



Deliberate poisoning in Spain. Situation, actions and progress 2000-2012

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1. Introduction

Illegal poisoning is undoubtedly one of the main threats to biodiversity in Spain. With the aim to tackle this situation, a National Strategy Against Illegal Use of Poison Baits in Environment in Spain was approved in 2004. It has an ambitious objective: to halt illegal poisoning in Spain by means of three targets, such as increasing the knowledge and information on this problem; development of prevention and dissuasion techniques; and increasing efforts to crime prosecution. All these main objectives are exhaustively developed in the National Strategy by concrete actions. The Strategy has to be developed by the Spanish Autonomous Communities.

So far only five Regions have developed regional action plans to combat the illegal poisoning. However, the implementation of such plan has been especially efficient in Andalusia. Other communities such as Catalonia have established specialized patrols to combat the use of poison being definitive for the prosecution of this crime.

In addition to the efforts made by some governments, NGOs play a key role in the fight against poison. This is the case of Antidoto Program and SEO/BirdLife, which coordinate the *Life+* project “*Action in the fight against illegal poison use in the natural environment in Spain*” (*Life+ VENENO*).

Below, there is a detailed description of the situation of poison in Spain and in Andalucía specifically and the measures undertaken in this region as an example to extend to other regions. It also expounded the case of specialized patrols created in Catalonia and the work done by Antidoto Program and SEO/BirdLife through *Life+ VENENO*.

2. Situation of poisoning in Spain

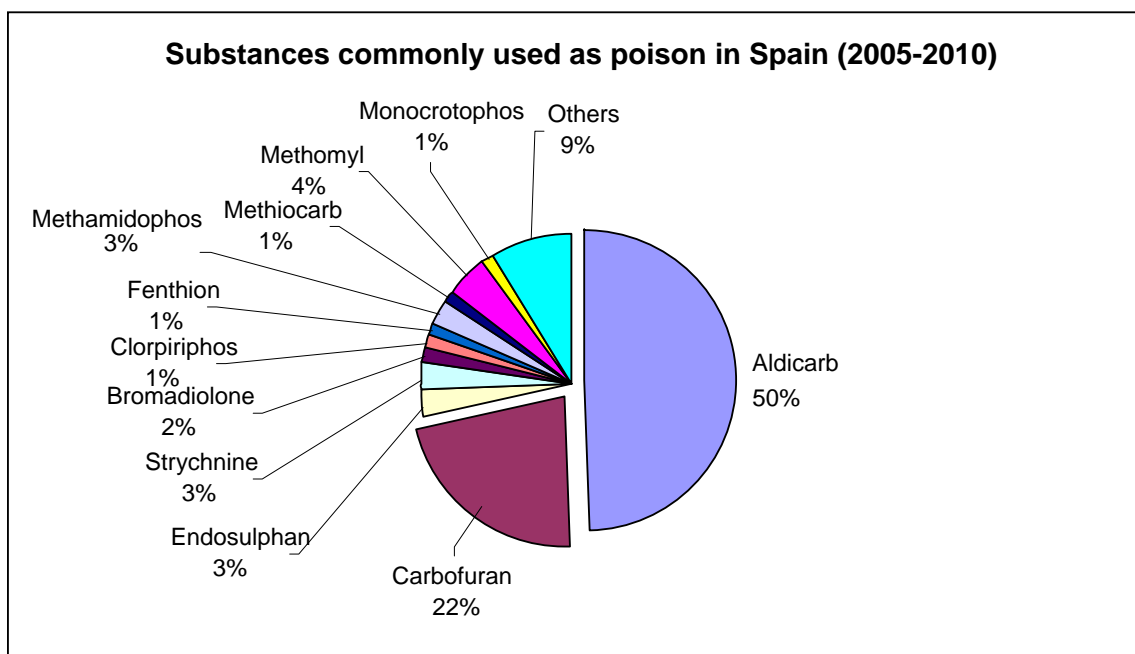
According to the Ministry of Agriculture, Food and Environment, in a period of 10 years (2000-2010), 2,355 red and black kites, 2,146 griffon vultures, 638 black vultures, 348 egyptian vultures, 114 Spanish imperial eagles, 40 bearded vultures, 7 brown bears and 858 specimens of other species have been killed. Poison usually affects the adult

reproductive fraction, which decreases productivity and reproductive success, negatively affecting the population dynamics of species. In the case of the red kite, the poison has been its first conservation problem in the last 20 years and remains so today, so that has it led to its listing as "Endangered".

