

David M. Kaplan

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AREAS OF SPECIALIZATION

Marine protected areas (MPAs); Marine spatial planning (MSP); Population dynamics of marine species; Meta-population modeling; Larval dispersal and connectivity; Marine conservation; Fisheries management; Tuna fisheries; Coastal oceanography; Species distribution modeling; Dynamics of upwelling systems

EDUCATION

2013 **Habilité de diriger recherche (HDR), U. Montpellier II, France**

1993-1997 **Doctor of Philosophy (PhD)**, Department of Physics, Univ. of California at Santa Barbara. Dissertation: Some new developments in the study of black holes and solitons in string theory. Adviser: Prof. A. Strominger.

1993-1996 **Master of Arts**, Department of Physics, University of California at Santa Barbara. Adviser: Prof. A. Strominger.

1989-1993 **Honors Bachelor of Sciences (*Magna Cum Laude*)** in Math/Physics, Brown University, Providence, RI. Sr. thesis adviser: Prof. R. Brandenberger.

1989 **High School**, Northern Highlands Regional, Allendale, NJ (with honors).

RESEARCH APPOINTMENTS

2017- **Chargé de Recherche, IRD, UMR MARBEC, Sète, France**

2017 **Associate Professor, Virginia Institute of Marine Science (VIMS), College of William & Mary, Virginia, USA**

2014-2017 **Assistant Professor, Virginia Institute of Marine Science (VIMS), College of William & Mary, Virginia, USA**

2007-2014 **Chargé de Recherche, 1^{ère} Classe, IRD, Sète, France**

2006-2007 **Assistant Researcher, Univ. California, Santa Cruz, USA**

2001-2006 **Postdoctoral Researcher, Univ. California, Davis, USA**

1998-2001 **Postdoctoral Researcher, P. Univ. Católica de Chile**

1993-1997 **Graduate Student, Univ. California, Santa Barbara, USA**

RECENT TEACHING EXPERIENCE

Spring 2018 **Spatialized Structured Databases for Marine, Ecological & Fisheries Sciences, MARBEC, Sète, France**

Spring 2016, **Statistical Methods & Data Analysis, VIMS, USA**
2017

Summer 2015 **Structured Databases for Marine Science, VIMS, USA**

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- Fall 2014, Fall 2016** **GIS in Marine Science, VIMS, USA (co-taught with Christine N. Meynard, VIMS)**
- 2012** **Introduction to numerical ecology, U. San Marcos, Lima, Peru / Rhodes U., Grahamstown, South Africa / CEAZA, Coquimbo, Chile**
One-week, 30-hour course on numerical methods in ecology, population modeling, and scientific programming repeated in 3 different locations.
- 06/2012** **UCT Winter Course “Modeling the marine ecosystem from the ocean to the fish”, UCT, South Africa**
9 hours of lectures on marine ecosystem modeling and MPAs.
- 03/2011** **Education au développement durable, IUFM, Univ. Montpellier II**
Lectures on marine biodiversity and conservation for continuing education high-school teachers.
- 2008-2014** **AERME, UMR 212 EME / Univ. Montpellier II, Sète, France**
Participation (6 hours) in a Masters 2 module on the Ecosystem Approach to Fisheries (EAF).
- 2001 & 2006** **Matlab mini-course, Univ. California, Davis, USA**
Series of lectures on basic programming in Matlab for ecologists.

GRADUATE STUDENTS

- 2018-** **Taha Imzilen**, PhD (Co-director): Modeling and analysis of the drift trajectories of fish aggregating devices (FADs) and estimation of their potential impacts in the Indian and Atlantic Oceans
- 2018-** **Mohamed Ahmed Souguez**. PhD (Director): Population structure of narrow-barred Spanish mackerel (*Scomberomorus commerson*) in the north-eastern Indian Ocean and the Red Sea
- 2018** **Athénaïs Groizard**. Masters 1 (Director): Analyse de la microchimie d’otolithe de deux espèces de merlus : *Merluccius capensis* et *Merluccius paradoxus*, pour la recherche d’indice de migration le long de la côte sud-africaine
- 2015-2016** **Julia Snouck-Hurgronje**. Masters of Marine Science (Director): The Effects of Drifting Fish Aggregating Devices (dFADs) on Bycatch in the Tropical Tuna Purse Seine Fisheries in the Atlantic and Indian Oceans.
- 2014-2017** **Bianco Santos**. Masters of Marine Science (Director): Oceanographic modeling of sea turtle carcass drift patterns to predict locations of at-sea mortality.
- 2013-** **Jennifer Beckensteiner**. Masters 2 & PhD (Director/Co-director): Conservation and potential for spatial management of marine fish assemblages in southern Angola.
- 2012-2016** **Alexandra Maufroy**. Masters 2 & PhD (Director): Drifting Fish Aggregating Devices of the Atlantic and Indian Oceans: modalities of use, fishing efficiency and potential management.
- 2011-2014** **Marion Cuif**. Masters 2 & PhD (Co-director): Empirical and modeling estimates of connectivity in damselfish (*Dascyllus aruanus*) of New Caledonia.
- 2011** **Sophie Marinesque**. Masters 2 (Director): Global implementation of marine protected areas: Is the developing world being left behind?

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- 2010** **Misael Morales.** Masters 2 (Director): The effect of Somali piracy on tropical tuna fisheries of the Indian Ocean.
- 2010-2013** **Lysel Garavelli.** Masters 2 (Co-director): Modeling dispersal of Cape hake ichthyoplankton. PhD (Thesis committee): Dispersal and population dynamics of loco (*Concholepas concholepas*) in north-central Chile.
- 2009-2012** **Arnaud Gruss.** PhD (Director): Evaluation of marine protected areas as a management tool for highly-mobile exploited marine species.
- 2009-2012** **Jeanne Fortilus.** PhD (Thesis committee): Bio-economic modeling of tuna fisheries: Implementation of marine protected areas in the Indian Ocean.
- 2005-2009** **Julio Palleiro.** PhD (Thesis committee; CICESE, Ensenada, Mexico): Population structure of red sea urchin (*Strongylocentrotus franciscanus*) on the west coast of Baja California, Mexico.

