

Supplementary Material S2: Theoretical National Red List assessments – Seychelles ER Species

The following is a list of assessment rationales for all identified ER species, considering their conservation status in the EEZ of the Republic of Seychelles, using IUCN Guidelines for the Application of Red List Categories and Criteria at National and Regional Levels. For species assessed under Criterion A, all generation lengths were taken from published global Red List assessments for that species.

Sphyrna mokarran: **CR**

The distribution of this species throughout Seychelles is poorly known. It has been found in fisheries markets up to 2013, forming 2% of the artisanal catch in that year [1]. There is a marked decline in great hammerhead populations in Seychelles, historically [1] and generally, shark populations in Seychelles have been exploited to such an extent that populations were considered over-exploited by the end of 1950s [2,3,4]. The shark fishery in Seychelles was deemed overfished in 2007. In Seychelles, sharks and rays contribute 20% of the semi-industrial total catch [5]. The artisanal sector dominates domestic fisheries and committed fishing effort continues to increase in this sector whilst CPUE has steeply declined by 82.5% since 1950s. Finning of sharks is only prohibited by foreign vessels in Seychelles waters and industrial and semi-industrial fisheries do otherwise practice finning for export [1]. Problems with illegal, unreported and unregulated fishing for sharks across the country persist and further strain local shark populations. Considered in the context of the history of the fishery baseline and of shark fishery development, evidence indicates a significant decline in shark stocks during the second half of the 20th century [2]. The percentage contribution of shark to total catch in the artisanal fishery declined from ~ 4 % from 1970 to ~ 2% in 2000 [2]. This equates to an 80.7 % population decline over three generations for this species. Although no species-specific population data are available, given the long-term overexploitation and inferred population decline of this species specifically in Seychelles, it is conservatively suspected that this species is undergoing a population reduction in Seychelles that is consistent with global rates of decline and thus experiencing a reduction of > 80% over the past three generation lengths (71.1 years). This suspected population reduction is based on low maximum rates of population increase, the continued presence of this species in fisheries markets, current and ongoing levels of exploitation, as well as inferred population declines for this species in Seychelles. This species is therefore assessed as Critically Endangered A2bd. It is unknown if this species experiences significant immigration of propagules from extra-regional populations and so this species listing does not require regional adjustment.

Rhynchobatus australiae: **CR**

The distribution of this species throughout Seychelles is poorly known. This species is targeted for its fins and meat [1]. 97 carcasses of *Rhynchobatus* sp. were recorded from artisanal catch monitoring in 2013, comprising 3% of the total carcasses recorded. Generally, shark and ray populations in Seychelles have been exploited to such an extent that populations were considered over-exploited by the end of 1950s [2,3,4]. The shark fishery in Seychelles was deemed overfished in 2007 and fishing effort has not seen marked reduction since. In Seychelles, sharks and rays contribute 20% of the semi-industrial total catch [5]. The artisanal sector dominates domestic fisheries and committed fishing effort continues to increase in this sector whilst CPUE has steeply declined by 82.5% since 1950s. Finning of sharks is only prohibited by foreign vessels in Seychelles waters and industrial and semi-industrial fisheries do otherwise practice finning for export [1]. Problems with illegal, unreported and unregulated fishing for sharks across the country persist and further strain local shark populations. Considered in the context of the history of the fishery baseline and of shark fishery development, evidence indicates a significant decline in shark stocks during the second half of the 20th century [2].

The percentage contribution of shark to total catch in the artisanal fishery declined from ~ 4 % from 1970 to ~ 2% in 2000 [2]. This equates to an 64.6 % population decline over three generations for this species. Although no species-specific population data are available, given the long-term overexploitation and inferred population decline of sharks in Seychelles, it is conservatively suspected that this species is undergoing a population reduction in Seychelles that is consistent with global rates of decline and thus experiencing a reduction of > 80% over the past three generation lengths (45 years). This suspected population reduction is based on low maximum rates of population increase, the continued presence of this species in fisheries markets, current and ongoing levels of exploitation, as well as inferred population declines for sharks in Seychelles. This species is therefore assessed as Critically Endangered A2bd. It is unknown if this species experiences significant immigration of propagules from extra-regional populations and so this species listing does not require regional adjustment.

