will neither be easy nor cheap.

3.7 BIOLOGICAL INVASION ON MEDITERRANEAN SMALL ISLANDS, THE CASE OF MAMMAL AND UNGULATES, AN EXAMPLE OF CONTRIBUTION AT REGIONAL SCALE;

By Mr Mathieu THEVENET and Mr Fabrice BERNARD

PIM Initiative, an example of network strategy on invasive species at Mediterranean scale

The International department of the French Coastal Agency 'Conservatoire du littoral' has been working for 10 years on insular territories through the Mediterranean Small Island Initiative. Aimed at improving the management of these natural sites of less than 1000 Ha, this organization is working in the first place on the field involving at the same time national institutions, universities and associations of Mediterranean countries.

Invasive species being one of the most important challenges on islands conservation, PIM Initiative, in its active networking, is carrying out diagnostic studies, support on eradication campaigns on territories such as

- the black rat eradication of Zembretta in 2009, which has resulted in a drastic increase of Yelkouan Shearwater breeding population on this islet[1]
- The participation at black rat eradication of Bagaud Islet in support of the National Park of Port-Cros in France
- Diagnostics on Invasive mammals study on Zembra, Kuriat and Galite archipelago, Tunisia. Habibas archipelago, Algeria; Sazani Islands, Albania; Essaouira, Morocco; Rouveau island and Presqu'ile de Giens islets, France; Comino, Malta, Islet of Kerkennah.
- *Carpobrotus* eradication on Rouveau Islands

All these experiences need to be shared to allow the implementing of similar actions by other manager of the Mediterranean. Therefore the PIM Initiative is coordinating a trainee program to permit transfer of experience, in every campaign cited. The scientific Committee of PIM Initiative grouping together experts from all Mediterranean countries permit to identify target site were such activities need to be implemented and the correct methodology to follow.

Based on this model of action, it should be interesting to spread this way of proceeding to also tackle the Ungulate issues on small Islands: build up an efficient working group, identify the target sites, find funds providers, and quickly start to carry out pilot actions on the field involving other islands manager of the 3 typology of actors outlined above, in order to permit horizontal experience transfer to other Mediterranean and Macaronesian sites.

Different ways of providing such a regional networking support are possible: a new dedicated network about ungulate, a new Macaronesian network about small islands or an increased in thematic and geography of the Mediterranean network of small island? All the figures have to be evaluated...

3.8 VIABILITY OF ERADICATION OF ALIEN MAMMALS IN AZORES

By Ms. Sandra Hervías

Nowadays, most islands are invaded by more than one alien mammal species. The eradication is often the preferred strategy for the removal of exotic species on islands, but before attempting eradication, knowledge of the influence of each alien mammal and their trophic interactions on prey population is required. Moreover, when those islands are inhabited by humans and domestic animals there are challenges associated with eradication campaigns and hence, detailed analyses of the social, cultural, and economic costs and benefits of eradication are required to increase the probability of local communities supporting the eradication campaign.

Corvo Island (the Azores, North Atlantic Ocean) has an extraordinary list of seabird species, some of them categorized as vulnerable by the IUCN. Seabird populations have declined dramatically due mainly to the reduction of habitat and predation by cats and rodents. Moreover, there is evidence that introduced goats and sheep feed on indigenous plant species, which today represent the larger unique patches of natural vegetation, and the soil erosion reduces the habitat where burrow-nesting seabirds build their nests.

In order to preserve seabird populations in the island of Corvo we aimed two objectives: (1) to investigate the feasibility of performing an eradication of the alien mammal species, and (2) to know the trophic interaction between rodents and cats to find out whether the eradication of only one species would benefit seabird breeding success.

According to the small size of Corvo Island (17km²) and the densities of alien mammal species, their eradication is likely to be technically feasible. However, because there are socio-political factors impeding the success of eradication, some actions are needed to overcome risks to attempt mammal eradication on Corvo. Seabird species have one of the lowest breeding success on Corvo among all available studies on these species, therefore it is recommended to take action to avoid a drastic reduction of seabird breeding populations in the near future. The removal of only the main predator of seabirds (cats) couldn't benefit seabird breeding success, because the potential expansion of rodents may lead to a negative cascading effect on seabirds.

An iterative approach conducting eradication campaigns on inhabited islands and involving local communities, that starts with small islands and communities and builds on those experiences before planning eradications on larger islands with larger communities, may be the most efficient way to build global expertise in mammal eradications on inhabited islands.