RECENT FUNDING SOURCES

- 2016-2017 Building the statistical and experimental framework for parentage-based abundance estimation of Western Atlantic bluefin tuna, \$62,408, NMFS Bluefin Tuna Research Program, **Project director**
- 2016-2018 Incorporating climate into distribution and abundance indices for stock assessment: looking into the past and planning for the future, \$168,863, NMFS Fisheries And The Environment (FATE) call
- 2016-2018 Spatio-temporal trends in private oyster lease use in the lower Chesapeake Bay, \$80,000, Virginia Sea Grant Graduate Student Fellowship awarded to Jennifer Beckensteiner
- 2016-2017 Sea turtle nesting site selection and egg survival in the anthropogenized and climate-impacted environment of southern Virginia, \$30,000, Dominion Foundation, **Project director**
- 2016-2017 Identifying locations of and mechanisms for sea turtle mortality from stranding data using ocean drift models, \$5,000, Virginia Sea Grant project initiation award with student Bianca Santos
- 2014-2015 Catch, Effort, and eCOsystem impacts of FAD-fishing (CECOFAD), 300k€, European Commission
- 2012-2015 Tropical tuna fisheries and the use of Fish Aggregating Devices (FADs), 100k€, France Filière Pêche, France
- 2012-2014 Prioritizing EcoLogically significant And Globally Important areas for marine mammal Conservation (PELAGIC), 200k€, CESAB/FRB & Fondation Total, France, **Project director**
- 2011-2015 Management of Ocean Resources under Shifting Expectations: bringishifting2011- ng the historical perspective into marine mammal conservation (MORSE), 394k€, ANR, France
- 2011-2012 Spatial management of pelagic ecosystems with marine protected areas: Visions for the future, 20k€, EUR-OCEANS, France, **Project director**
- 2011-2013 Modélisation de la dynamique de populations de “loco” (*Concholepas concholepas*)

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- au Chili (MOLOCO), 20k€, ECOS-Sud, France-Chile
- 2010-2014 Connectivity of Marine Populations: Application to the South Lagoon of New Caledonia (COMPO; <http://www.compo.ird.fr/>), 200k€, ANR, France
- 2009-2013 Marine protected areas for highly mobile species (AMPED;2009-201201-<http://www.amped.ird.fr>), 1,000k€, ANR, France, **Project director**
- 2006-2007 California Ocean Decision System for the Marine Life Protection Act, Resource Legacy Funding Foundation, USA
- 2006-2007 Coastal Ocean Currents Monitoring Program (COCMP), Coastal Conservancy, USA

PUBLICATIONS

Google scholar citation indices: >2230 citations, h-index=27, i10-index=47

Peer-reviewed Journal Publications (58):

- Snouck-Hurgronje JE, Kaplan DM, Chassot E, Maufroy A, Gaertner D (*in press*) Fishing on floating objects (FOBs): How French tropical tuna purse seiners split fishing effort between GPS-monitored and unmonitored FOBs. *Can J Fish Aquat Sci*. doi:[10.1139/cjfas-2017-0152](https://doi.org/10.1139/cjfas-2017-0152)
- Santos BS, Friedrichs MAM, Rose SA, Barco SG, Kaplan DM (2018) Likely locations of sea turtle stranding mortality using experimentally-calibrated, time and space-specific drift models. *Biological Conservation* **226**:127–143. doi:[10.1016/j.biocon.2018.06.029](https://doi.org/10.1016/j.biocon.2018.06.029)
- Santos BS, Kaplan DM, Friedrichs MAM, Barco SG, Mansfield KL, Manning JP (2018) Consequences of drift and carcass decomposition for estimating sea turtle mortality hotspots. *Ecological Indicators* **84**:319–336. doi:[10.1016/j.ecolind.2017.08.064](https://doi.org/10.1016/j.ecolind.2017.08.064)
- Pendleton LH, Ahmadiya GN, Browman HI, Thurstan RH, Kaplan DM, Bartolino V (2018) Debating the effectiveness of marine protected areas. *ICES J Mar Sci* **75**:1156–1159. doi:[10.1093/icesjms/fsx154](https://doi.org/10.1093/icesjms/fsx154)
- Hidalgo M, Kaplan DM, Kerr LA, Watson JR, Paris CB, Browman HI (2017) Advancing the link between ocean connectivity, ecological function and management challenges. *ICES J Mar Sci* **74**:1702–1707. doi:[10.1093/icesjms/fsx112](https://doi.org/10.1093/icesjms/fsx112)
- Kaplan DM, Cuif M, Fauvelot C, Vigliola L, Nguyen-Huu T, Tiavouane J, Lett C (2017) Uncertainty in empirical estimates of marine larval connectivity. *ICES J Mar Sci* **74**:1723–1734. doi:[10.1093/icesjms/fsw182](https://doi.org/10.1093/icesjms/fsw182)
- Mullon C, Guillotreau P, Galbraith ED, Fortilus J, Chaboud C, Bopp L, Aumont O, Kaplan DM (2017) Exploring future scenarios for the global supply chain of tuna. *Deep Sea Research Part II: Topical Studies in Oceanography* **140**:251–267. doi:[10.1016/j.dsr2.2016.08.004](https://doi.org/10.1016/j.dsr2.2016.08.004)
- Nomura KJ, Kaplan DM, Beckensteiner J, Scheld AM (2017) Comparative analysis of factors influencing spatial distributions of marine protected areas and territorial use rights for fisheries in Japan. *Marine Policy* **82**:59–67. doi:[10.1016/j.marpol.2017.05.005](https://doi.org/10.1016/j.marpol.2017.05.005)
- Maufroy A, Kaplan DM, Bez N, Molina ADD, Murua H, Floch L, Chassot E (2017) Massive increase in the use of drifting Fish Aggregating Devices (dFADs) by tropical tuna purse seine fisheries in the Atlantic and Indian oceans. *ICES J Mar Sci* **74**(1):215-225. doi:[10.1093/icesjms/fsw175](https://doi.org/10.1093/icesjms/fsw175)
- Monsarrat S, Pennino MG, Smith TD, Reeves RR, Meynard CN, Kaplan DM, Rodrigues ASL (2016) A spatially explicit estimate of the prewhaling abundance of the endangered North Atlantic right whale. *Conservation Biology* **30**:783-791. doi:[10.1111/cobi.12664](https://doi.org/10.1111/cobi.12664)

