

Prof. Dr. Antonio Castro

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Professional Preparation

University of Granada	Spain	Biological Sciences	B.S. 2003
University of Almeria	Spain	Pedagogical Education	M.S. 2006
University of Almeria	Spain	Ecology	M.S. 2007
University of Almeria	Spain	Ecology	Ph.D. 2009

Professional Appointments

University of Almeria	Spain	Assistant Professor	2018- present
Idaho State University	USA	Assistant Professor	2015-2018
University of Oklahoma	USA	Adjunct Lecturer	2012-2015
University of Oklahoma	USA	Postdoctoral Associate	2014-2015
University Amsterdam	Netherland	Visiting Postdoc	2011-2012
Charles Sturt University	Australia	Visiting Postdoc	2010-2011
University of Almeria	Spain	Graduate Research Assistant	2005-2009

RESEARCH AND TEACHING INTERESTS

Sustainability Science, Territorial Planning, Ecosystem Services, Social-Ecological Systems, Science-Policy Interface, Human Dimension of Conservation, Protected Areas, Land Use Change, Social Farming, Human-Carnivore Interactions, Biological Soil Crusts

THESES DISSERTATION

Title: Ecosystems and human wellbeing: ecological and socioeconomic valuation of ecosystem services for territorial planning. University of Almería, Spain (PhD. 2009)
Title: Ecosystem services for environmental planning. University of Almería, Spain (MS. 2006)

PUBLICATIONS

ACADEMIC IMPACT OF PUBLISHED WORK

- 32 publications/18 submitted, accepted or in preparation
- 9 articles and book chapters in Spanish
- Google Scholar h-index = 14 (e.g., 648 total cites, 633 from 2013)
- Research Gate score: 28.63

Google Scholar: <https://scholar.google.es/citations?user=5oYZIVIAAAAJ&hl=es&authuser=1>
Research Gate: https://www.researchgate.net/profile/Antonio_Castro11

ACADEMIC SERVICE

2018- : IPBES Lead Author of Multiple Values of Nature
2017- : Associate Editor of Journal of Arid Environments (2017 Impact Factor: 2.000)

PEER-REVIEWED PUBLICATIONS (* denotes graduate student or postdoc advised)

Articles in preparation

48. Nogueira, N., Vaughn C.C., **Castro, A.J.**, Quintas-Soriano, C.* , Mercury contamination in freshwater mussel. *Freshwater Science*

47. **Castro, A.J.**, Vaughn C.C., Quintas-Soriano, C.* , Nogueira, N. Freshwater mussel's contributions to people. *Freshwater Science*

46. **Roospind, A., Brandt, J., Castro, A.J.**, Capps, K., Balvanera, P., Martinez-Ramos, M., Martín-López, B., Baxter, CV. Fostering social-ecological resilience of the Food-Energy-Water nexus in the face of increasing oil palm impacts in tropical ecosystems. *Environmental Research Letters*

45. Martín-López, B, Palomo, I, García-Llorente, M., Iniesta-Arandía, I., Castro, A.J. Human-Carnivore interactions: a systematic review. *Biological Reviews*

44. Quintas-Soriano, C.* , Brandt J., Gibson, M.A., Narducci, J., **Castro, A.J.** Evaluating decoupling of social-ecological river systems. *Bioscience*

43. Kelemen, E., Irene Iniesta-Arandia, **Castro, A.J.**, David del Álamo, Marta Hernández, Cristina Quintas, Elisa Oteros, Izaskun Casado, Ignacio Palomo, Berta Martín-López, Erik Gómez. Evaluating the performance of the ES concept and tools in conflict management. **Ecosystem Services**.

42. García-Llorente, M., **Castro, A.J.**, Velazco-Muñoz, J.* , Aznar-Sanchez, J.A. Ecosystem Services provided by European Agro-Ecosystems: a meta-analysis. **Ecosystem Services**

Articles submitted or accepted pending revisions

41. García-Llorente, M., Iván López, Irene Iniesta-Arandia, **Castro, A.J.**, David del Álamo, Marta Hernández, Cristina Quintas, Elisa Oteros, Izaskun Casado, Ignacio Palomo, Erik Gómez, José A. González, Carlos Montes, Igone Palacios, Miren Onaindia. Ecosystem services demand across Spanish ecosystems. *Ecology and Society*

40. Cornell, J., Quintas-Soriano, C.* , Running, K., **Castro, A.J.** Climate Change impacts on ecosystem services in the western of U.S. *Environmental Science and Policy*

39. Narducci, J., Quintas-Soriano, C.* , Brandt J., **Castro, A.J.** Urban growth and implications for human wellbeing in the western of United States. *Land Use Policy*

38. **Ibarrola, M.J.**, Francis Turkelboom, Sanderine, N., Kastner, T., **Castro, A.J.** Tomato trading teleconnections: linking local impacts from remote regions. *Global Sustainability* (invited to Special Issue).