Eretmochelys imbricata: **CR**

This species is broadly distributed throughout Seychelles. Across its global range and within Seychelles this species faces threats from over-exploitation of adult females and eggs at nesting beaches, degradation of nesting habitats, take of juveniles and adults in foraging areas, incidental mortality relating to marine fisheries, and degradation of marine habitats (Mortimer and Donnelly 2008). Seychelles is one of the few places in the world where records of long-term monitoring of both protected and unprotected beaches are available [6]. For the inner islands of Seychelles, monitoring was conducted at all 22 islands during both the early 1980s and the early 2000s. Nesting populations at the two islands that had been well-protected since the 1970s increased by 389% during a period of two decades; meanwhile, the nesting populations at 13 islands that had received no protection prior to 1994 declined by 59% during the same period. When all 22 of the inner islands are considered together, there was an overall decline of 24% in the total nesting population between the early 1980s and the early 2000s. Based on this rate of decline over 20 years and given the estimated generation length for this species (45 years) and the continuing threats to it, a 85.7% decline can be inferred over three generations. This species is therefore assessed as Critically Endangered under criterion A2bd in Seychelles. This species does breed within the Seychelles and it likely receives significant immigration of propagules from outside the region. This immigration is expected to decrease but it is unknown whether the regional population is a sink, thus no adjustment is necessary to the initial classification of this species as Critically Endangered.

Carcharhinus amblyrhynchos: **EN**

The distribution of this species throughout Seychelles is poorly defined. It has been found in fisheries markets up to 2013 and this species contributes the greatest proportion to the catch of sharks and rays in Seychelles artisanal catch (31.7% in 2013 [1]). Generally, shark populations in Seychelles have been exploited to such an extent that populations were considered over-exploited by the end of 1950s [2,3,4]. In Seychelles, sharks and rays contribute 20% of the semi-industrial total catch [5]. The artisanal sector dominates domestic fisheries and committed fishing effort continues to increase in this sector whilst CPUE has steeply declined by 82.5% since 1950s. Finning of sharks is only prohibited by foreign vessels in Seychelles waters and industrial and semi-industrial fisheries do otherwise practice finning for export [1]. Problems with illegal, unreported and unregulated fishing for sharks across the country persist and further strain local shark populations. Considered in the context of the history of the fishery baseline and of shark fishery development, evidence indicates a significant decline in shark stocks during the second half of the 20th century [2]. The percentage contribution of shark to total catch in the artisanal fishery declined from ~ 4 % from 1970 to ~ 2% in 2000 [2]. This equates to a 64.6% population decline over three generations for this species. Although no species-specific population data are available, given the long-term overexploitation and inferred population decline of sharks in Seychelles, it is conservatively suspected that this species is undergoing a

population reduction of > 50% over the past three generation lengths (45 years). This suspected population reduction is based on low maximum rates of population increase, the continued presence of this species in fisheries markets, current and ongoing levels of exploitation, as well as inferred population declines for sharks in Seychelles. This species is therefore assessed as Endangered A2bd. It is unknown if this species experiences significant immigration of propagules from extra-regional populations and so this species listing does not require regional adjustment.

Balaenoptera musculus: **LC**

The distribution of this species throughout Seychelles is poorly known. Globally this species is listed as Endangered due to historical population declines associated with direct exploitation [7]. Populations are now increasing and it is not a targeted species in Seychelles. This species is therefore listed as Least Concern. It is unknown if this species breeds within the region but there is no expectation that immigration of propagules into the region will decrease, thus the species listing does not require regional adjustment.

Cheilinus undulatus: **EN**

This reef-associated species is distributed throughout Seychelles. Juveniles occur in shallow coral reefs, lagoons and seagrass areas inshore, whereas adults tend to occupy steep outer reef slopes. It is not protected or subject to fisheries regulations despite its Endangered status, globally. It is caught in fish trap and handline fisheries [2]. Though total global catch for this species is only 400 mt annually [54], severe declines are noted in all places with available data very soon after fishing begins and where management is not effective [8]. Given the susceptibility of this species to fishing pressures and the evidence that it is severely reduced anywhere it is fished, it is suspected that this species is undergoing population decline in Seychelles concurrent with global declines of > 50% over three generations. This species is therefore listed as Endangered A2bd. It is not expected that this species experiences significant immigration of propagules from extra-regional populations and so this species listing does not require regional adjustment.