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- Beckensteiner J, [Kaplan DM](#), Potts WM, Santos CV, O'Farrell MR (2016) Data-limited population-status evaluation of two coastal fishes in southern Angola using recreational catch length-frequency data. *PLOS ONE* **11**:e0147834. [doi:10.1371/journal.pone.0147834](https://doi.org/10.1371/journal.pone.0147834)
- Garavelli L, Colas F, Verley P, [Kaplan DM](#), Yannicelli B, Lett C (2016) Influence of Biological Factors on Connectivity Patterns for *Concholepas concholepas* (loco) in Chile. *PLoS ONE* **11**:e0146418. [doi:10.1371/journal.pone.0146418](https://doi.org/10.1371/journal.pone.0146418)
- Cuif M, [Kaplan DM](#), Fauvelot C, Lett C, Vigliola L (2015) Monthly variability of self-recruitment for a coral reef damselfish. *Coral Reefs* **34**:759–770. [doi:10.1007/s00338-015-1300-4](https://doi.org/10.1007/s00338-015-1300-4)
- Lett C, Nguyen-Huu T, Cuif M, Saenz-Agudelo P, [Kaplan DM](#) (2015) Linking local retention, self-recruitment, and persistence in marine metapopulations. *Ecology* **96**:2236–2244. [doi:10.1890/14-1305.1](https://doi.org/10.1890/14-1305.1)
- Maufroy A, Chassot E, Joo R, [Kaplan DM](#) (2015) Large-Scale Examination of Spatio-Temporal Patterns of Drifting Fish Aggregating Devices (dFADs) from Tropical Tuna Fisheries of the Indian and Atlantic Oceans. *PLoS ONE* **10**:e0128023. [doi:10.1371/journal.pone.0128023](https://doi.org/10.1371/journal.pone.0128023)
- Monsarrat S, Pennino MG, Smith TD, Reeves RR, Meynard CN, [Kaplan DM](#), Rodrigues ASL (2015) Historical summer distribution of the endangered North Atlantic right whale (*Eubalaena glacialis*): a hypothesis based on environmental preferences of a congeneric species. *Diversity & Distributions* **21**:925–937. [doi:10.1111/ddi.12314](https://doi.org/10.1111/ddi.12314)
- Cuif M, Keller F, Chateau O, [Kaplan DM](#), Labonne M, Lett C, Vigliola L (2014) Evaluation of transgenerational isotope labeling of embryonic otoliths in a coral reef damselfish with single and repeated injections of enriched ¹³⁷Barium. *Journal of Experimental Marine Biology* **459**:151–159. [doi:10.1016/j.jembe.2014.05.019](https://doi.org/10.1016/j.jembe.2014.05.019)
- Bonhommeau S, Nieblas A-E, Chassot E, [Kaplan DM](#), Dubroca L, Manacorda C, Barde J, Pape OL (2014) Reply to Feeley and Machovina: Trophic ecology complements estimates of land use change due to food production. *PNAS* **111**:E795–E795. [doi:10.1073/pnas.1324144111](https://doi.org/10.1073/pnas.1324144111)
- Nieblas A-E, Bonhommeau S, Pape OL, Chassot E, Dubroca L, Barde J, [Kaplan DM](#) (2014) Reply to Roopnarine: What is an apex predator? *PNAS* **111**:E797–E797. [doi:10.1073/pnas.1324146111](https://doi.org/10.1073/pnas.1324146111)
- Garavelli L, [Kaplan DM](#), Colas F, Stotz W, Yannicelli B, Lett C (2014) Identifying appropriate spatial scales for marine conservation and management using a larval dispersal model: The case of *Concholepas concholepas* (loco) in Chile. *Progress in Oceanography* **124**:42–53. [doi:10.1016/j.pocean.2014.03.011](https://doi.org/10.1016/j.pocean.2014.03.011)
- Cuif M, [Kaplan DM](#), Lefèvre J, Faure VM, Caillaud M, Verley P, Vigliola L, Lett C (2014) Wind-induced variability in larval retention in a coral reef system: A biophysical modelling study in the South-West Lagoon of New Caledonia. *Progress in Oceanography* **122**:105–115. [doi:10.1016/j.pocean.2013.12.006](https://doi.org/10.1016/j.pocean.2013.12.006)
- [Kaplan DM](#), Chassot E, Amandé JM, Dueri S, Demarcq H, Dagorn L, Fonteneau A (2014) Spatial management of Indian Ocean tropical tuna fisheries: potential and perspectives. *ICES Journal of Marine Science* **71**:1728–1749. [doi:10.1093/icesjms/fst233](https://doi.org/10.1093/icesjms/fst233)
- Ban NC, Maxwell SM, Dunn DC, Hobday AJ, Bax NJ, Ardron J, Gjerde KM, Game ET, Devillers R, [Kaplan DM](#), Dunstan PK, Halpin PN, Pressey RL (2014) Better integration of sectoral planning and management approaches for the interlinked ecology of the open oceans. *Marine Policy* **49**:127–136. [doi:10.1016/j.marpol.2013.11.024](https://doi.org/10.1016/j.marpol.2013.11.024)
- Grüss A, [Kaplan DM](#), Robinson J (2014) Evaluation of the effectiveness of marine reserves for transient spawning aggregations in data-limited situations. *ICES J Mar Sci* **71**:435–449.

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[doi:10.1093/icesjms/fst028](https://doi.org/10.1093/icesjms/fst028)

Ban NC, Bax NJ, Gjerde KM, Devillers R, Dunn DC, Dunstan PK, Hobday AJ, Maxwell SM, [Kaplan DM](#), Pressey RL, Ardron JA, Game ET, Halpin PN (2014) Systematic Conservation Planning: A new recipe for managing the High Seas. *Conservation Letters* **7**(1):41-54.

