

INFORMATION SHEET

Policy brief: “Small-scale fisheries and co-management schemes”

Charlotte Johnston of Crangon Ltd. was contracted on behalf of BiodivERsA by the Royal Belgian Institute of Natural Sciences to produce a policy brief based on the results of the following research projects funded by BiodivERsA: [PERCEBES](#) and [RESERVEBENEFIT](#) (BiodivERsA call 2015-2016), [REEF-FUTURES](#) (BiodivERsA call 2017-18) and [BUFFER](#) (BiodivERsA call 2011-12).

Knowledge and methodology used

The brief extracts and summarises some key results of the above projects and provides a list of relevant policy recommendations linked to current EU policy processes.

The brief was drafted by Charlotte Johnston in consultation with the BiodivERsA Policy Briefs Working Group and the leaders of each of the research projects. An initial outline brief was provided by the BiodivERsA secretariat including outputs from a workshop with the researchers. The outline included proposed policy recommendations and references to published papers resulting from the research projects and those in the late stages of publication.

Lead researchers from each of the projects identified the list of published papers on which the brief is based, and also which papers supported the key messages in particular.

Quality control

An initial and advanced draft of the brief was reviewed by the Policy Briefs Working Group and the research partners; and comments and suggestions made were addressed.

BiodivERsA funded research project contacts

[PERCEBES](#): Tools for the transition to spatial management of coastal resources: the stalked barnacle fishery in SW Europe

Contact: Jose Luis ACUÑA FERNÁNDEZ – Catedrático de Ecología, Observatorio Marino de Asturias, Departamento de Biología de Organismos y Sistemas, Universidad de Oviedo, Spain.

[RESERVEBENEFIT](#): Evaluating and managing connectivity in a network of Marine Protected Areas to maintain genetic diversity and deliver fish beyond protected limits

Contact : Stephanie MANEL – Ecole Pratique des Hautes Etudes, PSL, Centre d’Ecologie Fonctionnelle & Evolutive, Montpellier, France.

[REEF-FUTURES](#): The futures of reef services in the Anthropocene

Contact: David Mouillot – Ecole Pratique des Hautes Etudes, PSL, Centre d’Ecologie Fonctionnelle & Evolutive, Montpellier, France.

[BUFFER](#): Partially protected areas as buffers to increase the linked social-ecological resilience

Contact: Joachim Claudet –National Centre for Scientific Research, CRIOBE, Paris, France

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Xavier Le Roux, FRB France (Chair and Coordinator of BiodivERsA).

Sophie Germann, ANR France.

Catherine Julliot, Ministère de la Transition Ecologique (MTE) France.

Mari Susanne Solerød, RCN Norway.

Turgut Orman, MFAL Turkey.

Per Sjögren-Gulve, SEPA Sweden.

Published results supporting the brief

PERCEBES:

Aguion, A., Ojea, E., García-Flórez, L., Cruz, T., Garmendia, J.M., Davoult, D., Queiroga, H., Rivera, A., Acuña-Fernández, J.L., and Macho, G. 2021 in press. Establishing a governance threshold in small-scale fisheries to achieve sustainability. *AMBIO A Journal of the Human Environment*.

<https://link.springer.com/article/10.1007/s13280-021-01606-x>

Gelcich S, Fernandez M, Godoy N, Canepa A, Prado L, Castilla JC. 2012. Territorial User Rights for Fisheries as Ancillary Instruments for Marine Coastal Conservation in Chile. *Conservation Biology* 26(6), 1005-1015.

<https://doi.org/10.1111/j.1523-1739.2012.01928.x>

Rivera, A., Gelcich, S., García-Flórez, L., & Acuña, J. L. (2017). Heterogeneous management and conservation perceptions within the gooseneck barnacle co-management system in Asturias (N. Spain). *Marine Policy* 81 (2017): 229-235. <https://doi.org/10.1016/j.marpol.2017.03.020>

Rivera, A., Gelcich, S., García-Flórez, L., & Acuña, J. L. (2019). Social attributes can drive or deter the sustainability of bottom-up management systems. *Science of The Total Environment*, 690, 760-767.

<https://doi.org/10.1016/j.scitotenv.2019.06.323>

RESERVEBENEFIT:

Benestan L, Fietz K, Loiseau N, Guerin P-E, Trofimenko EP, Ruehs S, Schmidt C, Rath W, Biastoch A, Pérez-Ruzafa A, Baixauli P, Forcada A, Arcas E, Lenfant P, Mallol S, Goñi R, Velez L, Höppner M, Kininmonth S, Mouillot D, Puebla O & Manel S. 2021 Restricted dispersal in a sea of gene flow. *Proceedings of the Royal Society B*, 288, 20210458. <https://doi.org/10.1098/rspb.2021.0458>

Fietz K, Trofimenko E, Guerin P-E, Arnal V, Torres-Oliva M, Lobréaux S, Pérez-Ruzafa A, Manel, W & Puebla O. 2020 New genomic resources for three exploited Mediterranean fishes. *Genomics*, 112(6), 4297-4303.

<https://doi.org/10.1016/j.ygeno.2020.06.041>

Kininmonth S, Weeks R, Abesamis RA, Bernardo LPC, Beger M, Treml E, Williamson D, Pressey R. 2019 Strategies in scheduling marine protected area establishment in a network system. *Ecological Applications*; 29(1). <https://doi.org/10.1002/eap.1820>

Manel S, Loiseau N, Andrello M, Fietz K, Goñi R, Forcada A, Lenfant P, Kininmonth S, Marcos C, Marques V, Mallol S, Pérez-Ruzafa A, Breusing C, Puebla O & Mouillot D. 2019 Long-Distance Benefits of Marine Reserves: Myth or Reality?. *Trends in Ecology & Evolution*, 34(4), 342-354.

<https://doi.org/10.1016/j.tree.2019.01.002>

REEF-FUTURES:

Cinner JE, Zamborain-Mason J, Gurney GG et al. 2020. Meeting fisheries, ecosystem function and biodiversity goals in a human-dominated world. *Science* 368(6488), 307-311.

<https://science.sciencemag.org/content/368/6488/307>

BUFFER:

Horta e Costa B, Claudet J, Franco G, Erzini K, Caro A, Gonçalves EJ (2016). A Regulation-Based Classification System for Marine Protected Areas (MPAs). *Marine Policy* 72: 192-198.

<https://doi.org/10.1016/j.marpol.2016.06.021>

Zupan M, Fragkopoulou E, Claudet K, Erzini K, Horta e Costa B, Goncalves EJ. 2018 Marine partially protected areas: drivers of ecological effectiveness. *Frontiers in Ecology and the Environment*, 16(7), 381-

387. <https://doi.org/10.1002/fee.1934>

Other sources

Video: "[Gatherers in XXI century Europe: The gooseneck barnacle fishery](#)"

Documentary about the science and the management of the gooseneck barnacle fishery in the southwestern coast of Europe. It portrays the power of co-management to achieve a sustainable exploitation of the resource and to find solutions to the pressing problem of poaching. It also shows results from European research project PERCEBES on the recovery of exploited gooseneck barnacle populations and on the connection of distant populations by the drift of their pelagic larvae.

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