

Stephanie D'agata

## Biography

I am a conservation scientist aiming at investigating the consequences of human activities on the disruption of coral reef ecosystem functioning now and in the future, and the consequences for local communities through the loss of ecosystem benefits. Part of my research focused on assessing the effectiveness of Marine Protected Areas (MPAs) in conserving fish functional diversity using wilderness areas as biodiversity references. After my PhD, I worked for about two years for the Wildlife Conservation Society (WCS) at Madagascar as the scientific advisor of the marine program. During this experience I could witness the complexity of socio-ecological systems in small-scale fisheries. I am currently a postdoctoral fellow with both the Macquarie University in Sydney (Australia) and WCS through the Marine Monitoring project (PI Dr Emily Darling). My research focused now on investigating the management outputs across WCS seascapes as well as assessing the MPAs network in the Western Indian Ocean (WIO) looking at, among others, the distribution of fish functional diversity and how well protected it is by the current MPA network.

## Employment

### Research outputs

#### **Aligning marine spatial conservation priorities with functional connectivity across maritime jurisdictions**

Maina, J. M., Gamoyo, M., Adams, V. M., D'agata, S., Bosire, J., Francis, J. & Waruinge, D., 24 Dec 2019, In : Conservation Science and Practice.

#### **Implementing a social-ecological systems framework for conservation monitoring: lessons from a multi-country coral reef program**

Gurney, G. G., Darling, E. S., Jupiter, S. D., Mangubhai, S., McClanahan, T. R., Lestari, P., Pardede, S., Campbell, S. J., Fox, M., Naisilisili, W., Muthiga, N. A., D'agata, S., Holmes, K. E. & Rossi, N. A., Dec 2019, In : Biological Conservation. 240, p. 1-9 9 p., 108298.

#### **Temperature patterns and mechanisms influencing coral bleaching during the 2016 El Niño**

McClanahan, T. R., Darling, E. S., Maina, J. M., Muthiga, N. A., D'agata, S., Jupiter, S. D., Arthur, R., Wilson, S. K., Mangubhai, S., Nand, Y., Ussi, A. M., Humphries, A. T., Patankar, V. J., Guillaume, M. M. M., Keith, S. A., Shedrawi, G., Julius, P., Grimsditch, G., Ndagala, J. & Leblond, J., Nov 2019, In : Nature Climate Change. 9, p. 845-851 12 p.

#### **Gravity of human impacts mediates coral reef conservation gains**

Cinner, J. E., Maire, E., Huchery, C., MacNeil, M. A., Graham, N. A. J., Mora, C., McClanahan, T. R., Barnes, M. L., Kittinger, J. N., Hicks, C. C., D'Agata, S., Hoey, A. S., Gurney, G. G., Feary, D. A., Williams, I. D., Kulbicki, M., Vigliola, L., Wantiez, L., Edgar, G. J., Stuart-Smith, R. D. & 17 others, Sandin, S. A., Green, A., Hardt, M. J., Beger, M., Friedlander, A. M., Wilson, S. K., Brokovich, E., Brooks, A. J., Cruz-Motta, J. J., Booth, D. J., Chabanet, P., Gough, C., Tupper, M., Ferse, S. C. A., Sumaila, U. R., Pardede, S. & Mouillot, D., 3 Jul 2018, In : Proceedings of the National Academy of Sciences of the United States of America. 115, 27, p. E6116-E6125 10 p.

#### **Coral reefs: fishing for sustainability**

Darling, E. S. & D'agata, S., 23 Jan 2017, In : Current Biology. 27, 2, p. R65-R68 4 p.

#### **Unexpected high vulnerability of functions in wilderness areas: evidence from coral reef fishes**

D'agata, S., Vigliola, L., Graham, N. A. J., Wantiez, L., Parravicini, V., Villéger, S., Mou-Tham, G., Frolla, P., Friedlander, A. M., Kulbicki, M. & Mouillot, D., 14 Dec 2016, In : Proceedings of the Royal Society B: Biological Sciences. 283, 1844, p. 1-10 10 p., 20160128.

#### **Marine reserves lag behind wilderness in the conservation of key functional roles**

D'Agata, S., Mouillot, D., Wantiez, L., Friedlander, A. M., Kulbicki, M. & Vigliola, L., 29 Jun 2016, In : Nature Communications. 7, p. 1-10 10 p., 12000.

#### **Bright spots among the world's coral reefs**

Cinner, J. E., Huchery, C., MacNeil, M. A., Graham, N. A. J., McClanahan, T. R., Maina, J., Maire, E., Kittinger, J. N., Hicks, C. C., Mora, C., Allison, E. H., D'Agata, S., Hoey, A., Feary, D. A., Crowder, L., Williams, I. D., Kulbicki, M., Vigliola, L., Wantiez, L., Edgar, G. & 19 others, Stuart-Smith, R. D., Sandin, S. A., Green, A. L., Hardt, M. J., Beger, M., Friedlander, A., Campbell, S. J., Holmes, K. E., Wilson, S. K., Brokovich, E., Brooks, A. J., Cruz-Motta, J. J., Booth, D. J., Chabanet, P., Gough, C., Tupper, M., Ferse, S. C. A., Sumaila, U. R. & Mouillot, D., 15 Jun 2016, In : Nature. 535, 7612,

p. 416-419 4 p.

**How accessible are coral reefs to people? A global assessment based on travel time**

Maire, E., Cinner, J., Velez, L., Huchery, C., Mora, C., Dagata, S., Vigliola, L., Wantiez, L., Kulbicki, M. & Mouillot, D., Apr 2016, In : Ecology Letters. 19, 4, p. 351-360 10 p.

**Human-mediated loss of phylogenetic and functional diversity in coral reef fishes**

D'agata, S., Mouillot, D., Kulbicki, M., Andréfouët, S., Bellwood, D. R., Cinner, J. E., Cowman, P. F., Kronen, M., Pinca, S. & Vigliola, L., 3 Mar 2014, In : Current Biology. 24, 5, p. 555-560 6 p.

**Global patterns and predictors of tropical reef fish species richness**

Parravicini, V., Kulbicki, M., Bellwood, D. R., Friedlander, A. M., Arias-Gonzalez, J. E., Chabanet, P., Floeter, S. R., Myers, R., Vigliola, L., D'Agata, S. & Mouillot, D., 1 Dec 2013, In : Ecography. 36, 12, p. 1254-1262 9 p.

**The Coral Sea: physical environment, ecosystem status and biodiversity assets**

Ceccarelli, D. M., McKinnon, A. D., Andréfouët, S., Allain, V., Young, J., Gledhill, D. C., Flynn, A., Bax, N. J., Beaman, R., Borsa, P., Brinkman, R., Bustamante, R. H., Campbell, R., Cappel, M., Cravatte, S., D'Agata, S., Dichmont, C. M., Dunstan, P. K., Dupouy, C., Edgar, G. & 24 others, Farman, R., Furnas, M., Garrigue, C., Hutton, T., Kulbicki, M., Letourneur, Y., Lindsay, D., Menkes, C., Mouillot, D., Parravicini, V., Payri, C., Pelletier, B., Richer de Forges, B., Ridgway, K., Rodier, M., Samadi, S., Schoeman, D., Skewes, T., Swearer, S., Vigliola, L., Wantiez, L., Williams, A., Williams, A. & Richardson, A. J., 5 Nov 2013, In : Advances in Marine Biology. 66, p. 213-290 78 p.