37. Gibson, M.A.*, Quintas-Soriano, C.*, Brandt J., Narducci, J., **Castro, A.J.** Prioritization of Land Trust Conservation Easements in the Western of United States (under review). *Landscape Ecology*

36. Parson, S., **Castro, A.J.**, Aho, K., Lohse K. Social-Ecological Systems boundaries in Idaho, US (under review). *Applied Geography*

35. Pérez-Rámirez I, García-Llorente M, Benito A, **Castro, A.J.** (under review). Public participatory mapping of agro-ecosystem services for landscape planning. *Landscape Ecology*

34. Quintas-Soriano, C.*, García-Llorente, M., Meacham, M., Norström, A.V., Peterson, G.D, **Castro, A.J.** (accepted). Ecosystem services bundles across Mediterranean transformed landscapes. *Landscape Ecology*

2018 or in press

33. Requena-Mullor, J.M*., Quintas-Soriano, C.*, Brandt J., Cabello J., **Castro, A.J.** (in press). Modeling how land use legacy affects the provision of ecosystem services in Mediterranean southern Spain. *Environmental Research Letters* <http://iopscience.iop.org/article/10.1088/1748-9326/aae5e3>

32. Quintas-Soriano, C., J. Brandt, K. Running, C. V. Baxter, D. M. Gibson, J. Narducci, and **Castro, A.J.** 2018. Social-ecological systems influence ecosystem service perception: a Programme on Ecosystem Change and Society (PECS) analysis. *Ecology and Society* 23(3):3. <https://doi.org/10.5751/ES-10226-230303>

31. **Castro, A.J.**, Egoh B. Quintas-Soriano, C. (in press). Ecosystem Services in dryland systems of the world. *Journal of Arid Environments* <https://doi.org/10.1016/j.jaridenv.2018.09.006>

30. **Castro, A.J.**; Quintas-Soriano, C.; Brandt, J.; Atkinson, C.L.; Baxter, C.V.; Burnham, M.; Egoh, B.N.; García-Llorente, M.; Julian, J.P.; Martín-López, B.; Liao, F.H.; Running, K.; Vaughn, C.C.; Norström, A.V. Applying Place-Based Social-Ecological Research to Address Water Scarcity: Insights for Future Research. *Sustainability* 2018, 10, 1516.

29. **Castro, A.J.**, Julian, J.P., Vaughn, C., Martin-Mikle, C.J., Quintas-Soriano, C.* Ecosystem services across US-watersheds: a meta-analysis 2001-2014. *Ecosystem Services and Global Ecology*

28. Quintas-Soriano, C.*, García-Llorente, M. **Castro, A.J.** (2018). What ecosystem service science has achieved in Spanish drylands? Evidences of need for transdisciplinary science. *Journal of Arid Environments* <https://www.sciencedirect.com/science/article/pii/S0140196318300065>

2017

27. Francis Turkelboom, Sander Jacobs, Eszter Kelemen, Marina García-Llorente, Francesc Baró, Pam Berry, Michael Leone, Marijke Thoonen, Mette Termansen, Ágnes Kalóczkai, Angheluta Vadineanu, **Castro, A.J.**, Bálint Czúcz, Christine Röckmannx, Daniel Wurbs, David N. Barton, David Odee, Elena Preda, Erik Gómez-Baggethun, Erik Stange, Graciela Rusch, Guillermo

Martínez Pastur, Ignacio Palomo, Jan Dick, Jim Casaer, Jiska van Dijk, Joerg A. Priess, Johannes Langemeyer, Jyri Mustajoki, Leena Kopperoinen, Martin J. Baptist, Pablo Luis Peri, Raktima Mukherjee, Réka Aszalós, S.B. Roy, Sandra Luque, Verónica Rusch (in press). When we cannot have it all: ecosystem services trade-offs in real-life planning contexts. *Ecosystem Services*
<https://www.sciencedirect.com/science/article/pii/S2212041617300256>