Rhincodon typus: **LC**

This species is distributed throughout Seychelles, though rarely seen in the inner islands. This species is protected throughout Seychelles at all times under the Wild Animals Protection Regulations of 1993 [1]. It was not previously fished in Seychelles waters and is not a targeted species in fisheries. This species is therefore listed as Least Concern.

Chelonia mydas: **EN**

The global assessment for this species is the result of assessment of a series of index sites and is based on annual number of nesting females. Based on estimates of longevity, generation length and on the actual and extrapolated changes in subpopulation size for the Seychelles index, it is estimated that the mean annual number of nesting females has declined by 78.5% in Seychelles over the last three generations. This species is therefore assessed as Endangered A2bd. Subpopulations of this species are generally deemed genetically distinct [9] and thus this species likely does not receive any significant propagules from outside the region and does not require a regional adjustment to its initial listing.

Albula glossodonta: **VU**

This species is closely associated with mangroves, seagrasses and other coastal habitats. Given the continuing worldwide declines in mangrove habitat of 2% per year [10] as well as the decline of Indo-Pacific seagrass habitat, it is suspected that this species is undergoing an extreme habitat loss in Seychelles that is concurrent with its broader global population. It is estimated that the population decline of this species in Seychelles is equal to or greater than 30% and thus it is listed as Vulnerable

under criterion A2bcd. It is unlikely that the population receives any significant immigration of propagules from outside of the region, thus the species listing does not require regional adjustment.

Carcharhinus albimarginatus: **EN**

The distribution of this species throughout Seychelles is poorly defined. It has been found in fisheries markets up to 2013, forming 5.2% of the total artisanal catch in that year [1]. Generally, shark populations in Seychelles have been exploited to such an extent that populations were considered over-exploited by the end of 1950s [2,3,4]. In Seychelles, sharks and rays contribute 20% of the semi-industrial total catch [5]. The artisanal sector dominates domestic fisheries and committed fishing effort continues to increase in this sector whilst CPUE has steeply declined by 82.5% since 1950s. Finning of sharks is only prohibited by foreign vessels in Seychelles waters and industrial and semi-industrial fisheries do otherwise practice finning for export [1]. Problems with illegal, unreported and unregulated fishing for sharks across the country persist and further strain local shark populations. Considered in the context of the history of the fishery baseline and of shark fishery development, evidence indicates a significant decline in shark stocks during the second half of the 20th century [2]. The percentage contribution of shark to total catch in the artisanal fishery declined from ~ 4 % from 1970 to ~ 2% in 2000 [2]. This equates to a 78.2% population decline over three generations for this species. Although no species-specific population data are available, given the long-term overexploitation and inferred population decline of sharks in Seychelles, it is conservatively suspected that this species is undergoing a population reduction of > 50% over the past three generation lengths (66 years). This suspected population reduction is based on low maximum rates of population increase, the continued presence of this species in fisheries markets, current and ongoing levels of exploitation, as well as inferred population declines for sharks in Seychelles. This species is therefore assessed as Endangered A2bd. It is unknown if this species experiences significant immigration of propagules from extra-regional populations and so this species listing does not require regional adjustment.

Carcharhinus leucas: **EN**

The distribution of this species throughout Seychelles is poorly defined. It has been found in fisheries markets up to 2013. This species is a perceived threat in Seychelles and is subject to targeted fishing operations [1]. Generally, shark populations in Seychelles have been exploited to such an extent that populations were considered over-exploited by the end of 1950s [2,3,4]. In Seychelles, sharks and rays contribute 20% of the semi-industrial total catch [5]. The artisanal sector dominates domestic fisheries and committed fishing effort continues to increase in this sector whilst CPUE has steeply declined by 82.5% since 1950s. Finning of sharks is only prohibited by foreign vessels in Seychelles waters and industrial and semi-industrial fisheries do otherwise practice finning for export [1]. Problems with illegal, unreported and unregulated fishing for sharks across the country persist and further strain local shark populations. Considered in the context of the history of the fishery baseline and of shark fishery development, evidence indicates a significant decline in shark stocks during the second half of the 20th century [2]. The percentage contribution of shark to total catch in the artisanal fishery declined from ~ 4 % from 1970 to ~ 2% in 2000 [2]. This equates to a 84.3% population decline over three generations for this species. Although no species-specific population data are available, given the long-term overexploitation and inferred population decline of sharks in Seychelles, it is conservatively suspected that this species is undergoing a population reduction of > 50% over the past three generation lengths (80 years). This suspected population reduction is based on low maximum rates of population increase, the continued presence of this species in fisheries markets, current and ongoing levels of exploitation, as well as inferred population declines for sharks in Seychelles. This species is therefore assessed as Endangered A2bd. It is unknown if this species experiences significant immigration of propagules from extra-regional populations and so this species listing does not require regional adjustment.

