

# International Conventions Protecting Aromatic and Medicinal Plants. The Portuguese case

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Key words: Bern, Washington, Habitats, National laws.

## 1. INTRODUCTION

In our increasingly technological society and in spite of all the synthetic compounds, there is still an interest in the natural plant products because active plant constituents have a synergistic effect – these ingredients work together producing a quite different effect from that of a single constituent given on its one.

Thus, medicinal and aromatic plant species still play an important role in our daily lives.

The Portuguese mediterranean flora is very rich in aromatic and medicinal species.

Some of these species are well known and widely used in all the mediterranean countries, some others are endemisms and only used in smaller scale.

Some of them are already being cultivated; some others are still collected in the wild.

And national and/or international laws protect some of the aromatic and medicinal species, for the deduction on these plant species from nature may endanger their survival.

Several problems of biodiversity conservation can be risen when dealing with commercial exploration of plant species. Genetic variability erosion of isolated populations of a particular species, even extinction of rare or endemic species can occur if the wild harvesting of these species is excessive.

This paper deals with the conservation of aromatic and medicinal plant species, which may be in danger by over exploration. The following examples illustrate this urge for legal measures concerning Nature Conservation:

- Over wild harvesting of a particular species will cause a decrease in number of specimens, thus decreasing the genetic diversity. This situation can have severe consequences to the conservation of that species. This may be the case of the species *Phlomis lychnitis* in Portugal, if the collecting in the wild doesn't decrease in the near future, namely within the territory of the Natural Park of "Serras de Aire e Candeeiros", in the centre of Portugal.
- Uncontrolled exploration of endemic species, either for commercial purposes, for scientific research, or any other purpose. An example of this may be the species *Antirrhinum majus linkianum*, a lusitanian endemism, which has several medicinal properties. Due to the narrow range of distribution of the sub-species – it only grows on limestone, in the centre of Portugal – commercial exploration is highly unfavourable to its conservation.

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- Some aromatic or medicinal species find the limit of its range of distribution in Portugal. Portuguese populations may have a significantly different genetic pool from that of other populations. The extinction of these populations causes genetic erosion of the species. This could occur with the species *Taxus baccata*, a medicinal species, widely distributed in all Europe, but with very small populations in Portugal (Serra da Estrela and North of Portugal).

Thus, legal measures are required, in order to protect the species and their habitats.

## 2. LEGAL MEASURES FOR NATURE CONSERVATION

At the present moment, several International Conventions, one European Community Directive and one Portuguese law have been transposed to national laws:

- Bern Convention – Decreto-Lei n.º 316/89
- Washington Convention – Decreto-Lei n.º 114/90  
Reg. (CE) nº 338/97
- Habitats Directive – Decreto-Lei n.º 226/97

Besides these three laws there is one national law about the protection of *Ilex aquifolium*:

- Decreto-Lei n.º 423/89

### 2.1. Bern Convention

“Convention on the Conservation of European Wildlife and Natural Habitats”

This European Convention, signed in 1979, stands on the principle that wild fauna and flora are an important natural patrimony whose esthetical, scientific, cultural, recreational and economical value which must be preserved and passed on to future generations.

All the countries, members of this Convention, must take political measures to maintain biological equilibria and government objectives and programmes must be in compliance with the objectives of the Convention.

This Convention aims to:

- Protect all wild species of fauna and flora;
- Protect endangered habitats;
- Promote the co-operation between different countries concerning nature conservation.

The Bern Convention has three Appendixes, as follows:

1. Appendix I – Species of Flora strictly protected; thus, it is forbidden to:
  - Wild harvest, dig up or cut down specimens of species listed in this appendix;
  - Purchase, offer to purchase, acquisition and display to the public for commercial purposes of these species;
  - Intentional deterioration of the correspondent habitats.

Exemptions to the above mentioned prohibitions may be granted, by issuance of a Credential, if the harvest is intended for research aimed at the re-introduction of listed species, increase of the species area of distribution, public health or to prevent any damage to human kind.

2. Appendix II – Species of Fauna strictly protected.

3. Appendix III – species of fauna whose capture, detention and killing may be allowed, with the issuance of a permit.

The infringement of any article of the Bern Convention is sanctioned with fine up to 500.000\$00.

An example of an Appendix I aromatic species may be the *Thymus carnosus*. It is an endemic species that occurs only on sandy soil, close to the Portuguese Atlantic and Mediterranean coast.

## 2.2. Washington Convention

### “Convention on International Trade in Endangered Species of Wild Fauna and Flora”

This International Convention, also known as CITES, was signed in 1973. Its main objective is to protect species of wild fauna and flora and to guarantee their protection by regulating trade.

In order to do so, several aspects must be controlled:

- Importations and exportations of animals and plants;
- Trade and movements of specimens within the Community;
- Encourage trade of captive-bred animals and artificially propagated plants instead of wild specimens.

The Convention lists the species in different Appendixes I, II and III - according to their degree of endangerment, corresponding to Annexes of the Council Regulation for the European Community – A, B and C:

Appendix I / A – species threatened with extinction or so rare that any level of trade would imperil the survival of the species; Trade of species listed in I / A is very difficult and allowed only if its purpose is for research, education, intends breeding or artificially propagation from which conservation benefits will accrue to the species concern.