[doi:10.1111/conl.12010](https://doi.org/10.1111/conl.12010)

Bonhommeau S, Dubroca L, Pape OL, Barde J, [Kaplan DM](#), Chassot E, Nieblas A-E (2013) Eating up the world's food web and the human trophic level. *Proceedings of the National Academy of Sciences (PNAS)* **110**:20617–20620. [doi:10.1073/pnas.1305827110](https://doi.org/10.1073/pnas.1305827110)

[Kaplan DM](#), Bach P, Bonhommeau S, Chassot E, Chavance P, Dagorn L, Davies T, Dueri S, Fletcher R, Fonteneau A, Fromentin J-M, Gaertner D, Hampton J, Hilborn R, Hobday A, Kearney R, Kleiber P, Lehodey P, Marsac F, Maury O, Mees C, Ménard F, Pearce J, Sibert J (2013) The True Challenge of Giant Marine Reserves. *Science* **340**:810–811.

[doi:10.1126/science.340.6134.810-b](https://doi.org/10.1126/science.340.6134.810-b)

Currie J, Lengaigne M, Vialard J, [Kaplan DM](#), Aumont O, Maury O (2013) Indian Ocean Dipole and El Niño/Southern Oscillation impacts on regional chlorophyll anomalies in the Indian Ocean. *Biogeosciences* **10**:6677-6698. [doi:10.5194/bg-10-6677-2013](https://doi.org/10.5194/bg-10-6677-2013)

White JW, Botsford LW, Hastings A, Baskett ML, [Kaplan DM](#), Barnett LA. (2013) Transient responses of fished populations to marine reserve establishment. *Conservation Letters* **6**:180-191. [doi:10.1111/j.1755-263X.2012.00295.x](https://doi.org/10.1111/j.1755-263X.2012.00295.x)

Brochier T, Ecoutin JM, Morais LT de, [Kaplan DM](#), Lae R (2013) A multi-agent ecosystem model for studying changes in a tropical estuarine fish assemblage within a marine protected area. *Aquatic Living Resources* **26**:147-158. [doi:10.1051/alr/2012028](https://doi.org/10.1051/alr/2012028)

Meynard CN, [Kaplan DM](#) (2013) Using virtual species to study species distributions and model performance. *Journal of Biogeography* **40**:1-8. [doi:10.1111/jbi.12006](https://doi.org/10.1111/jbi.12006)

Garavelli L, Grüss A, Grote B, Chang N, Smith M, Verley P, Stenevik EK, [Kaplan DM](#), Lett C (2012) Modeling the Dispersal of Cape Hake Ichthyoplankton. *J Plankton Res* **34**:655–669.

[doi:10.1093/plankt/fbs039](https://doi.org/10.1093/plankt/fbs039)

Grüss A, [Kaplan DM](#), Lett C (2012) Estimating local settler–recruit relationship parameters for complex spatially explicit models. *Fisheries Research* **127–128**:34–39.

[doi:10.1016/j.fishres.2012.04.016](https://doi.org/10.1016/j.fishres.2012.04.016)

Meynard CN, [Kaplan DM](#) (2012) The effect of a gradual response to the environment on species distribution modeling performance. *Ecography* **35**:499–509. [doi:10.1111/j.1600-0587.2011.07157.x](https://doi.org/10.1111/j.1600-0587.2011.07157.x)

Marinesque S, [Kaplan DM](#), Rodwell LD (2012) Global implementation of marine protected areas: Is the developing world being left behind? *Marine Policy* **36**:727-737.

[doi:10.1016/j.marpol.2011.10.010](https://doi.org/10.1016/j.marpol.2011.10.010)

Fischer DT, White JW, Botsford LW, Largier J, [Kaplan DM](#) (2011) A GIS-Based Tool for Representing Larval Dispersal for Marine Reserve Selection. *The Professional Geographer* **64**:1-25, [doi:10.1080/00330124.2011.585079](https://doi.org/10.1080/00330124.2011.585079).

Grüss A, [Kaplan DM](#), Hart DR (2011) Relative Impacts of Adult Movement, Larval Dispersal and Harvester Movement on the Effectiveness of Reserve Networks. *PLoS ONE* **6**:e19960, [doi:10.1371/journal.pone.0019960](https://doi.org/10.1371/journal.pone.0019960).

Grüss A, [Kaplan DM](#), Guénette S, Roberts CM, Botsford LW (2011) Consequences of adult and juvenile movement for marine protected areas. *Biological Conservation* **144**:692-702,

[doi:10.1016/j.biocon.2010.12.015](https://doi.org/10.1016/j.biocon.2010.12.015).

Chassot E, [Kaplan DM](#), Ortiz de Zarate V, Romanov E, Fonteneau A (2010) Comment on