3.9 STRATEGY FOR INVASIVE ALIEN SPECIES IN THE CANARY ISLANDS.

By Mr. Juan Luis Rodríguez Luengo

According to the List of Wild Species of the Canary Islands 2009, the islands are host to 14,254 species of land animals, plants and fungi. Of these, 3,857 (27%) are endemic to the Canaries. From the conservation point of view, 380 are included in the Canary Islands Catalogue of Protected Species or in the List of Wild Species under Special Protection.

Feral goats and sheep, along with wild mouflon, Barbary sheep (aoudad) and rabbits are among the major threats to certain habitats and numerous species of endangered animals and plants.

According to the official statistics of the Canary Islands Government, 416,764 goats and sheep appear in the 2012 census of livestock facilities widely distributed throughout the archipelago, except for national parks, natural parks and reserves. While the number of feral goats and sheep on each island is unknown, in recent years the scientific community has been warning us about their impact on endangered habitats and species of flora and fauna.

According to the Royal Decree 630/2013, August 2nd, regulating the Spanish Catalogue of Invasive Alien Species, feral goats and sheep are considered "invasive alien species". This means that the competent authorities should adopt measures for the management, monitoring and possible eradication of these species.

According to the Decree 42/2003, 6th July, regulating hunting in the Canary Islands, goats and sheep cannot be considered as hunting species, but licensed hunters may participate in control operations promoted by the competent authorities.

Other legal instruments available to control livestock farming are the regulations on animal health and welfare, each island's territorial plans that regulate livestock, and legal instruments for the management of protected natural areas.

As a result of the studies commissioned by the Department of the Environment of the Canary Islands Government during 2014, we learned that:

- In at least 80 of the 196 areas included in the Canaries Natura 2000 network, introduced ungulates adversely affect animal and plant species: in 8 on Lanzarote, Fuerteventura 10, Gran Canaria 16, Tenerife 16, La Gomera 15, La Palma 10 and El Hierro 5.
- There are 92 species of vascular plants with serious conservation problems for which these ungulates are one of their main threats.
- Goats adversely affect 16 animal species: 4 birds, 3 giant lizards, one grasshopper and 8 snails, in 18 areas included in the Natura 2000 network within the Canaries.

To address this situation, some of the island councils ("cabildos") have taken steps to control or eradicate these species, sometimes with funding from the LIFE financial instrument of the European Union. However a coordinated response is required by the different authorities involved (local, insular and regional), to prevent feralization and control or eradicate established populations.

What actions should we carry out in the future?

1. Control or eradication of feral ungulates. Priority: areas with threatened species.
2. Promote the herding plans for each island.
3. Establish clear guidelines on goat and sheep herding in protected areas and include them progressively in the 'master' plans.
4. Strict application of the legislation on registration and identification of animals.
5. Improve inter-administrative coordination.

Juan Luis Rodríguez Luengo
Dirección General de Protección de la Naturaleza
Gobierno de Canarias

Annex 4

COUNCIL OF EUROPE

CONSEIL DE L'EUROPE

Convention on the Conservation

of European Wildlife and Natural Habitats

Draft Recommendation No. ... (2015) of the Standing Committee, adopted on 4 December 2015, on the control of feral ungulates in islands of the Mediterranean and Macaronesian Regions

The Standing Committee to the Convention on the Conservation of European Wildlife and Natural Habitats, acting under the terms of Article 14 of the Convention,

Having regard to the aims of the Convention to conserve wild flora and fauna and their natural habitats, especially endangered and vulnerable species, including endangered and vulnerable migratory species;

Recalling that under Article 11, paragraph 2.b of the Convention, each Contracting Party undertakes to strictly control the introduction of non-native species;

Recalling its Recommendation No. 99 (2003) on the European Strategy on Invasive Alien Species;

Recalling its Recommendation No. 128 (2007) on the European Charter on Hunting and Biodiversity;

Recalling Decision VI/23 of the 6th Conference of the Parties of the Convention on Biological Diversity, on alien species that threaten ecosystems, habitats or species, and the definitions used in that text;

Recalling that the 10th Conference of the Parties of the Convention on Biological Diversity adopted the Strategic Plan for Biodiversity 2011-2020 with its 20 headline Aichi targets for 2020, in particular Target 9 devoted to invasive alien species (IAS): "By 2020, invasive alien species and pathways are identified and prioritised, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment";

