

November 21st, 2020

Honorable Mrs. Gila Gamliel The Minister of Environment Israel public_shimua@sviva.gov.il; sar@sviva.gov.il

<u>Re: IUCN's Groupers and Wrasses Specialist Group supports declaration of Dusky grouper and</u> <u>Goldblotch grouper as protected species in Israel</u>

Dear Madam,

It has come to our attention that your government is considering to declare two groupers, the Dusky grouper (*Epinephelus marginatus*) and the Goldblotch grouper (*Epinephelus costae*), as protected species.

The IUCN¹ Groupers and Wrasses Specialist Group (GWSG) fully supports the declaration to protect the Dusky grouper and the Goldblotch grouper in Israel, as this measure is in line with current scientific knowledge on their known or indicated population and conservation status, and one that should confer effective protection. Both species are clearly in need of attention; the Dusky grouper status on the IUCN Red List is Vulnerable, and the Goldblotch grouper is listed as Data Deficient.

¹ The International Union for Conservation of Nature (IUCN) is the global authority on the status of the natural world and the measures needed to safeguard it. More than 200 States and government agencies, 1200 NGO's and 17,000 experts are members in IUCN. Established in 1964, the Red List of Threatened Species has evolved to become the world's most comprehensive information source on the global extinction risk status of animal, fungus and plant species. GWSG website: https://www.iucn.org/ssc-groups/fishes/grouper-and-wrasse

Groupers are among the more sensitive species to fishing, due to their biology as well as their desireability (value and taste). Time and time again and species after species, we have seen that their populations are being negatively impacted when they are exploited (even at low levels) in the absence of effective management. Groupers play an important role as predators in maintaining healthy marine ecosystems. They are also flagship species for divers, and hold potential economic benefits to local communities as an ecotourism and education resource.

Archaeological evidence strongly suggests that groupers were once very abundant in the Mediterranean before being overexploited in recent times (Guidetti et al., 2014;Woodson et al., 2018; Prato et al., 2013). Such changes are often not recognized or widely evident because of the 'shifting baseline' phenomenon, whereby changes over one or several human generations, or decades, may not be recognized, or noticed, due to a loss of knowledge about how things were before exploitation dominated (Pinnegar and Engelhard, 2008). This is particularly the case where fisheries have not been documented regularly and in a standardized way which is the typical case with groupers.

The Dusky grouper has been assessed as Vulnerable globally, and Endangered in the Mediterranean. There is no doubt that its populations have been reduced substantially in comparison to historic numbers.

The Goldblotch grouper has been assessed as Data Deficient, in this case a signal of concern but with insufficient data to complete a species assessment according to IUCN's strict metrics. However, it is very likely that its conservation status differs little from that of the Dusky grouper, due to their similar life history traits and behavior. Indeed, some argue that the precautionary approach calls for addressing all Data Deficient species as in need of protection (Parsons 2016).

The high sensitivity of groupers to fishing, especially their vulnerability if exploited at their spawning aggregations and without management, and the late sexual maturity (especially of males in the case of sex-changing species), requires effective conservation measures to allow enough adults to survive and reproduce to maintain populations at levels that enable healthy populations to persist. If management is successful, such species will continue to play a functional role in the ecosystem, while also providing economic benefit to fishers and other stakeholders. Experience has shown, again and again, that if management is delayed until populations are seriously reduced, recovery can be very slow, in the order of decades; hence these taxa clearly need to be managed in a precautionary manner (Sadovy de Mitcheson et al, 2020).

To effectively protect depleted marine species such as groupers in most fisheries a complete moratorium (as implemented in the United States for several groupers) is recommended to allow for recovery to start. In addition, creating and monitoring at least 10% of coastal areas with habitat for the species (ideally and ultimately 30% as under Conventional on Biodiversity global targets) as Marine Protected Areas (MPAs) is recommended in the long term. To be effective it would be important to forbid any type of fishing within an MPA, either professional or for sport, while eventually allowing visits by recreational (for non-extractive activities) divers and scientists.