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- “Clarification regarding the distribution of bigeye tuna *Thunnus obesus* in the Atlantic Ocean, including British waters.” *Journal of Fish Biology* 77:1449-1454, [doi:10.1111/j.1095-8649.2010.02816.x](https://doi.org/10.1111/j.1095-8649.2010.02816.x).
- Kaplan DM, Hart DR, Botsford LW (2010) Rotating spatial harvests and fishing effort displacement: a comment on Game et al. (2009). *Ecology Letters* 13:E10-E12, [doi:10.1111/j.1461-0248.2010.01499.x](https://doi.org/10.1111/j.1461-0248.2010.01499.x).
- Kaplan DM, Planes S, Fauvelot C, Brochier T, Lett C, Bodin N, Le Loc'h F, Tremblay Y, Georges J (2010) New tools for the spatial management of living marine resources. *Current Opinion in Environmental Sustainability* 2:88-93, [doi:10.1016/j.cosust.2010.02.002](https://doi.org/10.1016/j.cosust.2010.02.002).
- Kaplan DM, Chassot E, Gruss A, Fonteneau A (2010) Pelagic MPAs: The devil is in the details. *Trends in Ecology & Evolution* 25:62-63, [doi:10.1016/j.tree.2009.09.003](https://doi.org/10.1016/j.tree.2009.09.003).
- Kaplan DM, Halle C, Paduan J, Largier JL (2009) Surface currents during anomalous upwelling seasons off central California. *Journal of Geophysical Research* 114:C12026, [doi:10.1029/2009JC005382](https://doi.org/10.1029/2009JC005382).
- Moffitt EA, Botsford LW, Kaplan DM, O'Farrell MR (2009) Marine reserve networks for species that move within a home range. *Ecological Applications* 19:1835-1847, [doi:10.1890/08-1101.1](https://doi.org/10.1890/08-1101.1).
- Kaplan DM (2009) Fish life histories and marine protected areas: An odd couple? *Marine Ecology-Progress Series* 377: 213-225, [doi:10.3354/meps07825](https://doi.org/10.3354/meps07825).
- Kaplan DM, Botsford LW, Gaines S, O'Farrell MR, Jorgensen S (2009) Model-based assessment of persistence in proposed marine protected area designs. *Ecological Applications* 19(2): 433-448, [doi:10.1890/07-1705.1](https://doi.org/10.1890/07-1705.1).
- Kaplan DM, Lekien F (2007) Spatial interpolation and filtering of surface current data based on open-boundary modal analysis. *Journal of Geophysical Research* 112: C12007, [doi:10.1029/2006JC003984](https://doi.org/10.1029/2006JC003984).
- Kaplan DM, Botsford LW, Jorgensen S (2006) Dispersal-per-recruit: an efficient method for assessing sustainability in marine reserve networks. *Ecological Applications* 16: 2248-2263.
- Jorgensen SJ, Kaplan DM, Klimley AP, Morgan SG, O'Farrell MR, Botsford, LW (2006) Limited movement in blue rockfish *Sebastes mystinus*: internal structure of home range. *Marine Ecology Progress Series* 327: 157-170.
- Largier JL, Lawrence C, Roughan M, Kaplan DM, Dever E, Dorman C, Kudela R, Bollens S, Wilkerson F, Dugdale R, Botsford LW, Garfield NT, Kuebel-Cervantes B, Koracin D (2006) WEST: a northern California study of the role of wind-driven transport in the productivity of coastal plankton communities. *Deep-Sea Research II* 53: 2833-2849, [doi:10.1016/j.dsr2.2006.08.018](https://doi.org/10.1016/j.dsr2.2006.08.018).
- Kaplan DM, Largier JL (2006) HF radar-derived origin and destination of surface waters off Bodega Bay, California. *Deep-Sea Research II* 53: 2906-2930, [doi:10.1016/j.dsr2.2006.07.012](https://doi.org/10.1016/j.dsr2.2006.07.012).
- Kaplan DM (2006) Alongshore advection and marine reserves: consequences for modeling and management. *Marine Ecology Progress Series* 309: 11-24.
- Kaplan DM, Largier JL, Botsford LW (2005) HF radar observations of surface circulation off Bodega Bay (northern California, USA). *Journal of Geophysical Research* 110: C10020, [doi:10.1029/2005JC002959](https://doi.org/10.1029/2005JC002959).
- Velazquez I, Kaplan DM, Velasco-Hernandez JX, Navarrete SA (2005) Multistability in an open recruitment food web model. *Applied Mathematics and Computation* 163: 275-294.
- Kaplan DM, Botsford LW (2005) Effects of variability in spacing of marine reserve on fisheries

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- yield and sustainability. *Canadian Journal of Fisheries and Aquatic Sciences* **62**: 905-912.
- Kaplan DM, Largier JL, Navarrete SA, Guíñez R, Castilla JC (2003) Large diurnal temperature fluctuations in the nearshore water column. *Estuarine, Coastal and Shelf Science* **57**: 385-398.
- Wieters E, Kaplan DM, Navarrete SA, Sotomayor A, Largier JL, Nielsen K, Veliz F (2003) Alongshore and temporal variability in chlorophyll-a concentration in Chilean nearshore waters. *Marine Ecology Progress Series* **249**: 93-105.
- Kaplan DM, Lowe DA, Maldacena JM, Strominger A (1997) Microscopic entropy of $N=2$ extremal black holes. *Physical Review D* **55**: 4898-902.
- Kaplan DM, Michelson J (1997) Scattering of several multiply charged extremal $D=5$ black holes. *Physics Letters B* **410**: 125-30.
- Kaplan DM, Michelson J (1996) Zero modes for the $D=11$ membrane and five-brane. *Physical Review D* **53**: 3474-6.

Book Chapters (4):

- Robinson J, Grüss A, Kaplan DM (2013) Conservation and fisheries effects of protecting aggregative spawners using no-take reserves. In: Robinson J, Samoilys MA (eds) *Reef Fish Spawning Aggregations in the Western Indian Ocean: Research for Management*. WIOMSA, CORDIO, Victoria, Seychelles, p 113–122. Available from: <http://wiomsa.net/wiomsav2/index.php/2014-09-16-11-28-45/search-by-category/book-series/finish/70-wiomsa-book-series/1044-reef-fish-spawning-aggregations-in-the-western-indian-ocean-research-for-management> [Last accessed 10 February 2015].
- Chassot E, Guillotreau P, Kaplan DM, Vallée T (2012) The tuna fishery and piracy. In: Norchi CH, Proutière-Maulion G (eds) *Piracy in comparative perspective: Problems, strategies, law*. Editions A. Pedone & Hart Publishing, Oxford, United Kingdom, p 51–72
- Lett C, Kaplan D (2010) Towards landscape ecological modelling of marine reserves. In: LandMod 2010 : international conference on integrative landscape modelling. Quae, Montpellier, France. Available from: <http://www.documentation.ird.fr/hor/fdi:010051570> [Last accessed 10 February 2015].
- Botsford LW, Kaplan DM, Hastings A (2004) Sustainability and yield in marine reserve policy. In: Shipley JB (ed) *Aquatic Protected Areas as Fisheries Management Tools*, 5th edn. American Fisheries Society, Bethesda, Maryland, p 75–86

Other Publications (8):