Carcharhinus melanopterus: **EN**

The distribution of this species throughout Seychelles is poorly defined. It has been found in fisheries markets up to 2013. This species has nearly been completely extirpated from Seychelles plateau [1]. Generally, shark populations in Seychelles have been exploited to such an extent that populations were considered over-exploited by the end of 1950s [2,3,4]. In Seychelles, sharks and rays contribute 20% of the semi-industrial total catch [5]. The artisanal sector dominates domestic fisheries and committed fishing effort continues to increase in this sector whilst CPUE has steeply declined by 82.5% since 1950s. Finning of sharks is only prohibited by foreign vessels in Seychelles waters and industrial and semi-industrial fisheries do otherwise practice finning for export [1]. Problems with illegal, unreported and unregulated fishing for sharks across the country persist and further strain local shark populations. Considered in the context of the history of the fishery baseline and of shark fishery development, evidence indicates a significant decline in shark stocks during the second half of the 20th century [2]. The percentage contribution of shark to total catch in the artisanal fishery declined from ~ 4 % from 1970 to ~ 2% in 2000 [2]. This equates to a 63.8% population decline over three generations for this species. Although no species-specific population data are available, given the long-term overexploitation and inferred population decline of sharks in Seychelles, it is conservatively suspected that this species is undergoing a population reduction of > 50% over the past three generation lengths (44 years). This suspected population reduction is based on low maximum rates of population increase, the continued presence of this species in fisheries markets, current and ongoing levels of exploitation, as well as inferred population declines for sharks in Seychelles. This species is therefore assessed as Endangered A2bd. It is unknown if this species experiences significant immigration of propagules from extra-regional populations and so this species listing does not require regional adjustment.

Negaprion acutidens: **EN**

The distribution of this species throughout Seychelles is poorly defined. It has been found in fisheries markets up to 2013 [1]. Generally, shark populations in Seychelles have been exploited to such an extent that populations were considered over-exploited by the end of 1950s [2,3,4]. In Seychelles, sharks and rays contribute 20% of the semi-industrial total catch [5]. The artisanal sector dominates domestic fisheries and committed fishing effort continues to increase in this sector whilst CPUE has steeply declined by 82.5% since 1950s. Finning of sharks is only prohibited by foreign vessels in Seychelles waters and industrial and semi-industrial fisheries do otherwise practice finning for export [1]. Problems with illegal, unreported and unregulated fishing for sharks across the country persist and further strain local shark populations. Considered in the context of the history of the fishery baseline and of shark fishery development, evidence indicates a significant decline in shark stocks during the second half of the 20th century [2]. The percentage contribution of shark to total catch in the artisanal fishery declined from ~ 4 % from 1970 to ~ 2% in 2000 [2]. This equates to a 63.8% population decline over three generations for this species. Although no species-specific population data are available, given the long-term overexploitation and inferred population decline of sharks in Seychelles, it is conservatively suspected that this species is undergoing a population reduction of > 50% over the past three generation lengths (44 years). This suspected population reduction is based on low maximum rates of population increase, the continued presence of this species in fisheries markets, current and ongoing levels of exploitation, as well as inferred population declines for sharks in Seychelles. This species is therefore assessed as Endangered A2bd. It is unknown if this species experiences significant immigration of propagules from extra-regional populations and so this species listing does not require regional adjustment.

Triaenodon obesus: **VU**

The distribution of this species throughout Seychelles is poorly defined. It has been found in fisheries markets up to 2013, however, it is by far the most commonly seen shark by divers and its low

occurrence in markets reflects its low commercial value in Seychelles. It is generally released by fishers when caught [1]. This reef shark species is however largely dependent on reef systems (Compagno 1984). The area of occupancy for a species can be defined as an area essential to the survival of a species at any life stage [11]. The total area of coral reef habitat in Seychelles is approximately 1690 km² [12,13]. Primary threats to this species habitat in Seychelles come from dredging and reclamation, climate change, invasive species and excessive fishing pressure [13]. The scale of these threats are such that they represent ≤ 10 locations across Seychelles. Given the range restriction and the continuing loss of habitat due to a compilation of threats, this species is listed as Vulnerable B2ab(iii). It is unknown if this species experiences significant immigration of propagules from extra-regional populations and so this species listing does not require regional adjustment.