26. Trachtenberg, Z., **Castro, A.J.**, Gates, K., Randall, A., Schlupp, I., Soreghan, L. Theriault, N., Wieters, N.M. (Inter)Facing the Anthropocene: Representing an interdisciplinary interaction. *Resilience: Journal of the Environmental Humanities*
<https://www.jstor.org/stable/10.5250/resilience.5.issue-1?refreqid=excelsior%3A6982198f2b7bdc675bc1f4bccd07e98f>

25. Balvanera, P., Calderon-Contreras, **Castro, A.J.** R., Ruiz Mercado, I, Geijzendorffer, I., Jacobs, S., Felipe-Lucia, Ilse R. Geijzendorffer, Sander Jacobs, Berta Martín-López, Ugo Arbieu, Chinwe Ifejika Speranza, Bruno Locatelli, Natalia Pérez Harguindeguy, Ilse Ruiz Mercado, Marja J. Spierenburg, Améline Vallet, Laura Lynes, Lindsey Gillson. (2017). Interconnected place-based social-ecological research is needed to inform global sustainability (in press). *Current Opinion in Environmental Sustainability*
<https://www.sciencedirect.com/science/article/pii/S1877343517301409>

24. Rodríguez-Caballero, E., **Castro, A.J.**, Chamizo, S., Quintas-Soriano, C., Garcia-Llorente, M., Canton, Y., Weber, B. Ecosystem services provided by biocrusts: From ecosystem functions to social values. *Journal of Arid Environments*
<http://www.sciencedirect.com/science/article/pii/S0140196317301696>

23. Martín-López, B, Palomo, I., García-Llorente, M., Iniesta-Arandía, I., **Castro, A.J.**, Gómez-Baggethun, E., Montes, C. (2017). Delineating social-ecological systems boundaries: a social-ecoregional approach. *Land Use Policy*, **Volume 66**, 90–104
<http://www.sciencedirect.com/science/article/pii/S026483771630816X>

22. Requena-Mullor, J.M.*, Lopez, E., **Castro, A.J.**, Cabello, J., Reyes, A., Segura-Alcaraz, D., Castro, H. (2017). Remote-sensing based approach to forecast habitat quality under climate change scenarios. 12(3): e0172107, *Plos ONE*
<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0172107>

2016

21. **Castro, A.J.**, García-Llorente, M., Quintas-Soriano, C. (2016). Ecosystem Services. In: Cabello J., Salinas M. J., Torres M. T., Castro. H. (Eds.), *Global Change Monitoring Handbook: a proposal for arid and semiarid environments*, p 95-99. Fundación Patrimonio Natural, Biodiversidad y Cambio Global. Almeria, ISBN: 978-84-606-6228-0 [pdf](#)

20. Quintas-Soriano, C.*, García-Llorente M, Castro, H., **Castro A.J.** (2016). Expansion of greenhouse horticulture in Spain seen to compromise conservation and the revitalisation of rural areas. A service from the European Commission. *Science for Environment Policy*, [Issue 459](#)

19. **Castro, A.J.**, García-Llorente, M., Vaughn, C., Julian, J.P., and Atkinson C.L. (2016). Willingness to pay for ecosystem services among stakeholder groups in a South-Central U.S. watershed with regional conflict. *Journal of Water Resources Management and Planning*,
[http://ascelibrary.org/doi/abs/10.1061/\(ASCE\)WR.1943-5452.0000671](http://ascelibrary.org/doi/abs/10.1061/(ASCE)WR.1943-5452.0000671)

18. Quintas-Soriano, C.*, **Castro A.J.**, Castro, H., García-Llorente M, (2016). Land use impacts on ecosystem services and implications on human well-being in arid Spain. *Land Use Policy*, 54 534–548 <http://www.sciencedirect.com/science/article/pii/S0264837716302010>

17. García-Llorente, M., **Castro, A.J.**, Quintas-Soriano, C.*, Castro, H., Montes, C., Martín-López, B. (2016). The value of time in biological conservation and supplied ecosystem services: A willingness to give up time exercise. *Journal of Arid Environments*, 124, 13-21 [doi:10.1016/j.jaridenv.2015.07.004](https://doi.org/10.1016/j.jaridenv.2015.07.004)