The illegal poisoning in Spain has its origins mainly in conflicts between predators and game species (rabbit and partridge), and in conflicts between predators (especially dogs and wolves) and livestock. It is considered as a massive and non-selective method for killing predators, prohibited by national and regional law and punishable under the Spanish Penal Law, which imposes a prison sentence for this crime that can be up to two years. Despite this ban, poison is still used regularly. According to experts, the reason for this tendency is the decline in game species populations (rabbit, partridge) and the recovery of wolf populations, which has led to increased persecution of predators. Also, poisoned baits used today are more lethal than those used in the past. The high degree of impunity, which is due to the lack of prevention, surveillance and investigation, is one of the main obstacles to ending with this illegal practice.

SEO/BirdLife, in the framework of the *Life+ VENENO*, has developed a study on the substances used for poisoning wildlife¹ (2005-2010). The study provides an analysis of the main substances used in the preparation of poisoned baits in Spain, how to acquire them, both in a legal and illegal way, and why the controls established not prevent illegal use.

The study has identified more than 70 substances used to prepare poisoned baits, mostly pesticides and biocides. The substances most used in the country are aldicarb and carbofuran insecticides that appear on the 50% and 22% of episodes of poisoning analyzed, respectively, followed by other products such as methomyl (4%), endosulfan (3%), the strychnine (3%) or rodenticide bromadiolone (2%).



¹ <http://www.venenono.org/wp-content/uploads/2012/12/Informe-VeneNO-OK.pdf>

3. Illegal poisoning and trends in Andalucía 2003-2012

Andalucía is a vast region, neighbouring Morocco to the South, Portugal to the East and Extremadura, Castilla-La Mancha and Murcia to the North. The region is featured by a wide range of different landscapes and ecosystems, accounting for the highest Iberian altitudes (nearly 4,000m ABSL) to coastal marshland, forest, deserts as well as the stronghold for many of the European treasures of biodiversity. Similarly, Andalucía homes an important mosaic of human cultures and people, each with peculiarities and depending largely on natural resources from ancient times. Hence, nowadays Andalucía as a whole spans a complex of many different landscapes, cultures, ecosystems and biodiversity.

On the same line, it should be pointed out the use of poison has been traditionally embedded from Pre-Roman History periods not only in the territory, but in the whole Mediterranean Iberia itself for different purposes: medicine, solving domestic conflicts and the like, to a point that it is deeply cultural. Interestingly, Iberians were known to wear and their belts small leather bags containing natural poisons to kill enemies or merely as medicine. Therefore, the first enemy to target as far as antipoison fight is concern by any Spanish regional Administration and a major challenge is to actually deter rural human populations from using poison and remove this ancient practice from current available set of tools to manage the environment.

State-of-the-art

For several circumstantial reasons, incidence of illegal poisoning in Andalucía in the early 2000's was alarming, as reported by published data and available information.

The use of poison to wipe out vermin and generalist predators in the region reached a significant peak in the late 1990's, so that years 1998 and 1999 may well be referred to as the most critical in this context over the last decades. As a consequence, wild populations of certain threatened species underwent a worrisome decline both globally and locally to the point some populations became extinct, namely Red and Black Kites and more importantly Egyptian Vultures. Other vulnerable species came across an overall cut down in population numbers like Black Vultures to the point population viability analysis undertaken by experts suggested showed an extinction rate around 10% annually, clearly overstepping the affordable threshold for the entire population.

As a result of the situation the regional government of Andalucía deployed all available resources at the time, both human and technical in order to bring poison incidence down to levels tolerable by these highly vulnerable species. After the critical situation at the beginning, each province conducted individually local piecemeal programs in their respective territories with the clear intention to arrest the devastating effects of the problem. This can be then considered the first stage of the long term fight against the threat from these toxic compounds in Andalucía.