Physeter macrocephalus: **LC**

The distribution of this species throughout Seychelles is poorly known. Globally this species is listed as Vulnerable due to historical population declines associated with past exploitation [14]. Populations are now increasing and it is not a targeted species in Seychelles. This species is therefore listed as Least Concern. It is unknown if this species breeds within the region but there is no expectation that immigration of propagules into the region will decrease, thus the species listing does not require regional adjustment.

Pateobatis fai: **VU**

The distribution of this species throughout Seychelles is poorly defined. This species is not a targeted component of fisheries and is rarely found in markets. Juveniles likely use shallow coral reefs and lagoons as nursery areas [16]. The area of occupancy for a species can be defined as an area essential to the survival of a species at any life stage [11]. The total area of coral reef habitat in Seychelles is approximately 1690 km² [12,13]. Primary threats to this species habitat in Seychelles come from dredging and reclamation, climate change, invasive species and excessive fishing pressure [13]. The scale of these threats are such that they represent ≤ 10 locations across Seychelles. Given the range restriction and the continuing loss of habitat due to a compilation of threats, this species is listed as Vulnerable B2ab(iii). It is unknown if this species experiences significant immigration of propagules from extra-regional populations and so this species listing does not require regional adjustment.

Pastinachus ater: **VU**

The distribution of this species throughout Seychelles is poorly defined. This species is not a targeted component of fisheries and is rarely found in markets. In Seychelles, juveniles of this species are known to use restricted lagoon and atoll environments as nursery areas in the first years of life [17]. The area of occupancy for a species can be defined as an area essential to the survival of a species at any life stage [11]. The total area of coral reef habitat in Seychelles is approximately 1690 km² [12,13]. Primary threats to this species habitat in Seychelles come from dredging and reclamation, climate change, invasive species and excessive fishing pressure [13]. The scale of these threats are such that they represent ≤ 10 locations across Seychelles. Given the range restriction and the continuing loss of habitat due to a compilation of threats, this species is listed as Vulnerable B2ab(iii). It is unknown if this species experiences significant immigration of propagules from extra-regional populations and so this species listing does not require regional adjustment.

Taeniurops meyeri: **VU**

The distribution of this species throughout Seychelles is poorly defined. This species is not a targeted component of fisheries and is rarely found in markets. The area of occupancy for a species can be defined as an area essential to the survival of a species at any life stage [11]. This species is benthic and known from coral reef habitats [15]. The total area of coral reef habitat in Seychelles is approximately 1690 km² [12,13]. Primary threats to this species habitat in Seychelles come from

dredging and reclamation, climate change, invasive species and excessive fishing pressure [13]. The scale of these threats are such that they represent ≤ 10 locations across Seychelles. Given the range restriction and the continuing loss of habitat due to a compilation of threats, this species is listed as Vulnerable B2ab(iii). It is unknown if this species experiences significant immigration of propagules from extra-regional populations and so this species listing does not require regional adjustment.

Urogymnus asperrimus: **VU**

The distribution of this species throughout Seychelles is poorly defined. This species is not a targeted component of fisheries and is rarely found in markets. In Seychelles, juveniles of this species are known to use restricted lagoon and atoll environments as nursery areas in the first years of life [17]. The area of occupancy for a species can be defined as an area essential to the survival of a species at any life stage [11]. The total area of coral reef habitat in Seychelles is approximately 1690 km² [12,13]. Primary threats to this species habitat in Seychelles come from dredging and reclamation, climate change, invasive species and excessive fishing pressure [13]. The scale of these threats are such that they represent ≤ 10 locations across Seychelles. Given the range restriction and the continuing loss of habitat due to a compilation of threats, this species is listed as Vulnerable B2ab(iii). It is unknown if this species experiences significant immigration of propagules from extra-regional populations and so this species listing does not require regional adjustment.

