

# SOER 2005 BIODIVERSITY

## Background Note on Exploited Species MEPA Nature Protection Unit

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The rise in population growth, increasing consumer demands as well as conflict and competition amongst economy-generating activities, and improved access and capture/collection techniques, are leading to the ever-increasing intensity of exploitation of wildlife resources available for local use by the Maltese.

Animals and plants are exploited for a number of reasons such as for food consumption; human enjoyment and quality of life; trade as souvenirs or pets; scientific research as well as private collections.

Inappropriate and unregulated exploitation of wildlife resources through over collection and over-fishing compromises the conservation status of the species being targeted, resulting in it becoming threatened. Overexploitation engenders decline and loss of populations. Direct impacts of exploitation by removal of individuals include change in abundance and size structure while indirect effects involve trophic interactions at the community level. Consequently, the delicate balance of natural systems is disrupted since not only the targeted species is affected but also other affiliate species dependent on the targeted species for their survival. Recovery is usually long term and in certain cases irreversible.

The level of exploitation differs in intensity and degree of impact according to the species targeted and depending on its economic value. Species most vulnerable to overexploitation include those with a low reproductive/recruitment rate, slow growth, late attainment of sexual maturity and long life spans.

To this end, a number of native and endemic species of terrestrial and marine flora and fauna threatened by exploitation, are afforded strict legal protection at a National level by way of subsidiary legislation issued under the Environment Protection Act, making it illegal to exploit them. Examples of strictly protected species are included in Table 1 below.

Species	RBD Status	Current Status	Reason for Exploitation
<u>TERRESTRIAL</u>			
Painted Frog ( <i>Discoglossus pictus pictus</i> ; Maltese: Zring)	Vulnerable; Restricted distribution (Mediterranean & Maltese Islands)	Frequent though persecuted	Illegally caught to play with or to be kept as a pet
Evergreen Oak Longhorn Beetle ( <i>Cerambyx cerdo</i> ; Maltese: Susa tal- Ballut)	Vulnerable	Stable but very small population size	Due to its large size it is subjected to indiscriminate killing
Irises ( <i>Iris spp.</i> ; Maltese: Fjurdilis)	Generally vulnerable with a restricted distribution	Threatened. Restricted to a few areas.	Illegally picked from their natural habitat.
Maltese Pyramidal Orchid ( <i>Anacamptis urvilleana</i> ; Maltese: Orkida Piramidali ta' Malta) and other species of orchids	Rare; Restricted distribution (Maltese Islands)	Scarce though widespread in garigue in the Maltese Islands	Illegal picked because of its conspicuous inflorescence.
<u>MARINE</u>			
Date Mussel ( <i>Lithophaga lithophaga</i> ; Maltese: <i>Tamra</i> )	Not Listed	Threatened	Illegally removed from its natural habitat and subjected to illegal exploitation and illegal commercial activity for food consumption
Loggerhead Turtle ( <i>Caretta caretta</i> ; Maltese: Fekruna tal- Bahar)	Vulnerable	It is scarce. Threatened by commercial fishing as it falls a victim to by- catch as a result of Long lining targeting swordfish and dolphin fish (Lampuki)	Before legally protected, marine turtles were exploited for their meat and carapace.

<p>Conspicuous marine invertebrate species such as sponges, corals, molluscs and sea horses</p>	<p>Red Data Listed species afforded legal protection include:</p> <p><i>Corallium rubrum</i>  <i>Cladocora caespitosa</i>  <i>Antipathes</i> spp.  <i>Gibbula nivos</i>  <i>Charonia nodifera</i>  <i>Charonia tritonis</i>  <i>Zonaria pyrum</i>  <i>Schilderia achatidea</i>  <i>Pinna nobilis</i></p> <p>These are mainly assigned a rare status with restricted distribution</p>	<p>Largely Threatened (rare, vulnerable or endangered)</p>	<p>Exploitation of numerous marine invertebrate species for the purpose of food, display, collection by conchologists and sale as souvenirs is mainly responsible for their decline in the Maltese Islands. Seashells from a wide variety of marine mollusc species namely Triton shells, Tun shells, Cowries, Pen shells and Top shells are valued for commercial and ornamental purposes and are illegal exhibited for sale.</p> <p>Seahorses (Malt.: <i>Żwiemel tal-Baħar</i>) such as the Short-Snouted Sea Horse (<i>Hippocampus hippocampus</i>) and the Long-Snouted Sea Horse (<i>Hippochampus guttulatus</i>), which are both protected are sometimes illegally directly captured from their habitat or as by-catch during artisanal and amateur fishing.</p>
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**Table 1: Examples of protected species subjected to illegal exploitation**

## **CASE STUDY:**

### **Illegal capture and killing of the Painted Frog**

The painted frog *Discoglossus pictus* Otth, 1837, belongs to the family Discoglossidae, which includes all frogs pertaining to the genus *Discoglossus*. The Latin word '*pictus*' means painted, referring to fact that individuals vary in colour from grey, dark green, yellowish and brown. This species is subdivided into three subspecies (*D. p. pictus*, *D. p. auritus* and *D. p. scovazii*), which have arisen due to geographical isolation from one another for many years.