On the early stage teething problems arose in accordance with the complexity of the problem. Poisoning is an extremely complex problem to approach, for a wide array of technical, ecological and resources reasons and solutions had to be taylor made and specifically designed on each particular case at levels of species involved, place and toxic

compound. It becomes evident then that poison respond to different motivations and in turn, this model the features and traits of incidents in each particular area. In other words, no two poisoning incidents are the same and the skills to correctly pinning down the differences, makes the difference between failure and success in their resolution.

Soon after this first or early task force was implemented as a response to a crisis situation, it became clear that new, more solid and planned measures were to be conducted, but this time not on a local perspective. It was evident that a global multi-approach was most needed, including measures from very different angles and addressing objectives in short, medium and long terms. It was also obvious that the new approach had to face the issue from all possible points of view to consolidate a global strategy allowing local variations according to areas and provinces.

The former first stage of antipoison fight produced valuable information to characterize poisoning in the territory, accounting for some 60% motivated by hunting related issues or game management misspractice, 30% farming related and a remaining 10% belonging to other causes, mainly personal conflicts.

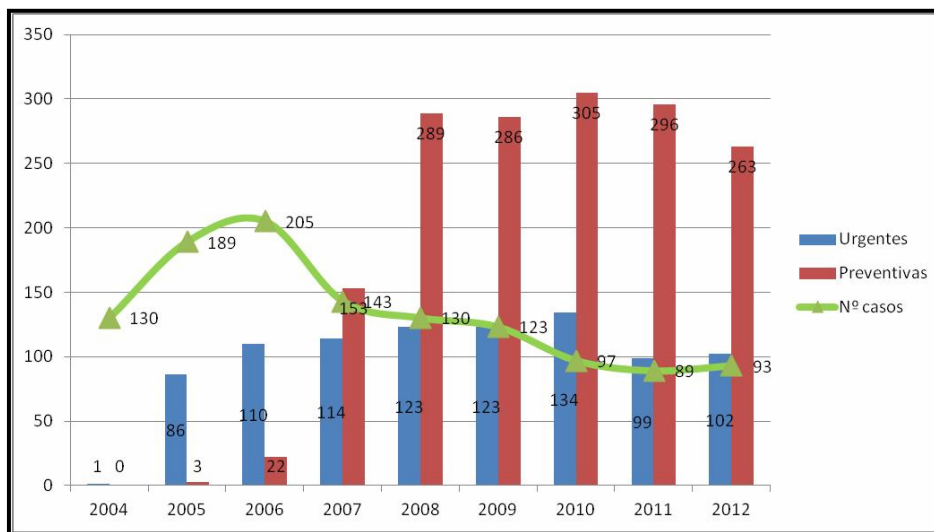
Thus, once the first emergency measures were implemented, the problem evaluated and the needs and aims correctly targeted, the Regional Govt. (*Junta de Andalucía*) proceeded onto a further stage and set up a long term project: *Estrategia Andaluza de Lucha contra el veneno* (Andalusian Strategy Against poison) (hereinafter referred to as EAV), addressing poison from all perspectives and key players involved: hunters, farmers and society in general. Despite reducing poisoning incidence seemed to be out of reach at the beginning, the situation was critical and there was a real need to face the problem directly. Hence, in order to achieve these goals, EAV was provided with a solid 0.9 million euro budget annually and five full time experts, coordinated whiting the scope of *Dirección General de Gestión del Medio Natural*.

Summarizing, EAV comprises 62 specific actions, grouped into modules:

- Prosecution of the offence
- Social education/information
- Poison detection and creation of two UCE (*Unidad Canina Especializada*), by the first time in Europe, starting in 2003 and coming into action at the beginning of 2004
- Legal actions, both at Penal and Administrative levels
- Defining and implementing field protocols
- Creation of a Data-base with all relevant data and the Map of Hot Spots for poison in Andalucía
- Creation of a new highly specialized reference laboratory CAD -*Centro de Análisis y Diagnóstico*- equipped with all needed resources in toxicology, protocols and forensic approach.
- Prevention and inspections on hot-spots
- Information visits to potential *cotos de caza* (hunting states) and potential farmers
- Training programmes and advanced courses for uniformed bodies (*Guardia Civil* and *Agentes de Medio Ambiente*) and providing them with equipment and resources