- Katara I, Gaertner D, Marsac F, Grande M, Kaplan DM, Urtizbera A, Guery L, Depetris M, Duparc A, Floch L, Lopez J, Abascal F (2018) Standardisation of yellowfin tuna CPUE for the EU purse seine fleet operating in the Indian Ocean. IOTC–2018–WPTT20–36. Indian Ocean Tuna Commission Working Party on Tropical Tunas (WPTT), Sète, France
- Maufroy A, Kaplan DM, Bez N, Chassot E (2016) Integrating scientific and French tropical tuna purse seine skippers knowledge for a better management of dFAD fisheries in the Indian Ocean. IOTC–2016–WPTT18–36 Rev_1. IOTC Scientific Committee. Available from: https://www.researchgate.net/publication/312330601_Integrating_scientific_and_French_tropical_tuna_purse_seine_skippers_knowledge_for_a_better_management_of_dFAD_fisheries_in_the_Indian_Ocean [Last accessed 6 March 2017]
- Maufroy A, Bez N, Kaplan DM, Delgado de Molina A, Murua H, Chassot E (2014) How many Fish Aggregating Devices are currently drifting in the Indian Ocean? Combining sources of information to provide a reliable estimate. IOTC–2014–WPTT16–21. Indian Ocean Tuna

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Commission, Victoria, Seychelles. Available from:

http://www.iotc.org/sites/default/files/documents/2014/11/IOTC-2014-WPTT16-21_-_FAD_estimation.pdf [Last accessed 10 February 2015]

- Davies TK, Martin S, Mees C, Chassot E, Kaplan DM (2012) A review of the conservation benefits of marine protected areas for pelagic species associated with fisheries. [ISSF Technical Report 2012-02](#).
- Chassot E, Dewals P, Floch L, Lucas V, Morales-Vargas M, Kaplan DM (2010) Analysis of the effects of Somali piracy on the European tuna purse seine fisheries of the Indian Ocean. In: *IOTC Scientific Committee Proceedings. Indian Ocean Tuna Commission, Seychelles*, pp 1-26.
- Kaplan DM, Botsford LW, O'Farrell MR (2007) Assessment of proposed marine protected area designs on the central California coast. *Report for the Marine Life Protection Act (MLPA) implementation process*.
- Paduan J, Kaplan DM, Garfield N, Largier JL (2006) Surface current mapping with high frequency radar - Building the tools for hazardous spill response. *Monterey Bay National Marine Sanctuary (MBNMS) Ecosystem Observations*.
- Brandenberger R, Kaplan DM, Ramsey S (1993) Some Statistics for Measuring Large Scale Structure. BROWN-HET-922, astro-ph/9310004.

PRESENTATIONS AND POSTERS

Conference Presentations (43):

- Kaplan DM (2018) Squaring data and models in larval connectivity studies: Conceptual differences, uncertainties and future challenges. *GDR iMarco*. Heraklion, Greece. October 9. **Invited speaker**
- Kaplan DM, Snouck-Hurgronje JE, Chassot E, Maufray A, Gaertner D (2017) How French tropical tuna purse seiners split fishing effort between GPS-monitored and unmonitored FOBs and what it says about effort standardization. *13th Working Party on Data Collection & Statistics*. Victoria, Seychelles. November 26.
- Kaplan DM, Snouck-Hurgronje JE, Chassot E, Maufray A, Gaertner D (2017) The Effects of Drifting Fish Aggregating Devices on Bycatch in the Tropical Tuna Purse Seine Fisheries in the Atlantic and Indian Oceans. *3rd Meeting of the ad hoc Working Group on FADs*. Madrid, Spain. September 11-12.
- Kaplan DM, Santos B, Friedrichs MAM, Rose S, Barco SG (2017) Drift Trajectories of Sea Turtle Carcasses from Mortality Locations to Stranding Locations based on an Empirically Calibrated Ocean Drift Model. *37th Annual Symposium on Sea Turtle Biology and Conservation*. Las Vegas, Nevada, USA. April 18. **Poster**
- Kaplan DM, Lett C, Cuif M, Nguyen-Huu T, Vigliola L, Fauvelot C, Tiavouane J, Saenz-Agudelo P (2015) Linking local retention, self-recruitment, and persistence in marine metapopulations. *ICES Annual Science Conference*. Copenhagen, Denmark. September 22.
- Kaplan DM, Beckensteiner J, Potts WM, O'Farrell MR, Santos CV (2014) Data-limited population-status evaluation of two coastal fishes in southern Angola using recreational catch length-frequency data. *2nd World Small-Scale Fisheries Congress*. Merida, Mexico. September 21-26.
- Kaplan DM (2014) Quantitative assessment methods adapted to data-limited, small-scale fisheries. *2nd World Small-Scale Fisheries Congress*. Merida, Mexico. September 21-26. **Session organizer**.