16. Requena-Mullor, J.M.*, Lopez, E., **Castro, A.J.**, Virgos, E., Castro, H. (2016). Landscape influence on the feeding habits of European badger (*Meles meles*) in arid Spain. *Mammal Research*, 1-11 <http://link.springer.com/article/10.1007%2Fs13364-016-0269-x>

15. **Castro, A.J.**, Caryn C. Vaughn, Jason P. Julian, and Marina García-Llorente, (2016). Social Demand for Ecosystem Services and Implications for Watershed Management. *Journal of the American Water Resources Association* (JAWRA) 1-13. <http://onlinelibrary.wiley.com/doi/10.1111/1752-1688.12379/abstract>

2015

14. García-Llorente, M., Iniesta-Arandia, I., Willaarts, B., Harrison, P.A., Berry, P., Bayo, M., **Castro, A.J.**, Montes, C., Martín-López, B., (2015). Biophysical and socio-cultural factor underlying spatial tradeoffs of ecosystem services in semiarid watersheds: A sustainability analysis of social-ecological systems. *Ecology and Society*, 20(3), 39 <http://www.ecologyandsociety.org/vol20/iss3/art39/>

13. **Castro, A.J.**, Martín-López, B., Plieninger, T., López, E., Alcaraz-Segura, D., Vaughn, C.C., Cabello, J. (2015). Do protected areas networks ensure the supply of ecosystem services? Spatial patterns of two nature reserve systems in semi-arid Spain. *Applied Geography*, 60, 1-9 [doi:10.1016/j.apgeog.2015.02.012](https://doi.org/10.1016/j.apgeog.2015.02.012)

12. Lopez-Rodriguez, **Castro, A.J.**, M., Cabello, J., Jorreto, S., Castro, H. (2015). Science-policy interface approach for dealing with water environmental problems *Environmental Science and Policy*, 50, 1-14 <http://www.sciencedirect.com/science/article/pii/S1462901115000155>

11. **Castro, A.J.**, Vaughn, C., Julian, J.P, Garcia-Llorente, M., *Bowman, K.N.** (2015). Social perception and supply of ecosystem services: a watershed approach for carbon related ecosystem services. In: Blanco, J.A. and Lo, Y.H. (eds), *Biodiversity in Ecosystems - Linking Structure and Function*, Universidad Publica de Navarra, Spain [Link](#)

2014

10. **Castro, A.J.**, Verburg, P., Martín-López, B., García-Llorente, M., Cabello, J., Vaughn, C., and López E. (2014). Ecosystem service trade-offs from the supply to social demand: a landscape-scale spatial analysis. *Landscape and Urban Planning*, 132: 102 - 110 [doi:10.1016/j.landurbplan.2014.08.009](https://doi.org/10.1016/j.landurbplan.2014.08.009)

9. Quintas-Soriano, C.*, **Castro, A.J.**, García-Llorente, M., Cabello, J., Castro, H. (2014). From supply to social demand: a landscape-scale analysis of the water regulation service. *Landscape Ecology*, **29**: 1069-1082 doi:[10.1007/s10980-014-0032-0](https://doi.org/10.1007/s10980-014-0032-0)

8. Requena-Mullor, J.M.*, Lopez, E., **Castro, A.J.**, Cabello, J., Virgos, E. Modeling spatial distribution of European badger in arid landscapes: an ecosystem functioning approach (2014). *Landscape Ecology*, **29**: 843-855 doi:[10.1007/s10980-014-0020-4](https://doi.org/10.1007/s10980-014-0020-4)

7. Fernando Santos-Martín, Carlos Montes, Berta Martín-López, José A. González, Mateo Aguado, Javier Benayas, Concepción Piñeiro, Jorge Navacerrada, Pedro Zorrilla, Marina García Llorente, Irene Iniesta, Elisa Oteros, Ignacio Palomo, César López Santiago, Paloma Alcorlo, M^a Rosario Vidal, M^a Luisa Suárez, **Castro, A.J.** et al. (2013). *Ecosystem and Biodiversity for Human Wellbeing: Spanish National Ecosystem Assessment*, Fundación Biodiversidad, Madrid, Spain. https://www.researchgate.net/publication/271208050_Ecosystems_and_biodiversity_for_human_wellbeingSpanish_National_Ecosystem_Assessment_Synthesis_of_key_findings