- Training for the main cutting edge of the fight against poison: BIEF (*Brigadas Especializadas en Envenenamiento*) for each Andalusian province and UFOA (*Unidad Forense de Apoyo*), a highly specialised teams of five agents and four experts from Junta de Andalucía.
- Strengthening bonds and coordination between all uniformed bodies (*Guardia Civil, Policía Autonómica* and *Agentes de Medio Ambiente*) and setting up joint teams.
- Producing advanced materials for Agents (manuals, books,...)
- Developing taylor made action plans for highly threatened species at the level of pair territories for species as Egyptian Vulture, Bearded Vultures and Black Vultures.
- Raising awareness and information to Judges, Magistrates and Public Prosecutors.
- Awareness (both on stakeholders and judges/public prosecutors)
- Establishment of SAIV *Sistema Andaluz de Indicadores de Uso de Veneno*: Andalusian System of Indicators of Poison Use

Therefore, EAV is a comprehensive long-term project, based on solid pillars and aiming realistic goals: not completely whipping out but reducing the incidence of illegal use of poison, and bring it down to a level that can be tolerated by those most vulnerable species/populations. Likewise, EAV is aiming to spread the message in rural populations against the use of poison, as the best choice to eradicate generalist predators.



Incidence of poisoning (green) and inspections (emergency in blue and preventive in red) in Andalucía 2004-2012

Results and current situation

Up to date, EAV has carried out in Andalucía 2,276 information/dissuasive visits/inspections to hunting states and 855 to farmers in sensitive areas. Between 2004 and 2012, 892 emergency inspections were conducted with the canine units and 1,617 preventive or deterring inspections were undertaken to sensitive areas where poison was detected in the past.

As far as achievements are concerned, it is worth mentioning that in less than ten years the occurrence of poisoning in the region declined by about 50%. This figure clearly indicates that the implemented actions proved to be effective. Not surprisingly, those key species more vulnerable to the use of poisoning either recovered significantly or broke up the declining trend they were involved in. The Egyptian Vulture is the best example and despite the situation still being critical and alarming, the decline seems to have stopped and two breeding pairs who disappeared recently have been recovered.

Indicators reveal that the incidence of poisoning is not so worrying today relative to what it used to be years before. Whereas one poisoning incident was recorded daily by 2001, today the figure has dropped to one incident every three days in general terms. Similarly, in ten years the number of baits involved per incident was reduced from 20 down to 1-3 baits. Likewise, whilst most incidents in the past used to involve threatened and wild species and/or were recorded inside protected areas, today most cases affect domestic species (cats and dogs) and take place in the surroundings of human dwellings. On the same lines, it is interesting to note that today a large part of incidents accounted for poisoning are put in the field at dusk and removed at dawn by poisoners, in an evident attempt to remain overlooked and undetected by agents. Though yet this masking practice still constitutes an offence, doubtlessly it is far less available to threatened bird species like vultures.

On another related matter, it should also be mentioned that the rate between emergency vs. preventive inspections is indicative. As the graph shows, preventive clearly overcomes those undergoing emergency circumstances. This figure puts on the table how gradually the dissuasive work is prevailing in respect to emergency actions, which were accounting for most of the work developed by the canine units at the beginning. In other words, today the more poison is searched for, the less is found.

Suffice it to say that the number of custodial convictions before EAV was implemented was only one for the whole Andalusian territory. Today, there are about twenty, and more are expected soon whose causes are waiting for an impending judge sentence.