MPAs are one important key to the long-term success of grouper protection. Israel has declared only 3% of its territorial waters as marine reserves. Since it is likely that the two species under consideration migrate long distances, particularly to spawn, they are vulnerable to fishing even with area protection (i.e. when they move out of protected areas). For this reason and due to the long

time-scales needed for the stock to rebuild (~10-30 years; García-Charton et al. 2008, Buchholz-Sørensen and Vella 2016), MPA's cannot serve as the sole conservation measure for depleted groupers in Israel under current conditions. This is why a complete ban on the fishing of groupers is needed as a first step and, indeed, has been the most effective method for returning grouper populations to a stable state in a number of countries, including for the Dusky grouper in France (Pollard et al, 2018).

Another crucial prerequisite for efficient fishery management is knowledge of the health of the fish stocks and of its importance to different stakeholders. Therefore, not only is information about the biology of the target species important, but fisheries' statistics data should be collected once fishing resumes. There is also non-fishing value from these fishes, in the form of attraction to the SCUBA diving community; Dusky grouper in particular are highly appreciated by the recreational divers elsewhere in the Mediterranean. The species have both extractive and non-extractive value to Society.

The IUCN Groupers and Wrasses Specialist Group fully supports the declaration of the Dusky grouper and the Goldblotch grouper as protected species in Israel, and believes that this measure will give substantial benefits to the Israeli public in the medium to longer term, as well as provide economic and social benefits to fishermen and recreation operators, looking to the future. On the other hand, absence of protection will eliminate these species in any functional sense in the ecosystem. Loss of the species is a loss for everybody.

We commend you on this important initiative to promote the protection of these unique animals and we are available to support if invited.

Sincerely yours,

Vonne Sadovy

Yvonne Sadovy and on behalf of Matthew Craig, Co-chairs GWSG

Copy to:

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LITERATURE CITED

- Buchholz-Sørensen, M., and A. Vella. 2016. Population Structure, Genetic Diversity, Effective Population Size, Demographic History and Regional Connectivity Patterns of the Endangered Dusky Grouper, *Epinephelus marginatus* (Teleostei: Serranidae), within Malta's Fisheries Management Zone. *PloS one* 11:e0159864.
- García-Charton, J. A., A. Pérez-Ruzafa, C. Marcos, J. Claudet, F. Badalamenti, L. Benedetti-Cecchi, J. M. Falcón, M. Milazzo, P. J. Schembri, B. Stobart, F. Vandeperre, A. Brito, R. Chemello, M. Dimech, P. Domenici, I. Guala, L. Le Diréach, E. Maggi, and S. Planes. 2008. Effectiveness of European Atlanto-Mediterranean MPAs: Do they accomplish the expected effects on populations, communities and ecosystems? *Journal for Nature Conservation* 16:193–221.
- Guidetti P, Baiata P, Ballesteros E, Di Franco A, Hereu B, et al. 2014. Large-Scale Assessment of Mediterranean Marine Protected Areas Effects on Fish Assemblages. PLoS ONE 9(4): e91841
- Pollard, D.A., Afonso, P., Bertoncini, A.A., Fennessy, S., Francour, P. & Barreiros, J. 2018. *Epinephelus marginatus*. *The IUCN Red List of Threatened Species* 2018: e.T7859A100467602. Downloaded on 28 October 2020.
- Parsons, E. C. M. (2016). "Why IUCN should replace "data deficient" conservation status with a precautionary "assume threatened" status—a cetacean case study." *Frontiers in Marine Science* **3**: 193.
- Prato G, Guidetti P, Bartolini F, Mangialajo L & Francour P. 2013. The importance of high-level predators in marine protected area management: Consequences of their decline and their potential recovery in the Mediterranean context, *Advances in Oceanography and Limnology*, 4:2, 176-193.
- Pinnegar, J.K., Engelhard, G.H. 2008. The 'shifting baseline' phenomenon: a global perspective. *Rev Fish Biol Fisheries* **18**, 1–16.
- Sadovy de Mitcheson, Y. J., C. Linardich, J. P. Barreiros, G. M. Ralph, A. Aguilar-Perera, P. Afonso, B. E. Erisman, D. A. Pollard, S. T. Fennessy, A. A. Bertoncini, R. J. Nair, K. L. Rhodes, P. Francour, T. Brulé, M. A. Samoilys, B. P. Ferreira, and M. T. Craig. 2020. Valuable but vulnerable: Over-fishing and under-management continue to threaten groupers so what now? *Marine Policy* 116.
- Woodson, C., Schramski, J.R. & Joye, S.B. 2018. A unifying theory for top-heavy ecosystem structure in the ocean. *Nat Commun* **9**, 23