2013

6. Barco-Bonilla, N., Romero-González, R., Plaza-Bolaños, P., Martínez Vidal J. L., **Castro, A.J.**, Martín, I., José Salas, J., Garrido Frenich, A. (2013). Priority organic compounds in wastewater effluents from the Mediterranean and Atlantic basins of Andalusia (Spain). *Environmental Science: Processes and Impact*, **15**, 2194-2203 <http://pubs.rsc.org/en/content/articlelanding/2013/em/c3em00329a#!divAbstract>

5. **Castro, A.J.**, García-Llorente, M., Martín-López, B., Palomo, I., and Iniesta-Arandía, I. (2013). Multidimensional approaches in ecosystem services assessment. In: Di Bella, C., Alcaraz-Segura, D. (Eds.): *Earth Observation of Ecosystem Services*, 441-468 <https://www.crcpress.com/Earth-Observation-of-Ecosystem-Services/AlcarazSegura-Bella-Straschnoy/9781466505889>

4. **Castro, A.J.**, Paruelo, J.M., Alcaraz-Segura, D., Cabello, J., M., Oyarzabal, and López-Carrique, E., (2013). Missing gaps in the estimation of the carbon gains service from Light Use Efficiency models. In: Alcaraz-Segura, D., Di Bella, C., (Eds). *Earth Observation of Ecosystem Services*, 105-124 <https://www.crcpress.com/Earth-Observation-of-Ecosystem-Services/AlcarazSegura-Bella-Straschnoy/9781466505889>

2012

3. García-Llorente, M., Martín-López, B., Nunnes, P.A.L.D, **Castro, A.J.**, Montes, C. (2012). A choice experiment study for land use scenarios in semiarid watersheds environments. *Journal of Arid Environments*, **87**:219-230 doi:[10.1016/j.jaridenv.2012.07.015](https://doi.org/10.1016/j.jaridenv.2012.07.015)

2. Cabello, J., Alcaraz-Segura, D., Ferrero, R., **Castro, A.J.**, Liras. E., (2012). The role of vegetation and lithology in the spatial and inter-annual response of EVI to climate in drylands of Southeastern Spain. *Journal of Arid Environments*, **79**:76-83 doi:[10.1016/j.jaridenv.2011.12.006](https://doi.org/10.1016/j.jaridenv.2011.12.006)

2011

1. **Castro, A.J.**, Martín-López, B., García-Llorente, M., Aguilera, P.A., López, E., Cabello, J. (2011). Social preferences regarding the delivery of ecosystem services in a semiarid Mediterranean region. *Journal of Arid Environments*, 75:1201-1208 [doi:10.1016/j.jaridenv.2011.05.013](https://doi.org/10.1016/j.jaridenv.2011.05.013)

OTHER PUBLICATIONS AND BOOK CHAPTERS (in Spanish)

9. Requena-Mullor, J.M.*, **Castro, A.J.**, Lopez, E., Virgos, E., Castro, H. (2015). Hábitos alimenticios del Tejón Europeo (Meles meles) en paisajes mediterráneos áridos. *Galemys Journal*

8. **Castro, A.J.**, Quintas-Soriano, C.*, García-Llorente, M., Cabello, J., Castro, H. (2013). Avanzando sobre el cómo, el dónde y el porqué de los problemas del agua en ambientes semiáridos: los servicios de los ecosistemas como aproximación. *Eubacteria*, 31: ISSN-1697-0071

7. Martín-López, B., García-Llorente, M., Iniesta-Arandía, I., **Castro, A.J.**, Willaarts, B. Aguilera, P.A., Montes, C. (2013). La evaluación de los servicios de los ecosistemas suministrados por las cuencas hidrográficas del sureste semiárido andaluz. *Eubacteria*, 31: ISSN-1697-0071

6. Cabello, J. and **Castro, A.J.**, (2012). Estado y tendencia de los servicios de los ecosistemas de Zonas Áridas de Andalucía. In: Evaluación de los Ecosistemas del Milenio Andalucía. Edt: Fundación Biodiversidad. Ministerio de Medio Ambiente y Medio Rural y Marino, Madrid, Spain

5. Cabello, J. and **Castro, A.J.**, (2012). Estado y tendencia de los servicios de los ecosistemas de Alta Montaña. In: Evaluación de los Ecosistemas del Milenio Andalucía. Edt: Fundación Biodiversidad. Ministerio de Medio Ambiente y Medio Rural y Marino, Madrid, Spain

