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CITES NON-DETRIMENT FINDING

A Primary Evaluation of
Varanus salvadorii

FROM INDONESIA



Ministry of Environment and Forestry (KLHK)
&
National Research and Innovation Agency (BRIN)
2024

CITES Non-detriment finding

A Primary Evaluation of *Varanus salvadorii*

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Text in italics is explanatory and should be deleted in completed documents. Please refer to the NDF Guidelines document for further explanation on how to complete this evaluation.

Species name	Crocodile Monitor (<i>Varanus salvadorii</i>)
Range state name	ID
Report compiled by	SA & MA
Date compiled	02/22/2024

Section One: Summary

Please provide a short overview (1-2 paragraphs) of the trade in this species in the country of interest.

Crocodile Monitor (*Varanus salvadorii*), listed in Appendix II. The harvest of *Varanus salvadorii* in Indonesia low volume, in total was 1148 individuals from 2018 to 2022 or average 230 individuals per year.

This NDF will examine the 230 wilds caught *Varanus salvadorii* each year.



Figure 1. A male of *Varanus salvadorii* (Photograph by A. Hamidy)

Section Two: Primary Evaluation score

Please score each attribute listed within the table below and sum these to provide a total.

Criteria	Number of points			Score
	1	2	3	
Annual Harvest level	Low (<2,000)	Medium (2,000 - 20,000)	High (>20,000)	1
Area of occupancy for non native/allien/invasive species	Large (>20,000km ²)	Medium (2,500 – 20,000km ²)	Small (<2,500km ²)	1
Life-history	Fast	Medium	Slow	1
Illegal trade and IUCN Threat status	If levels of illegal trade are known, they should be included under “Annual harvest level”. If unknown, and suspected to be detrimental, give a maximum score of 1 point . Similarly, if the status of the species is listed as VU, EN or CR in the IUCN Red List of Threatened Species, give a maximum score of 1 point			0

Section Three: Justification – Harvest level

Please provide an explanation with appropriate references to justify the score given.

The harvest of *Varanus salvadorii* in Indonesia actually extremely low volume, based on exporter report the total number export between 2018 to 2022 was 1148 individuals or about 230 individuals each year.

Based on those would give us an annual harvest rate value of 1.

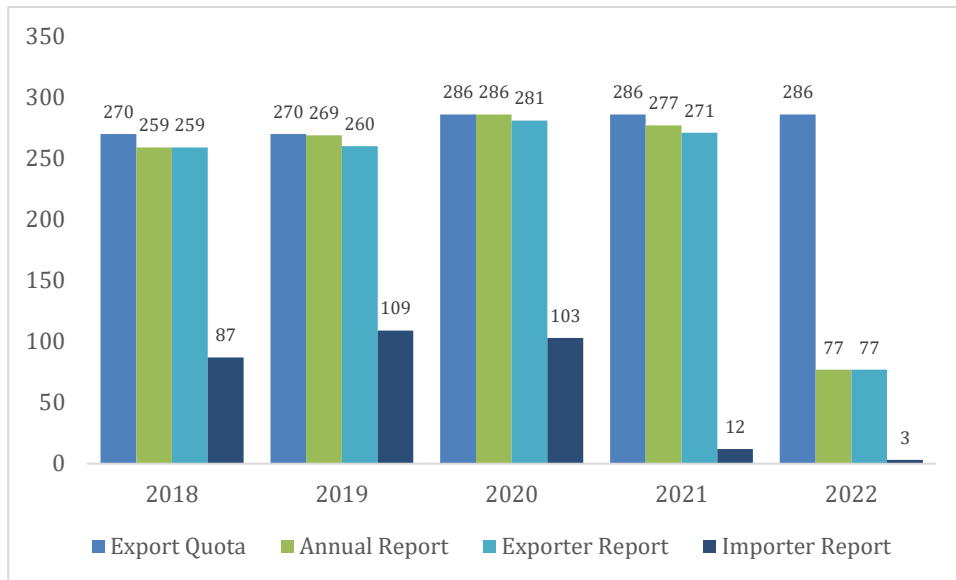


Figure 2. Comparison of export quota, annual report, exporter, and importer report of *Varanus salvadorii* from Indonesia.

Section Four: Justification – Area of occupancy

Please provide an explanation with appropriate references to justify the score given.