Urogymnus granulatus: **VU**

The distribution of this species throughout Seychelles is poorly defined. This species is not a targeted component of fisheries and is rarely found in markets. In Seychelles, juveniles of this species are known to use restricted lagoon and atoll environments as nursery areas in the first years of life [17]. The area of occupancy for a species can be defined as an area essential to the survival of a species at any life stage [11]. The total area of coral reef habitat in Seychelles is approximately 1690 km² [12,13]. Primary threats to this species habitat in Seychelles come from dredging and reclamation, climate change, invasive species and excessive fishing pressure [13]. The scale of these threats are such that they represent ≤ 10 locations across Seychelles. Given the range restriction and the continuing loss of habitat due to a compilation of threats, this species is listed as Vulnerable B2ab(iii). It is unknown if this species experiences significant immigration of propagules from extra-regional populations and so this species listing does not require regional adjustment.

Mobula alfredi: **VU**

The distribution of this species throughout Seychelles is poorly defined. This species is not a targeted component of fisheries and is rarely found in markets. The area of occupancy for a species can be defined as an area essential to the survival of a species at any life stage [11]. This neritic and oceanic pelagic ray species is typically resident in near-shore coral and rocky reef habitats Marshall et al., (2009). The total area of coral reef habitat in Seychelles is approximately 1690 km² [12,13]. Primary threats to this species habitat in Seychelles come from dredging and reclamation, climate change, invasive species and excessive fishing pressure [13]. The scale of these threats are such that they represent ≤ 10 locations across Seychelles. Given the range restriction and the continuing loss of habitat due to a compilation of threats, this species is listed as Vulnerable B2ab(iii). Sub-populations are generally considered widely separated and with low connectivity. It is therefore unlikely that species experiences significant immigration of propagules from extra-regional populations and so this species listing does not require regional adjustment.

Aetobatus ocellatus: **VU**

The distribution of this species throughout Seychelles is poorly defined. This species is not a targeted component of fisheries and is rarely found in markets. The area of occupancy for a species can be defined as an area essential to the survival of a species at any life stage [11] and this species is

commonly associated with coral reef ecosystems, often relying on reef environments to feed. The total area of coral reef habitat in Seychelles is approximately 1690 km² [12,13]. Primary threats to this species habitat in Seychelles come from dredging and reclamation, climate change, invasive species and excessive fishing pressure [13]. The scale of these threats are such that they represent ≤ 10 locations across Seychelles. Given the range restriction and the continuing loss of habitat due to a compilation of threats, this species is listed as Vulnerable B2ab(iii). It is unknown if this species experiences significant immigration of propagules from extra-regional populations and so this species listing does not require regional adjustment.

Nebrius ferrugineus: **VU**

The distribution of this species throughout Seychelles is poorly defined. This species is not a targeted component of fisheries and is rarely found in markets. The area of occupancy for a species can be defined as an area essential to the survival of a species at any life stage [11]. This species occurs on coral reefs and has a limited home range. The total area of coral reef habitat in Seychelles is approximately 1690 km² [12,13]. Primary threats to this species habitat in Seychelles come from dredging and reclamation, climate change, invasive species and excessive fishing pressure [13]. The scale of these threats are such that they represent ≤ 10 locations across Seychelles. Given the range restriction and the continuing loss of habitat due to a compilation of threats, this species is listed as Vulnerable B2ab(iii). It is unknown if this species experiences significant immigration of propagules from extra-regional populations and so this species listing does not require regional adjustment.

Epinephelus polyphekadion: **VU**

The distribution of this species throughout Seychelles is poorly defined. This species is not a targeted component of fisheries and is rarely found in markets. The area of occupancy for a species can be defined as an area essential to the survival of a species at any life stage [11]. This species is known to inhabit coral rich areas. The total area of coral reef habitat in Seychelles is approximately 1690 km² [12,13]. Primary threats to this species habitat in Seychelles come from dredging and reclamation, climate change, invasive species and excessive fishing pressure [13]. The scale of these threats are such that they represent ≤ 10 locations across Seychelles. Given the range restriction and the continuing loss of habitat due to a compilation of threats, this species is listed as Vulnerable B2ab(iii). It is unknown if this species experiences significant immigration of propagules from extra-regional populations and so this species listing does not require regional adjustment.