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- Kaplan DM (2013) Mobile MPAs for mobile species: Building a conceptual framework for understanding and predicting the impacts of MPAs on mobile pelagic and demersal species. *IMPAC3*, October 21-25. Marseille, France.
- Kaplan DM, Lett Christophe, Nguyen T, Cuif M, Vigliola L, Dumas P, Fauvelot C, Tiavouane J (2013) The COMPO Project and its relevance for MPA design. *GDR MarCo*. Marseille, France. June 3-6.
- Kaplan DM, Lett Christophe, Nguyen T, Cuif M (2013) Measures of connectivity and what they tell us about population dynamics. *GDR MarCo*. Marseille, France. June 3-6.
- Gruss A, Kaplan DM, Robinson J (2011) Évaluation de l'efficacité des aires marines protégées ciblant les agrégations de ponte transitoires en situations de données limitées. *Colloque Scientifique de l'Agence d'AMP*. Paris, France. November 22-24.
- Lett C, Kaplan DM, et al. (2011) Présentation du projet COMPO d'étude de la connectivité larvaire dans l'écosystème corallien de Nouvelle-Calédonie. *Colloque Scientifique de l'Agence d'AMP*. Paris, France. November 22-24.
- Kaplan DM, Chassot E, Amandé J, Dueri S, Demarcq H, Dagorn L, Fonteneau A (2011) Pelagic MPAs: General principles and examples from the Indian Ocean. *Colloque de l'Agence d'Aires Marines Protégées*, November 22-24. Paris, France.
- Kaplan DM (2011) Science and policy lessons learned from the implementation of the California MPA network. *Colloque Scientifique de l'Agence d'AMP*. Paris, France. November 22-24.
- Poster.**
- Kaplan DM, Chassot E, Torres E, Gaertner D, Morales M, Delgado A, Ariz J (2011) Effects of high seas MPAs on commercial fisheries: Examples from the Atlantic and Indian Oceans' tuna fleets. *2nd International Marine Conservation Congress*. Victoria, BC, Canada. May 14-19.
- Poster.**
- Kaplan DM (2011) Marine protected areas for fisheries management: A review of the theoretical evidence. *WIOMSA/RECOMAP Symposium on MPA and Fisheries*. Mombasa, Kenya. March 14-17. **Invited speaker.**
- Chassot E, Torres E, Kaplan DM, Gaertner D, Morales M, Delgado A, Ariz J (2011) Effects of high seas MPAs on commercial fisheries: Examples from the Atlantic and Indian Oceans' tuna fleets. *Marine Protected Areas on the high seas – symposium*. London, UK. February 3-4.
- Kaplan DM (2010) Modélisation de réseaux d'AMP appliquée au processus d'implémentation d'AMP en Californie, USA. *Ecologie 2010*. Montpellier, France. **Invited speaker.**
- Kaplan DM (2009) Spatial marine management and new approaches to marine ecology: a way out of the black box? *Diversitas OSC2*. Cape Town, South Africa. October 13-16. **Session organizer.**
- Kaplan DM, Fonteneau A, Tew-Kai E, Chassot E, Demarcq H, Currie J, Nieto K, Maury O, Gruss A, Barde J, Trolet J (2008) Connecting cartography to ecosystems: Examples from the Indian Ocean. *2012 Marine Targets: European Marine Strategy and Issues in High Seas*. Brest, France. December 9-11.
- Kaplan DM, Largier J, Halle C, Paduan J (2008) Coastal mesoscale circulation along central California: Consequences for larval transport and management. *Eastern Boundary Upwelling Ecosystems*. Gran Canarias, Spain. June 2-6.
- Kaplan DM, Paduan J (2008) HF Radar 201: Moving beyond the status quo for HF radar data manipulation, processing and management. *Ocean Sciences*. Orlando, Florida. March 2-7.
- Kaplan DM, Paduan J, Halle C, Largier C (2007) Circulation in the California Current System from a large array of HF radars. *54th Annual Eastern Pacific Ocean Conference*. Washington.

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September 15-18. **Poster.**

- Kaplan DM, O'Farrell MR, Botsford LW (2007) Can Maximum Sustainable Yield (MSY) increase with marine reserves? *American Fisheries Society Annual Meeting*. San Francisco. August 7-9. **Poster.**
- Kaplan DM, Paduan J, Cook M (2007) Status of the Northern California HF Radar network and some new developments in HF Radar processing technology. *Radio Oceanography Workshop 7*. Cancún, Mexico. May 28-31.
- Kaplan DM, Paduan J, Cook M, Lekien F (2006) Integrating HF radar, modal current decomposition and trajectory forecasting for robust ocean observing. *53rd Annual Eastern Pacific Ocean Conference*. Timberline Lodge, Oregon. September 27-30.
- Kaplan DM, Botsford LW, Jorgensen S (2006) Methods for assessment of sustainability in spatial management: evaluating marine reserve configurations. *91st Ecological Society of America Annual Meeting*. Memphis, TN. August 6-11.
- Kaplan DM (2006) Circulation and transport near Bodega Bay, California derived from modal decomposition of HF-radar currents. *Radio Oceanography Workshop 6*. Hamburg, Germany. May 15-18.
- Kaplan DM, Botsford LW (2006) Methods for assessments of sustainability in spatial management: Evaluating reserve designs. *NOAA National Stock Assessment Workshop 9*. San Francisco, California. April 18-20.
- Kaplan DM, Largier JL, Lekien F (2006) Application of Modal Current Decomposition techniques to the study of coastal circulation and transport near Bodega Bay, California. *Ocean Sciences Meeting*. Honolulu, Hawaii. February 20-24. **Poster.**
- Kaplan DM, Largier JL, Botsford LW (2005) The role of HF radar data in the WEST project. *52nd Annual Eastern Pacific Ocean Conference*. Fallen Leaf Lake, California. September 27-30.
- Kaplan DM (2005) The California MPA process from a scientist's point of view: pitfalls and progress. *British Ecological Society Annual Meeting*. Hertfordshire, England. September 5-7.
- Kaplan DM, Largier JL, Botsford LW (2005) Coastal connectivity and its relationship to biological processes from HF-radar derived Lagrangian trajectories. *Radio Oceanography Workshop 5*. Santa Cruz, California. May 3-6.
- Kaplan DM (2004) Spacing and configuration of marine reserve networks. *ICES Annual Science Conference*. Vigo, Spain. September 22-25.
- Kaplan DM, Botsford LW, Micheli F, Halpern B, Warner RR (2004) Temporal dynamics of fish populations after introduction of marine reserves. *89th Ecological Society of America Annual Meeting*. Portland, OR. August 1-6. **Poster.**
- Kaplan DM, Largier JL, Botsford LW (2004) Surface currents along the coast of northern California derived from high-frequency radar data. *12th Ocean Sciences Meeting*. Portland, OR. January 26-30.
- Kaplan DM, Largier JL, Botsford LW (2002) Preliminary analysis of high-frequency radar data from Bodega Bay, California. *11th Ocean Sciences Meeting*. Honolulu, Hawaii. February 11-15.
- Sotomayor A, Wieters E, Kaplan DM, Navarrete S, Nielsen K (2000) Spatial and Temporal Variation in Chlorophyll-a on the Central Coast of Chile. *PISCO/Mellon Symposium*. Portland, OR. December 14-19.
- Venegas R, Neill P, Kaplan DM (2000) Daily Settlement Patterns in Relation to Physical Parameters. *PISCO/Mellon Symposium*. Portland, OR. December 14-19.