This species is found in a variety of habitats, including rainforest vegetation like mixed alluvial and hill forests, as well as lowland and riparian forests. It tends to favor intact undisturbed primary forests and actively avoids human contact (Horn et al., 2007; Shea et al., 2016; Pattiselanno, 2007). Moreover, it can be spotted in open woodland habitats within the Trans-Fly region (Allison, 2006). These creatures demonstrate proficient swimming abilities and have been sighted in forested areas along rivers (Marshall and Beehler, 2011). Recent discoveries suggest that the species also inhabits the montane rainforests of Northern New Guinea, particularly in the Torricelli Mountain Range, at elevations reaching up to 1500 meters above sea level (Reh and Thomas, 2021). Crocodile monitors have been observed in primary rainforests of the Arfak Nature Park at 650 meters above sea level, where various tree species including Pacific teak, matoa, fig, pulai, Java almond, Malay apple, Klinki, and Papua nutmeg trees are present (Pattiselanno, 2007). Cann documented capturing an animal in a sago palm (*Metroxylon sagu*) (Cann, 1974; Horn, 2004). Additionally, crocodile monitors have been spotted in the Sepik-Ramu forest system, which consists of lowland rainforests dominated by Pacific teak trees, with notable occurrences of *Agathis labillardierei*, particularly in the Torricelli mountains and south of the Sepik river. Other common species found in this region include *Pometia*, *Terminalia*, *Palaquium*, *Eugenia*, and *Planchonella* species (FAO, 2000).



Figure 3. The natural distribution of *Varanus salvadorii* encompassing Papua provinces (Indonesia) and New Guinea.



Figure 4. Type habitat of *Varanus salvadorii*

Section Five: Justification – Life history

Please provide an explanation with appropriate references to justify the score given.

Size/age at sexual maturity: Ca. 170 cm TL, ♀: >45 cm SVL; age unknown

Clutch size: Up to 3 clutches per year with 4-12 (ø 7) eggs

Incubation period/temperature: 155-246 (ø 200) days at 27-30.5 °C

Size/weight of hatchlings: 11.5-16.5 cm SVL; 41-50.6 (ø 45) cm TL; 42.4-69.4 (ø ca. 60) g

Captive breeding: All breeding facilities in Indonesia (7) operated in outdoor cages, warm and humid tropical climate allowing male and female of Crocodile Monitor to mate successfully.



Figure 5. Captive breeding facilities

We therefore assign this species clearly to the 'Fast' category: 1 point.

Section Six: Illegal trade

Please provide an explanation with appropriate references to justify the score given.

Illegal trade is unknown, and in the Red List IUCN listed as LC.

We therefore assign this species clearly to score 0 points.

Section Seven: Conclusion, course of action and determination on exports

Please provide an overall conclusion on the perceived threat of trade to the species and details on whether further course of action will be taken to complete an NDF for the species.

Our evaluation yields a final score of **3**, therefore **the wild population is non-detrimental**.

Evaluating Non-Detriment

Primary Evaluation score lower than five (5) = trade is non-detrimental (**record the score and justification in the *Primary Evaluation* worksheet provided (in [Annex B](#)). This can be used for Step 4 of the Non-Detriment Finding**).

If the *Primary Evaluation* score is equal to or greater than five (5) then the non-detriment requirement cannot be satisfied, warranting additional information based on other indices to evaluate detriment. **A *Secondary Evaluation* should be undertaken**.

Section Eight: Literature Cited

Please provide references to all the reports and literature cited in this evaluation.

Auliya, M. and Koch, A. 2020. Visual Identification Guide to the Monitor Lizard Species of the World (Genus Varanus). Guidance for the Identification of Monitor Lizards with current Distribution Data as well as short Explanations on Reproductive Characteristics and Captive Breeding to support CITES Authorities. Bundesamt für Naturschutz (BfN) Federal Agency for Nature Conservation Konstantinstrasse 110 53179 Bonn, Germany. 201 pp.

Allison, 2006

Horn et al., 2007; Shea et al., 2016; Pattiselanno, 2007

Marshall and Beehler, 2011

Reh and Thomas, 2021

Pattiselanno, 2007

Cann, 1974; Horn, 2004

FAO, 2000