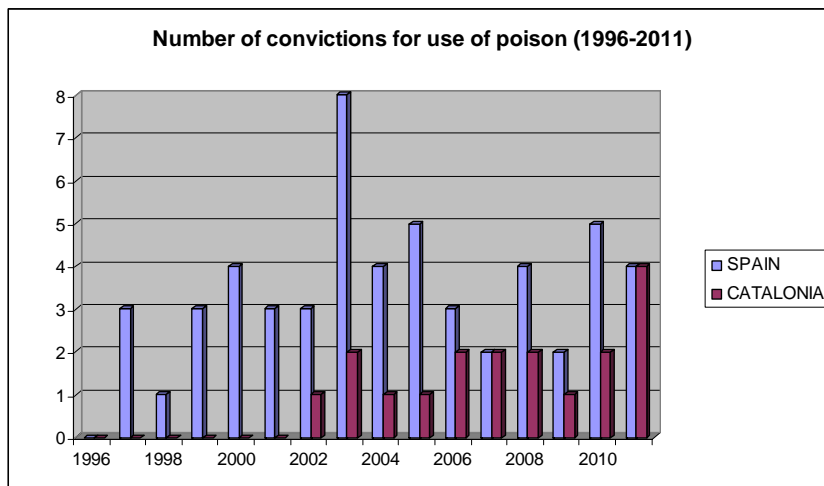
Lastly, police action proved to be highly effective and strongly recommended. Before EAV was implemented, investigators managed to solve cases only when the offender was busted *in fraganti*. Conversely today, 82% of all convictions were obtained by means of forensic and crime scene investigation methods some of them even solved and closed several years after the incident took place in the field. The use of modern techniques like fingerprints, ADN and other tools from police investigation procedures were applied to this particular field of wildlife criminalistics and forensics. Motivation is relevant and essential to encourage the agents involved in the investigation and prosecution of poisoning and must be addressed correspondingly by trainers.

4. Situation in Catalonia: “*Cos d’Agents Rurals*” investigation

The problem of poisoning is widely spread in Catalonia, a region in the north-eastern of Spain. The use of poisons was introduced and promoted to exterminate predators such as raptors, foxes, wolves and other carnivores and it has been used until 1989 when killing animals with poisons was banned by the Government (the use of poisoning was considered a

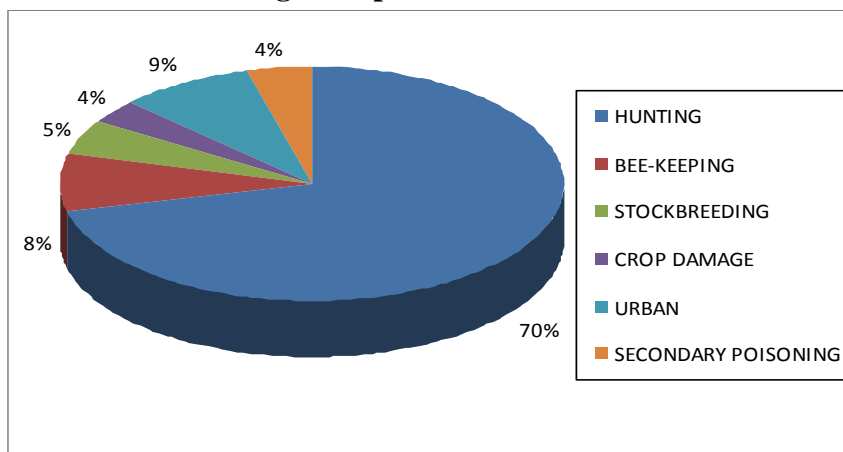
crime by local laws in 1995). Despite being an illegal practice pursued by local laws, poisons are still used and remain as one of the main causes of mortality among wild animals in this Region.

In Catalonia, Catalan rangers, called ‘*Cos d’Agents Rurals*’ (CAR), have been working against the use of poison for the last 10 years and a special patrol against poaching and poisoning was created to investigate the use of poisons and other illegal practices, clarifying the facts and bringing them to Court of Justice.



At its beginning the special patrol against poison was totally focused on indentifying different uses and casuistries, contacting people who suffered the effects (shepherds, veterinaries, pet owners, etc). After a carefully study of each case of poisoning it was found out that over 70% of them were related to the use of poisons to eradicate predators competing with certain game species (partridges or rabbits). In Catalonia toxic substances have been mainly used to get rid of foxes, dogs and other small and medium size carnivorous mammals. Poison is not normally used to control bird populations, nevertheless, the massive killing of big birds, like raptors, has been a negative side effect. However, the most affected animals by poison in Catalonia are pets, mainly dogs and cats, which in many cases were reported by the owners.