4. **Castro, A.J.**, (2010). El río: caudal de economía y ecología. In: El Río Andarax. Ed: I. Francés, A. Castro, A, Fernández, S. Jorreto, J. Gisbert. Agencia Andaluza del Agua. Consejería de Medio Ambiente. Junta de Andalucía, Spain. ISBN: 978-84-92807-46-8

3. **Castro, A.J.**, D. Alcaraz-Segura. Paraje Natural del Desierto de Tabernas, (2010). In: El Río Andarax. Edts: I. Francés, A. Castro, A, Fernandez, S. Jorreto, J. Gisbert. Agencia Andaluza del Agua. Consejería de Medio Ambiente. Junta de Andalucía, Spain. ISBN: 978-84-92807-46-8

2. Cueto, M., Jacoba, M., López, E., **Castro, A.J.**, (2010). El matorral. In: El Río Andarax. Edts: I. Francés, A. Castro, A, Fernández, S. Jorreto, J. Gisbert. Agencia Andaluza del Agua. Consejería de Medio Ambiente. Junta de Andalucía, Spain. ISBN: 978-84-92807-46-8

1. Aguilera, P., López, E., **Castro, A.J.**, Cabello, J., Blanca, G., Calaforra, J.M., Oyonarte, C. (2000). In: “Espacios Naturales y protegidos de Almería: naturaleza almeriense”. Consejería de Medio Ambiente. Junta de Andalucía, Spain

INTERNATIONAL RESEARCH STAYS

- Institute for Environmental Studies (IVM), *VU University of Amsterdam*, Netherlands. April-August 2012 (five months). In collaboration with Dr. Peter Verburg. Research stay funded by the University of Almeria (\$3,347)

- Institute for Land, Water and Society. *Charles Stuart University, Australia*. January-July 2010 (four months). In collaboration with Dr. Gary W. Luck. Research stay funded by the University of Almeria (\$4,016)
- Socio-Ecological Systems Laboratory, *Autonomous University of Madrid, Spain*. June 2009 (one month). In collaboration with Dr. Berta Martín-López
- Laboratorio de Análisis Regional y Teledetección (LART-IFEVA), *Universidad de Buenos Aires, Argentina*. February-June 2007 (five months). In collaboration with Dr. José M. Paruelo. Research stay funded by the University of Almeria (\$4,016)

RESEARCH GRANTS (EXTERNAL AND INTERNAL)

- 2018-2020 (funded). Ecosystem Functional Diversity of the Circumpolar Arctic. NASA ROSES 2016 A.50 GEO Work Programme solicitation. \$606,666 (Epstein, H. PI; Castro collaborator)
- 2017-2022 (non-funded, to be resubmitted in 2018). National Science Foundation, Innovations at the Nexus of Food, Energy and Water Systems (INFEWS). INFEWS/T3: Fostering social-ecological resilience of the Food-Energy-Water nexus in the face of increasing oil palm impacts in tropical ecosystems. \$2,489,000 (Castro, PI; Balvanera Co-PI, Martinez Ramos, Co-PI, Kapps, Co-PI, Brandt, Co-PI)
- 2016-2019 (funded). The LIFE Europe (the Financial Instrument for the Environment and Climate Action) (<http://ec.europa.eu/environment/life/funding/life2015/>). “The Green link”. \$45,000 + indirect charges to ISU (Castro, PI)
- 2016-2017 (funded) iSEED award under the Idaho NSF EPSCoR Research Infrastructure Improvement (RII) program, Managing Idaho’s Landscapes for Ecosystem Services (MILES). Predicting impacts of future policy-based land use scenarios on Idaho’s Ecosystem Services and implications for human wellbeing”. \$80,000 (Antonio J. Castro, P.I., Jodi Brandt (BSU) co-P.I.)
- 2016-2017 (funded). ISU Seed Grant, Mapping Idaho’s Ecosystem Services, \$19,770 (Antonio J. Castro, P.I., Katrina Running, co-P.I.)
- 2016-2020 (no funded). National Science Foundation, EPSCoR Track 2. RII Track-2 FEC: Transdisciplinary science and high-frequency sensor applications to inform sustainable management of food, energy, and water in large semi-arid river basins, \$3,951,000, (Sarah Godsey, Colden Baxter, P.I., Antonio J. Castro co-P.I.)
- 2015-2018 (no funded). U.S. Department of the Interior, U.S. Geological Survey, Water Resources Research National Competitive Grants. “Persistent drought, inter-statewater demand, and social, economic and ecological implications of reservoir management, \$501,732. (Caryn C. Vaughn, P.I., Antonio J. Castro co-P.I., Gates, Kiza co-P.I, Julian, Jason P co-P.I., Murray, Kyle co-P.I.)
- 2015-2018 (no funded). Environmental Protection Agency (EPA). “Multi-dimensional water resource valuation incorporating climate variability, water management, surface water-groundwater connectivity, water temperatures, and ecosystem services, \$644,058 (Caryn C. Vaughn, P.I., Antonio J. Castro co-P.I., Gates, Kiza co-P.I, Julian, Jason P co-P.I., Murray, Kyle co-P.I.)
- 2014-2017. NSF EPSCoR RII: Enhancing the resilience of socio-economic systems to climate variability in Oklahoma, Science PI, National Science. EPSCoR is funding 25% of my two years’ contract (\$90,000; 2014-2016) in collaboration with the South-Central Climate Science Center and the Oklahoma Biological Survey (Dr. Renee McPherson (co-PI) and Dr. Caryn Vaughn).

