



## TECHNICAL ARTICLE SERIES

### **Management Plan for the Conservation and Sustainable Use of *Podocnemis erythrocephala* (Chipiro), *Podocnemis unifilis* (Terecay), *Podocnemis expansa* (Arrau) and *Peltocephalus dumerilianus* (Cabezón)**

Authors: Carliz Díaz<sup>1</sup> and Edis Solórzano

Abstract: Development of a management plan for the conservation and sustainable use of the species *Podocnemis erythrocephala* (Chipiro), *Podocnemis unifilis* (Terecay), *Podocnemis expansa* (Arrau) and *Peltocephalus dumerilianus* (Cabezón), through institutional strengthening and updating of information on the status and population dynamics and the design of strategies for their conservation and sustainable use, as a way to conserve and maintain wild populations, reduce negative anthropogenic pressure on them and provide productive alternatives to improve the living conditions of local and indigenous communities in Venezuela.

Key-words: *Podocnemis expansa*, *Podocnemis unifilis*, *Podocnemis unifilis*, *Peltocephalus dumerilianus*, management plan, Venezuela.

---

<sup>1</sup> Directora General de Diversidad Biológica. Ministerio del Poder Popular para el Ecosocialismo (MINEC).



Freshwater turtles are among the most endangered vertebrate groups in the world because they suffer intense pressure from humans (Moll & Moll, 2004). Their populations are being diminished by unsustainable exploitation and habitat destruction. On the other hand, the growing demand for their eggs and meat, together with widespread traditional medicine practices, are critical factors that have brought many turtle populations to the brink of extinction (Turtle Taxonomy Working Group, 2017).

In Venezuela, as in other areas of distribution of the arrau (*Podocnemis expansa*), terecay (*Podocnemis unifilis*), Chipiro (*Podocnemis unifilis*) and cabezon (*Peltocephalus dumerilianus*) turtles, their eggs and meat are exploited, mainly for human consumption in rural areas.

Some of these species have been used in zoo-breeding activities for the reinforcement of wild populations or for commercial purposes, within the framework of conservation and sustainable use programs developed in the country. These activities are part of the conservation plans that have been carried out for more than 30 years in several areas of the country, within the framework of the National Program for the Conservation of Continental Chelonians developed by the Ministry of Popular Power for Ecosocialism (MINEC), with financing from the government of the Bolivarian Republic of Venezuela, which has allowed us to have a wide experience in the management of this group of animals (Marín, 2006; Marín, Babarro and Dávila 2007; Marín and Solórzano, 2012).

The techniques used in the aforementioned Program are perfectly applicable to achieve the successful realization of the sustainable use of these species, varying only in their final objective, that is, replacing the objective of preservation (in many cases wrongly called conservation), with that of sustainable use. These techniques include the protection of nesting areas, the transplantation of clutches, the collection and rearing of hatchlings, the recording of biological statistics, the evaluation of reproductive patterns, the release in areas of their natural distribution of specimens reared for a year and the incorporation of local communities in the execution of all the actions developed.

On the other hand, in order to support national policies and with the objective of achieving the conservation of freshwater turtles, MINEC is currently promoting the implementation of the project: Development of a management plan for the conservation and sustainable use of the species *Podocnemis erythrocephala* (Chipiro), *Podocnemis unifilis* (Terecay), *Podocnemis expansa* (Arrau) and *Peltocephalus dumerilianus* (Cabezón), through institutional strengthening and the updating of information on the status and population dynamics and the design of strategies for their conservation and sustainable use, as a way to conserve and maintain wild populations, reduce negative anthropogenic pressure on them and provide productive alternatives to improve the living conditions of local and indigenous communities; This project is financed by the German Development Bank (KfW), implemented under the institutional tutelage of ACTO,



through a financial cooperation agreement between Germany and the Permanent Secretariat of ACTO (PS/ACTO) through KfW.

This management plan will make it possible to have the technical-legal norms that will regulate the commercial harvesting of the aforementioned species in the country, since the commercial harvesting of wild fauna in Venezuela is carried out under the modality of management plans, whose content and terms of reference are established by the National Environmental Authority, according to the provisions of the Regulations of the Law for the Protection of Wild Fauna (Republic of Venezuela, 1970; Bolivarian Republic of Venezuela, 1999). These plans are promulgated through ministerial "Resolutions" that establish the administrative and technical measures for managing the resource, as well as the norms to be applied for controlling activities during their implementation.

The implementation of this plan, in addition to promoting legal domestic trade, will make it possible to promote international trade in these species, which are included in Appendix II of the

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), so that CITES will ensure that international trade does not threaten the survival of the populations involved.

The plan is based on criteria of legality, that is to say, it is guaranteed that the specimens have been obtained in accordance with national laws and regulations for the protection of wild fauna; and under criteria of sustainability and traceability, in order to have basic information, as well as strategies to verify that the trade of the species is carried out in a sustainable manner and is not detrimental to the maintenance of their wild populations, and also that it can be traced through the issuance and control of the respective CITES permits.

With the implementation of this management plan, it is expected that there will be greater empowerment and appreciation of the local and indigenous communities for the target species, which will have a positive impact on the conservation of their wild populations and the promotion of productive activities that will improve their livelihoods.



*Arrau tortoise specimens. Photograph by Edis Solórzano*



*Release of Arrau and Terecay tortoises, at the Arrau Tortoise Wildlife Refuge. Photo: Edis Solórzano.*

## **BIBLIOGRAPHY**

Moll, D. & E. O. Moll. 2004. The ecology, exploitation, and conservation of river turtles. Oxford University Press. 393 p.

Marín, E. 2006. Bases para el manejo de las poblaciones de quelonios del

Brazo Casiquiare por comunidades locales. MINAMB. Caracas. 12 p. (Mimeografiado).

Marín, E., R. Babarro y G. Dávila. 2007. Algunos aspectos de la biología reproductiva de *Podocnemis expansa*, en el Refugio de Fauna Silvestre de la



Tortuga Arrau, estados Apure y Bolívar. En: Simposio Biología y Conservación de Tortugas Continentales de Venezuela Homenaje al Dr. Juhani Ojasti, en el marco del VII Congreso Venezolano de Ecología, Puerto Ordaz, Venezuela.

Marín, E y C. Solórzano. 2012. Contribución al conocimiento de la biología reproductiva del chipiro, *Podocnemis erythrocephala* (Spix, 1824. Testudines; Podocnemidae) en el Brazo Casiquiare, Amazonas, Venezuela. Memoria de la Fundación La Salle de Ciencias Naturales. Vol. 72. N° 177. 2012. 12 p.

Turtle Taxonomy Working Group. 2017. Turtles of the World. Annotated

Checklist and Atlas of Taxonomy, Synonymy, Distribution and Conservation Status (8th Ed.). Chelonian Research Monographs 7:1–292 p.

República de Venezuela. 1977. Congreso de la República. Ley Aprobatoria de la Convención sobre el Comercio Internacional de Especies Amenazadas de Fauna y Flora Silvestres. Gaceta Oficial No. 2.053 Extraordinario del 29 de junio de 1977.

República de Venezuela. 1999. Presidencia de la República. Decreto N° 3269 del 29 de enero de 1999. Reglamento de la Ley de Protección a la Fauna Silvestre. Gaceta Oficial N° 5.302 de 29 de enero de 1999.

***Published in the Bioamazon Bulletin, issue n. 10, July-August 2021.***

---