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- Kaplan DM (2000) Ecological Consequences of Daily Warming of Coastal Sea Surfaces. *PISCO/Mellon Symposium*. Portland, OR. December 14-19.
- Kaplan DM, Navarrete S, Guíñez R, Castilla JC (2000) Daily warming of coastal waters and its possible causes. *International Symposium on Linkages and Dynamics of Coastal systems: Open Coasts and Embayments*. Santiago, Chile. October.
- Kaplan DM, Navarrete SA, Velasco-Hernandez JX (2000) Omnivory in open systems: the effects of life history on local population dynamics. *9th Annual Meeting of the Sociedad de Ecología de Chile*. Concepción, Chile. July 28-29.
- Kaplan DM (1997) Microscopic Entropy of N=2 Supersymmetric Black Holes. *Black Holes: Theory and mathematical aspects*. Banff, Canada. May 31 - June 4.
- Laboratory and University Presentations (29):**
- Kaplan DM, Santos BS (2017) Probable locations of sea turtle mortality from strandings data. MARBEC. Sète, France. October 5
- Kaplan DM, Santos B (2017) Loggerhead Sea Turtles: Unfolding a mystery. *VIMS After Hours Lecture Series*. Virginia, USA. January 26
- Kaplan DM (2016) Measures of marine larval connectivity and what these measures tell us about population dynamics. Departamento de Ecología, Pontificia Universidad de Chile. Santiago, Chile. July 6.
- Kaplan DM (2016) Estimación empírica de conectividad larval en sistemas marinos y que nos dice de la dinámica de poblaciones. Departamento de Biología, Universidad Austral. Valdivia, Chile. July 13.
- Kaplan DM (2015) Measures of marine larval connectivity and what these measures tell us about population dynamics. *Biomath Reading Group*. College of William & Mary, Williamsburg, VA. December 4.
- Kaplan DM (2014) Measures of larval connectivity and what these measures tell us about population dynamics. Fisheries Department, Virginia Institute of Marine Science. Virginia, USA. October 8.
- Kaplan DM (2012) Pelagic MPAs: General principles and examples from tropical tuna fisheries. CESAB, Aix-en-Provence, France. December 4.
- Kaplan DM (2012) Pelagic MPAs: General principles and examples from tropical tuna fisheries. Rhodes University, Grahamstown, South Africa. August 8.
- Kaplan DM (2012) Aires Marines Protégées pélagiques: Enjeux et controverses. CEFE, Montpellier, France. May 29.
- Kaplan DM (2010) Applied MPA modeling in California and South Africa. South African Institute of Aquatic Biodiversity. SAIAB, Grahamstown, South Africa. October.
- Kaplan DM (2010) Persistence et progrès: La science des aires marines protégées dans un contexte scientifique et politique complexe. ECOLAG, Univ. Montpellier II, France. April 27.
- Kaplan DM (2008) The California Ocean Current Monitoring Program: Advancements in the science and methodology of HF radar oceanography. Université de Toulon, France. April 24.
- Kaplan DM (2008) The California MPA implementation process. Centre de Recherche Halieutique, Sète, France. February 7.
- Kaplan DM (2007) Circulación sobre la plataforma continental en la California central y sus consecuencias para la productividad y la dispersión larval. Depto. de Geofísica, U. de Concepción, Chile. January 5.
- Kaplan DM (2006) Circulación sobre la plataforma continental en el California central y sus

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consecuencias para la productividad y la dispersión larval. Instituto de Biología Marina, U. Austral, Chile. December 19.

Kaplan DM (2006) Assessing sustainability and yield in networks of marine protected areas. Dept. of Ecology & Evolutionary Biology, UC Santa Cruz, California. November 1.

Kaplan DM (2006) Marine protected areas: Pain and progress. Ken Norris Symposium on Quantitative Biology. Cambria, California. September 17-19.

Kaplan DM (2006) HF-Radar observations of surface circulation in an upwelling system. Dept. of Ocean Sciences, UC Santa Cruz, California. May 31.

Kaplan DM (2005) Le processus de création de réserves marines en Californie: science, politique, progrès et pièges. Centre d'Océanologie de Marseille, France. September 16.

Kaplan DM (2005) Le processus de création de réserves marines en Californie: science, politique, progrès et pièges. IFREMER, Nantes, France. September 12.

Kaplan DM (2004) Modeling Marine Reserves: Inside and Out. IUEM, Brest, France. October 19.

Kaplan DM (2004) HF-Radar Observations of Surface Circulation in an Upwelling System. IRD Brest, France. October 18.

Kaplan DM (2004) Modeling Marine Reserves: Inside and Out. Centre de Recherche Halieutique Méditerranéenne et Tropicale, IRD Sète, France. October 12.

Kaplan DM (2004) Modeling Marine Reserves: Inside and Out. Université de Perpignan, France. October 9.

Kaplan DM (2004) Modelación de reservas marinas: la dinámica transitoria dentro de reservas y los efectos de la configuración espacial de areas protegidas. CEAB, Blanes, Spain. October 7.

Kaplan DM (2004) Observaciones de la circulación superficial con HF-radar en un sistema de surgencia. Instituto de Ciencias Marinas, CSIC, Barcelona, Spain. October 4.

Kaplan DM (2004) Modelación de reservas marinas: la dinámica transitoria dentro de reservas y los efectos de la configuración espacial de areas protegidas. Universidad de Vigo, Spain. September 30.

Kaplan DM (2004) Observaciones de la circulación superficial con HF-radar en un sistema de surgencia. Instituto de Investigaciones Marinas, CSIC, Vigo, Spain. September 29.

Kaplan DM (2004) Modelación de reservas marinas: la dinámica transitoria dentro de reservas y los efectos de la configuración espacial de areas protegidas. Instituto Español de Oceanografía, Vigo, Spain. September 27.

REVIEW WORK FOR INTERNATIONAL JOURNALS

Associate editor since 2015 for the *ICES Journal of Marine Science*.

Associate editor since 2016 for *Aquatic Living Resources*.

Reviewer for numerous journals, including Ecology Letters, Conservation Biology, Biological Conservation, Conservation Letters, Fish & Fisheries, Marine Ecology-Progress Series, PLoS ONE, Progress in Oceanography, Deep-sea Research, Journal of Physical Oceanography, Oikos, Oecologia, ICES Journal of Marine Science, Aquatic Biology, Canadian Journal of Fisheries & Aquatic Science, and Ecological Modeling.

LANGUAGE SKILLS

English (mother tongue), Spanish (fluent), French (fluent)

David M. Kaplan

COMPUTER LANGUAGES

R, SQL, Matlab, Netlogo, Python, C, Perl, PHP, HTML, Javascript