- 2013–2014. South Central Climate Science Center. Using an ecosystem services framework to examine the social, economic and ecological tradeoffs of different water management scenarios in the Kiamichi River (\$23,550 Caryn Vaughn, P.I.; Castro Senior Personnel).
- 2011–2012. Oklahoma Water Resources Research Institute, Incorporating Ecological Costs and Benefits into Environmental Flow Recommendations for Oklahoma Rivers: Phase 1, Southeastern Oklahoma (\$75,000, Caryn C. Vaughn, P.I., Castro Senior Personnel)
- 2010–2013. Development of predictive models and a system of monitoring and warning of the effects of global change on biodiversity and ecosystem functioning in SE Iberian. (SEGALERT project; P09-Rnm-5048). Funded by Andalusian Spanish Government (Antonio Castro co-P.I.; \$284,448)
- 2009–2012. Designing indicators and methodologies in the assessment of Global Change effects in semiarid ecosystems. Funded by Andalusian Spanish Government, Spain. (Antonio Castro P.I.: \$167,356, total funding project, \$2,543,820)
- 2009–2012. Managing National Parks beyond their limits: assessing and mapping ecosystem services as a tool for landscape planning within the global change context. Funded by the Spanish Ministry of Environment, Rural and Marine Affairs (Antonio Castro co-P.I.; \$107,993)
- 2008–2012. Functional diversity and human wellbeing: modeling the link between ecosystem services and the socioeconomic structure of a semiarid Spanish watershed. Project funded by the Andalusian Ministry of Science and Technology (Antonio Castro co-P.I.; \$185,846)
- 2008–2011. Implementation of the Water Framework Directive in river basins of Andalusia and its influence on human welfare: water ecosystem services. Funded by the Andalusian Ministry of the Environment, Spain (Antonio Castro co-P.I.; \$80,475)
- 2004–2005. Ecological guidelines and mapping of the bird steppe communities of Cabo de Gata Natural Park, Almería, Spain. Founded by Sociedad Estatal de Aguas de la Cuenca del Sur S.A. (Antonio Castro co-I.P.; \$80,466)
- 2005–2007. Ecological and Economic valuation of the goods and services supplied the network of protected areas of Andalusia, Spain. Funded by Andalusian Spanish Government, Spain (Antonio Castro co-P.I.: \$145,001)

RESEARCH FELLOWSHIPS (TOTAL FUNDING SINCE 2005 = \$330,439)

- 2014–2015. Research grant from Oklahoma Biological Survey at the University of Oklahoma (\$90,000)
- 2012–2013. Postdoctoral fellowship from Oklahoma Biological Survey for the collaboration with the Department of Biology at the University of Oklahoma (\$35,000, 1 year)
- 2010–2012. Postdoctoral fellowship from the Environmental Government of Andalusia for the collaboration with the Department of Ecology at the University of Almeria, and the Andalusian Center for the Assessment and Monitoring of Global Change (CAESCG) (\$107,108, 2 years)
- 2005–2010. PhD fellowship from the Environmental Government of Andalusia (Spain) for the collaboration with the Department of Ecology at the University of Almeria (\$80,331, 4 years)