Having in mind the EU Biodiversity Strategy to 2020, endorsed by the Council of the European Union in June 2011, and in particular its Target 5, calling on Member States to combat IAS so that by 2020 IAS and their pathways are identified and prioritised, priority species are controlled or eradicated, and pathways are managed to prevent the introduction and establishment of new IAS;

Recalling its Recommendation No. 91 (2002) on Invasive Alien Species that threaten biological diversity in islands and geographically and evolutionary isolated ecosystems;

Recalling its Recommendation No. 153 (2011) on the Charter on the Conservation and Sustainable Use of Biological Diversity on European Islands;

Welcoming the EU Regulation 1143/2014 on invasive alien species and looking forward to its full implementation by Member States;

Noting that feral ungulates may have very serious negative effects on the rich biological diversity of islands of the Mediterranean and Macaronesian Regions;

Conscious that Mediterranean and Macaronesian islands have a very high rate of endemic species protected by Appendices I and II of the Convention;

Referring to the report "Feral ungulates in the Mediterranean and Macaronesian islands" by Mr Joan Mayol [document T-PVS/Inf (2015) 2],

Using the term "feral ungulates" for non-native ungulates in a wild state after escape from captivity or as a result of intentional introduction;

Recommends that concerned Contracting Parties:

1. Clarify, where needed, the legal status of feral ungulates, both those that are the result of ancient introduction on islands and those that result of recent abandonment from livestock owners or accidental escape;
2. Consider, as a general rule, feral ungulates as invasive alien species having possible negative effects on island native biodiversity;
3. For ancient introductions that may have conservation or historical interest, manage those populations of non-native ungulates in a way that minimises their impact on native biodiversity, avoiding as appropriate giving them a conservation status as protected species;
4. Reverse, as far as possible, recent introductions of feral or wild ungulates into islands in the Mediterranean and Macaronesian Regions, particularly in those where they are having a serious negative impact on native biodiversity;
5. Promote in Mediterranean and Macaronesian islands a stricter enforcement of legislation on registration, identification and health control of ungulates so as to avoid irregular or illegal herding in natural areas;
6. Avoid subsidies and incentives for free-ranging herds in Mediterranean and Macaronesian islands that may result in a substantial increase of feral ungulates;
7. When controlling feral ungulates in Mediterranean and Macaronesian islands, prioritise their elimination from small uninhabited islands, protected areas and their buffer zones;
8. Include, where relevant, control of feral ungulates in Mediterranean and Macaronesian islands in management plans of Natura 2000 and Emerald Network sites; wherever control or eradication of feral ungulates is not feasible consider fencing as a tool to protect native biodiversity from the negative effects of those animals;
9. Consult hunters and the herding community when preparing eradication or control plans for feral ungulates in Mediterranean and Macaronesian islands so that support and cooperation measures to be implemented are, as far as possible, agreed;
10. Favour, when eradicating or controlling feral ungulates, the engagement of professionals with the help of voluntary hunters, avoiding that hunters are left as only actors of controls, as many past experiences have shown they might have an incentive in making control activities take many years or become permanent;
11. Collect appropriate information on feral ungulates in Mediterranean and Macaronesian islands, particularly in small uninhabited islands, in protected areas and for ancient introductions;
12. Promote research on the effects of feral ungulates on native species and also on the interaction of different invasive alien species on native species, as the removal of one alien species only may affect the populations of other alien species;
13. Promote awareness with local communities on the negative effects on biodiversity, landscape and the economy of feral ungulates involving as far as possible different actors so as to get community support for removal of animals;
14. Promote the active participation of Macaronesian and Mediterranean islands in an efficient international network of island managers, in order to i) share lessons learned on past initiatives and ii) to be granted access to a series of internationally recognized standards, guidelines and recommendations addressing natural resources management and specifically for feral ungulate management . According to its future development and implementation, promote participation in the "Small Sustainable Islands" ecolabel initiative and corresponding network.

Further recommends appropriate authorities of Spain to:

Continue and reinforce controls of feral ungulates in the whole island of La Gomera, in particular in National Park of Garajonay, its buffer zone and other protected areas of the island, making sure that there is co-ordination among the different administrations involved (Agriculture, Environment, National Park, Regional, Island and local authorities) and a common strategy is implemented, hopefully resulting in permanently eradicating feral ungulates and illegal herding in the whole island.