Origins of poison in Catalonia



Research method

Since it was established, the special patrol of CAR, which has four members, has implemented different procedures to prosecute the responsible in several uses of poison. The patrol follows the called "the wheel of poisoners" which can be explained with the following example: If an owner of a hunting ground finds predators competing with game species, he might decide to use poison which will cause the death of many animals and the next year other predators will occupy the space left by the killed ones, thus poisoners will use poison again and again. These situations provide clear evidence of poison use and allow rangers, after an accurate and discreet investigation, identify and arrest the perpetrator of poisonings. The evidences found by the CAR allow clarifying this kind of illegal practices and reducing the impunity with which the crime was committed.

The CAR does its investigation following a standardized protocol. Such protocol sets procedures and requirements to be followed by each ranger facing a suspicious case of animal poisoning. The main goal is avoiding deficiencies, defects in shape, wrong procedures, etc. during the research process which may invalidate and/or hinder a wide range of evidences and subsequent conviction of any suspicious case of criminal activity.

In cases of suspected use of poison is put into operation a specific investigation plan divided in three phases:

1) **Getting information about the case:** when most of the information is missing, the work of rangers consists on completing the case information trying to prove the reasons of the poisoning and if possible find out who is the poisoner. In such cases they look for historical background in the area asking veterinaries, hunters, neighbors or any other person who can give relevant information or could be involve in the case. Since this information is elaborated a hypothesis about people involved, dates and areas where poison has been used.

2) **Completing information available** (in those cases when more information is available but not completed). Since rangers can not attend each situation they just focus on the valuation of clear evidences complementing existing information in order to quickly resolve the easiest ones.

3) **Detaining poisoners right during the poisoning process (*in fraganti*)**, the goal in this phase is identify the area where the poisoner usually act establishing a permanent vigilance device to detain the person responsible in the act of placing or removing baits or animals poisoned.

The patrol also conducts prevention and awareness with key sectors (farmers, ranchers, hunters) to avoid the use of poison and use other methods like advertisement and several administrative measures such as banning hunting activity and the suspension of subsidies for farmers in order to prevent the use of poison.

The specialized patrol against poison and poaching of CAR has helped to almost eradicated in Catalonia the use of poison.

5. **The role of NGOs in the fight against poison in Spain. Antidote Program and Life + “Action in the fight against illegal poison use in the natural environment in Spain” (Life+ VENENO).**

In Spain, NGOs play a key role in the conservation of nature. In 1997 the fight against poison received a boost with the creation of the Antidote Program, as result of the concern of several entities about the catastrophic impact of poison in wildlife and, in particular, on important endangered species.

Antidote Program is supported by eight organizations, among which are the most representative of the Spanish conservation movement: *Ecologistas en Acción*, *WWF-Spain*, *Black Vulture Conservation Found (BVCF)*, *Fondo para la Protección de los Animales Salvajes (FAPAS)*, *Fundación Oso Pardo (FOP)*, *Fundación para la Conservación del Quebrantahuesos (FCQ)*, *Grupo para la Recuperación de la Fauna Autóctona y su Hábitat (GREFA)*, *Sociedad Española de Ornitología (SEO/BirdLife)* and *Sociedad Española para la Conservación y Estudio de los Mamíferos (SECEM)*

One of the most important achievements in the last years of Antidoto Program has been the public awareness raising on the problem of poisoning of wildlife. All the stakeholders involve (government, uniformed bodies, hunters, etc.) know, collaborate and make reference to the recommendations and protocols established by Antidote Program.

Other Antidoto achievements have been:

- Drafting of an Action Protocol on poisoning wildlife, which served to unify the criteria for collecting the samples, something very important to ensure the criminal proceedings exist.
- Participation in the drafting of the National Strategy Against Illegal Use of Poison Baits in the Environment, approved by the National Commission for Protection of Nature in 2004. This strategy sets out the guiding to fight against the poison throughout the Spanish state and is the reference document for communities to establish their own autonomous regional plans to combat the poison.
- Phone SOS VENENO (+34 900 713 182), a national free-line, which serves for reporting cases of poison.