- Appendix II / B – Species that is subjected to levels of international trade that may not be compatible to its survival or with the maintenance of the total population at a level consistent with the role of the species in the ecosystems in which it occurs; Trade of species listed in II / B are allowed for commercial purposes. For some countries, some species have annual Export Quotas.

- Appendix III / C– Species that is listed by the countries were it occurs and were it is locally endangered.

- Annex D (only for the Council regulations) – species not listed in annexes A to C which are imported into the Community in such numbers as to warrant monitoring.

The Convention and The Council Regulation include about 16 thousand wild plant species, most of them being traded for their ornamental value. Although, in the past few years there is a growing concern with trade of timber and aromatic or medicinal species.

The infringement of any article of the Washington Convention is sanctioned with fine up to 500.000\$00.

An example of Portuguese species listed in CITES and simultaneously medicinal is *Orchis coryophora*. All the orchid species are listed in CITES (over 8000 species). Many orchid species are wild harvested and traded as medicinal products. This industry, along with the ornamental value and with the important decrease of the orchids main habitats is endangering many species.

### 2.3. Habitats Directive

Within the European Community, the nature conservation politics lies on two major documents: Birds Directive (79/409/CEE) and the Habitats Directive (92/43/CEE).

The main objective of this last Directive is to ensure the European biodiversity, through the preservation of natural as well as the habitats of endangered species of wild fauna and flora.

In order to do so, the Directive aims to establish the “Rede-Natura 2000”, a European net of ecologically coherent areas. Each member-state must define these areas in a National List of Areas, from which will be selected the “Areas of Communitarian Interest” – ACI. Latter, these ACI will be submitted to the Habitats Committee for acceptance, being than defined as “Areas of Special Protection” - ASP. The last step is the definition of management measures for each of these ASP’s.

This process of defining the definitive ASP’s has not ended. Portugal has published the first National List of Areas in August of 1997 (Resolução do Conselho de Ministros nº 142/97) including 31 areas chosen for being representative of one or more habitat with a high degree of conservation.

The Directive includes 5 appendixes:

- Appendix I- types of natural habitats with communitarian interest, for which conservation demands their definition as areas of special conservation;
- Appendix II – Species of fauna and flora with communitarian interest, for which conservation demands their definition as areas of special conservation;
- Appendix III – Criteria of selection the areas to be identified as ACI’s and defined as ASP’s.
- Appendix IV – Species of fauna and flora of communitarian interest, that require strict measures of protection;
- Appendix V – Species of fauna and flora of communitarian interest that can be captured, harvested or otherwise used, as long as management measures are defined.

Any actions projects or plans that will substantially change an ACI or ASP must be carefully studied and in compliance with the conservation of the area. Any construction of buildings, large agricultural changes, topographical changes, introduction of alien fauna and flora species, and other activities that ma endanger the habitat or the species, must be submitted to positive opinion of the Instituto da Conservação da Natureza.

It is also forbidden, concerning flora, to wild harvest, dig up or cut down specimens.

Purchase, offer to purchase, acquisition and display to the public for commercial purposes of these species.

The infringement of any article of the Habitats Directive is sanctioned with fine up to 500.000\$00.

Many mediterranean habitats are listed in Appendix I of the Directive. One example of such habitats is the woods where the species *Quercus faginea* subsp. *broteroi* is dominant. This habitat is endemic of the Centre and South of Portugal.

An example of a listed species – Appendix V - may be *Ruscus aculeatus*, an ornamental and medicinal species that is abundantly wild harvested in Portugal.

#### **2.4. “Azevinho” law**

This law aims to prevent the extinction in Portugal of the species *Ilex aquifolium*. This species has a very narrow area of distribution in Portugal, occurring only under the Oak woods of the mountains of the North and Centre of Portugal. The plant is harvested mainly during Christmas for its beautiful berries. This situation, along with the destruction of the plant habitat, caused the decrease of *Ilex aquifolium* specimens.

Thus, in 1989, this law was published, prohibiting digging up, partial or total cut, transport and sell wild specimens of *Ilex aquifolium*. Although, as the cultivation of this species has been very successful, this activity is allowed for commercial purposes.

The infringement of this law is sanctioned with fine up to 200.000\$00.

### **3. FINAL REMARKS**

These are the laws that rule the protection of flora species and their habitats. Many other species require protection in order to prevent extinction of species and genetic deterioration.

Yet, I believe that laws are not enough to assure nature conservation. An investment in public awareness and environmental education is needed. It is also important to encourage propagation *in vitro* and cultivation of aromatic and medicinal plant species.

Finally, it is fundamental to establish management plans that contribute to conservation and biodiversity considering economical, social and cultural needs of the local populations.

### **REFERENCES**

Bern Convention - Decreto-Lei 316/89, 22 of September

Washington Convention – Decreto-Lei 114/90, 5 of April  
Council Regulation (EC) No 338/97, of 9 December 1996

Habitats Directive – Decreto-Lei 226/97, 27 August  
Resolução do Conselho de Ministros 142/97, 28 August

Azevinho Law – Decreto-Lei nº 423/89, 4 December