Epinephelus fuscoguttatus: **VU**

The distribution of this species throughout Seychelles is poorly defined. This species is not a targeted component of fisheries and is rarely found in markets. The area of occupancy for a species can be defined as an area essential to the survival of a species at any life stage [11]. This species is known to only inhabit reef environments (Rhodes et al., 2018). The total area of coral reef habitat in Seychelles is approximately 1690 km² [12,13]. Primary threats to this species habitat in Seychelles come from dredging and reclamation, climate change, invasive species and excessive fishing pressure [13]. The scale of these threats are such that they represent ≤ 10 locations across Seychelles. Given the range restriction and the continuing loss of habitat due to a compilation of threats, this species is listed as Vulnerable B2ab(iii). It is unknown if this species experiences significant immigration of propagules from extra-regional populations and so this species listing does not require regional adjustment.

Galeocerdo cuvier: **CR**

The distribution of this species throughout Seychelles is poorly known. It has been found in fisheries markets up to 2013 [1]. Historical accounts indicate a marked decline in populations of this species [2] and generally, shark populations in Seychelles have been exploited to such an extent that populations were considered over-exploited by the end of 1950s [2,3,4]. The shark fishery in

Seychelles was deemed overfished in 2007. In Seychelles, sharks and rays contribute 20% of the semi-industrial total catch [5]. The artisanal sector dominates domestic fisheries and committed fishing effort continues to increase in this sector whilst CPUE has steeply declined by 82.5% since 1950s. Finning of sharks is only prohibited by foreign vessels in Seychelles waters and industrial and semi-industrial fisheries do otherwise practice finning for export [1]. Problems with illegal, unreported and unregulated fishing for sharks across the country persist and further strain local shark populations. Considered in the context of the history of the fishery baseline and of shark fishery development, evidence indicates a significant decline in shark stocks during the second half of the 20th century [2]. The percentage contribution of shark to total catch in the artisanal fishery declined from ~ 4 % from 1970 to ~ 2% in 2000 [2]. This equates to an 88.3% population decline over three generations for this species. Although no species-specific population data are available, given the long-term overexploitation and inferred population decline of this species specifically in Seychelles, it is conservatively suspected that this species is undergoing a population reduction in Seychelles of > 80% over the past three generation lengths (68 years). This suspected population reduction is based on low maximum rates of population increase, the continued presence of this species in fisheries markets, current and ongoing levels of exploitation, as well as inferred population declines for this species in Seychelles. This species is therefore assessed as Critically Endangered A2bd. It is unknown if this species experiences significant immigration of propagules from extra-regional populations and so this species listing does not require regional adjustment.

Loxodon macrorhinus: **VU**

The distribution of this species throughout Seychelles is poorly defined. This species is not a targeted component of fisheries and is rarely found in markets. The area of occupancy for a species can be defined as an area essential to the survival of a species at any life stage [11]. This reef shark species is highly associated with coral reef habitats throughout its early life stages and known to use shallow reef-associated habitats as nurseries [18]. The total area of coral reef habitat in Seychelles is approximately 1690 km² [12,13]. Primary threats to this species habitat in Seychelles come from dredging and reclamation, climate change, invasive species and excessive fishing pressure [13]. The scale of these threats are such that they represent ≤ 10 locations across Seychelles. Given the range restriction and the continuing loss of habitat due to a compilation of threats, this species is listed as Vulnerable B2ab(iii). It is unknown if this species experiences significant immigration of propagules from extra-regional populations and so this species listing does not require regional adjustment.

Chaetodon trifascialis: **VU**

The distribution of this species throughout Seychelles is poorly defined. This species is not a targeted component of fisheries and is rarely found in markets. The area of occupancy for a species can be defined as an area essential to the survival of a species at any life stage [11]. This species is a coral reef dependent, exclusively occupying reef habitats and an obligate corallivore [19]. The total area of coral reef habitat in Seychelles is approximately 1690 km² [12,13]. Primary threats to this species habitat in Seychelles come from dredging and reclamation, climate change, invasive species and excessive fishing pressure [13]. The scale of these threats are such that they represent ≤ 10 locations across Seychelles. Given the range restriction and the continuing loss of habitat due to a compilation of threats, this species is listed as Vulnerable B2ab(iii). It is unlikely that this species experiences significant immigration of propagules from extra-regional populations and so this species listing does not require regional adjustment.

References:

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