SEO/BirdLife has been working in the framework of Antidoto Project. This NGO wanted to strengthen the fight against poison through *Life+ VENENO*. The main aim of this project, which began in 2010, is to achieve a significant reduction in illegal poison use in Spain. With the aim of achieving a significant reduction in this threat a series of actions is proposed:

1) **Adoption of action plans and protocols in the fight against wildlife poisoning.** All of 17 autonomous communities are committed to collaborate in the preparation of these documents and to approve them. In the first half of the project, 9 draft action plans and protocols have been developed in the autonomous communities of Asturias, Baleares, Canarias, Cantabria, Catalunya, Galicia, La Rioja, Murcia and Valencia. Since the project began five Spanish regions have approved plans and protocols to combat the illegal use of poison.

2) **Direct action against the illegal use of poisoned bait:** Furthermore, the project includes direct action in the fight against the illegal use of poisoned bait. The most important action has been the creation of a patrol of forest rangers specialised in this task in Castilla-La Mancha, called the UNIVE. In addition, specialised training has been given to the forest rangers of 6 autonomous communities. The specialization of forest rangers is essential to reduce the impunity with the crime is committed.

3) **Persuade wider society to see the wildlife poisoner as unacceptable:** A national educational campaign is being carried out in order to reach those groups involved in illegal poison use and it has been launched the website www.venenono.org. The project has also set up a network of volunteers against wildlife poisoning.

The project wanted to combine efforts of all stakeholders and involve them in the development of actions: Ministry of Agriculture, Food and Environment (Magrama), Autonomous Communities (CCAA), NGOs, hunting and agricultural sectors, public prosecutors, law enforcements (Seprona, forest rangers, regional police, etc), veterinarians, scientists, etc.

Awareness campaigns have been done with farmers in the Canary Islands. Alternatives to poison have been studied showing that surveillance and sheepdogs helped to reduce attack by predators. Also, it has been demonstrated that install water points to birds and lizards reduce their attacks against vine crops. These results could serve as a reference for other farmers in the rest of the country.

There have been significant improvements in the dissemination of information and awareness. Advertisements with the phone "SOS VENENO" (900 713 182) have been published in the journals of the editorial *América Ibérica* and *Aves y Naturaleza* published by SEO/BirdLife. On the other hand, it has been a great diffusion of the project in other media, including print, radio and television. In 2012 more than 600 impacts have been achieved in various media.

4) **Limit the access to legal toxic products and improve their use.** A *Study on substances that are often used to make poison baits* has been developed. There has been analysed which substances are used in the preparation of poisoned bait, by what ways they are acquired and why it is that the established control mechanisms do not prevent their illegal use. It has been demonstrated the need to strengthen controls on the marketing and use of plant protection products and biocides and to improve the legislation in this regard. In addition, a complaint has been presented to the Office of Environmental Prosecutor by sale of substances whose use and trade are prohibited, such as aldicarb, carbofuran or strychnine.

5) **Legal action in poisoning incidents:** Finally legal actions are being tackled in all the serious cases of wildlife poisoning. 22 criminal proceedings have been initiated for illegal use of poison and 4 guilty judgments have been given. These sentences are an example of the legal consequences involved in this crime. The rest of procedures are still ongoing. Furthermore, public comments have been presented to the review of the National Strategy against Poisoning and to other legal instruments that apply Community legislation on sustainable use of pesticides.

Finally, note that the project was awarded in June 2011, with the prize Redlife, as one of "the 10 Best Ideas to Save Nature". The *Life* + *VENENO* was the most voted.

6. Conclusion remarks

It seems EAV, Special Patrols in Catalonia or the work done by other governments and NGOs achieved objectives proposed from the beginning. Protocols and methods are now well known and actions revealing effective. However, there is no ground for complacency and letting the guard down. The fight against poison is highly demanding and success is never final, but temporary. Only failure is permanent and thus, all what was achieved after many years of struggle against poison, can vanish in a blink of the eye. The level of accomplishment demands a sustained strive in time and on the long term and so, investment and permanent updating approaches are most needed.

More information:

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Life+ VENENO: www.venenono.org

SEO/BirdLife, www.seo.org