The subspecies, *Discoglossus pictus pictus*, is the only native representative of the Class Amphibia in the Maltese islands. Lanza *et al.* (1986) report that this *nominate* from Sicily and the Maltese



The ability of *D. pictus* in any available freshwater successful under local summertime, when levels of frog commonly frequents

Once common in all freshwater, this anuran is due to reduction in the ponds in close proximity to

disturbance, alteration and destruction of its natural habitat, lowered water tables, and pollution by pesticides and fertilizers used in nearby fields. This is further coupled by the persistent persecution and illegal capturing by groups of children, sometimes even accompanied by their parents, to either keep as pets or else to play with, and probably even kill them.

Legally protected in Malta since 1993 by virtue of Legal Notice 49 of 1993, this species is also protected by the Bern Convention (1979) where it is listed in Appendix II (strictly protected fauna) and by the EC Habitats Directive (1992) where it is included in Annex IV (strictly protected flora and fauna). Locally, signs had been erected in a number of key places where the Painted Frog occurs; however, these were removed or destroyed by vandals.

In the Red Data Book, *D. pictus pictus* is listed as vulnerable with a restricted distribution both in the Maltese Islands and in the Mediterranean.

*subspecies is known only Islands*<sup>1</sup>.

*pictus* to breed all year round is one reason why this frog is conditions. During the the water table diminish, the humid areas.

localities with some now becoming more restricted number and quality of suitable each other as a result of

The adoption of sustainable harvesting methods that contribute to conservation efforts ensures the continuation of yielding benefits to the Maltese Community derived from the exploitation of wildlife resources. Regulation of exploitation is a requirement of Regulation 21 of L.N. 257 of 2003 whereby exploitation of species listed in Schedule VI of L.N. 257 of 2003 is permissible, as long as it is carried out in a way that does not threaten the species of concern. Examples of species, which can be subjected to managed exploitation are included in Table 2 below.

Species	RDB Status	Current Status	Reason for Exploitation
<u>TERRESTRIAL</u>			
Rosemary ( <i>Rosmarinus officinalis</i> ; Maltese: Klin)	Rare; restricted distribution (Maltese Islands)	Still rare and restricted to a few localities	Used for culinary purposes

<sup>1</sup> Lanza *et al.*, 1986. *Les discoglosses de la region mediterraneenne occidentale (Amphibia; Anura; Discoglossidae)*.

Elegant Narcissus ( <i>Narcissus elegans</i> ; Maltese: Narcis Imwahhar Skars) French Daffodil ( <i>Narcissus tazetta</i> ; Maltese: Narcis)	<i>N. elegans</i> is documented as very rare with a restricted distribution in the Mediterranean and Maltese Islands.	<i>N. tazetta</i> is localised, but usually frequent where found	Picked and sold <i>N. tazetta</i> is often gathered and sold in large bunches
Mediterranean Heath ( <i>Erica multiflora</i> ; Maltese: Issopu)	Not Listed	Frequent but declining	Used in cribs and flower arrangements
<b>MARINE</b>			
Rock Urchin ( <i>Paracentrotus lividus</i> ; Maltese: Rizza)	Not Listed	Very Common. Vulnerability to overexploitation is observed in species such as sea urchins with short larval period, slow growth, long life span with slow maturity, sedentary and sporadic recruitment due to irregular larval dispersal and variable larval survival.	Direct removal for scientific purposes (although <i>bona fide</i> studies should help in conservation efforts), culinary and commercial purposes.
European Lobster ( <i>Homarus gammarus</i> ; Maltese: Iljunfant tal-Bahar) and other species of lobster	Not Listed	Scarce, but more information on its status is required	Commercial exploited for food consumption
Dusky Grouper ( <i>Epinephelus marginatus</i> ; Maltese: Cerna)	Not Listed	The intense exploitation of the Dusky Grouper by artisanal or harpoon fishing has severely depleted stocks of this fish <sup>2</sup> .	Commercially exploited fish for food consumption

Table 2: Examples of species that should be subjected to managed exploitation and the main reasons for their exploitation

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<sup>2</sup> Mifsud CR & Stevens DT (eds), 2003. *Strategic Action Plan for the Conservation of Maltese Marine and Coastal Biodiversity*. Malta: Malta Environment and Planning Authority and the Regional Activity Centre for Specially Protected Areas.

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