TEACHING EXPERIENCE

Academic Courses

- Social-Ecological Systems Science. Instructor for a graduate course focusing on the role of ecosystem services in linking ecological and socioeconomic systems. Idaho State University, US. Spring 2018.
- Ecosystem Services and Human Wellbeing (GEO 5143). Instructor for a graduate course focusing on the role of ecosystem services in Human Wellbeing maintaining. University of Oklahoma, US. Fall 2013 (9 students).
- Ecology of Aquatic Ecosystems in Arid Lands. Co-instructor for a graduate course focusing on Water and Environment in semi-arid ecosystems. University of Almeria, Spain. 2010-2012 (15 students).
- Water Ecosystem Services and Human Welfare. Co-instructor for a graduate course focusing on Water and Environment in semiarid ecosystems. University of Almeria, Spain. 2010-2012 (13 students).
- Ecosystems and Human Wellbeing: what is the role of ecosystem services in nature conservation? Instructor for a graduate course focusing on ecosystem services and Global Change Assessment. University of Almeria, Spain. 2011-2012 (15 students).
- Statistical Techniques in Environmental Sciences. Co-instructor for a graduate course focusing on Integral Management of Natural Resources. International University of Andalucia (UNIA), Spain. 2009-2012 (20 students).
- Ecosystem Services and Global Change. Instructor for a graduate course focusing on cultural and natural heritage research. International University of Andalucia (UNIA). 2010-2011 (8 students).
- Teaching Experimental Science. Instructor for an undergraduate course, University of Almeria, Spain. 2010-2011 (75 students).

Labs sections

- Ecology. Co-instructor for an undergraduate course, University of Almeria (35 students). 2010-2011
- Science and Technology of Environment. Co-instructor for an undergraduate course, University of Almeria, Spain. 2007-2011 (15 students).
- Environmental Impacts. Co-instructor for an undergraduate course, University of Almeria, Spain. 2010-2011 (15 students).
- Coastal Ecosystems Conservation. Co-instructor for an undergraduate course, University of Almeria, Spain. 2010-2011 (15 students).
- Environmental Impacts. Co-instructor for an undergraduate course, University of Almeria, Spain. 2008-2009 (15 students).

Invited seminars or guest lectures

- Applying social-ecological system frameworks to improve sustainable land-use and enhance resilient agro-food systems under water scarcity". Organized by the Food and Agriculture Organization of the United Nations organise. 23-25 January 2018 – FAO Rome HQ.
- Ecology of Ecosystem Service Science. Guest lecture at Idaho State University. Responsible Keith Reinhart, October 20, 2016.
- Analyzing ecosystem service tradeoffs for decision-making domains: a framework from supply to social demand. Seminar at Dartmouth College and University of New Hampshire. Responsible Kevin Gardner (UNH) and Mark Borsuk (DC). April 23-26, 2014.

- Ecosystem Services and Conservation Biology: how do we measure and value them? Guest Lecturer for a graduate course focusing on Urban Ecology (BIOL PBIO 2404). Instructor Heather McCarthy, Department of Botany and Microbiology, University of Oklahoma, US. Spring 2014 (33 students).
- An introduction of Social Sciences in Conservation Biology. Guest Lecturer for a graduate course focusing on Biology of Invertebrates (BIOL 3053). Instructor Elizabeth Bergey, Oklahoma Biological Survey, University of Oklahoma, US. Spring 2014 (6 students).
- Vaughn, Caryn C. and Antonio J. Castro. “Sustainable River flows and ecosystem services in the Kiamichi River basin”. South Central Climate Science Center, University of Oklahoma, September 2013.
- Antonio J. Castro. “Water regulation service from supply to social demand: A landscape spatial analysis”. Guest seminar in Kirsten De Beurs Lab, Geography, University of Oklahoma, October 2013.
- Antonio J. Castro, Vaughn, Caryn C., and Jason Julian. “Exploring the Sociocultural Values of Ecosystem services for watershed management”. Geographical Ecology Workshop. Department of Biology, University of Oklahoma, February 2014.
- Antonio J. Castro, Vaughn, Caryn C., and Jason Julian. “Incorporating Ecosystem Services for Watershed Management in Southeast Oklahoma”. Plant Biology seminar. Department of Microbiology and Plant Biology, University of Oklahoma, March 2013

MENTORING EXPERIENCE

TOTAL GRADUATE STUDENTS AND POSTDOCS ADVISED SINCE 2010: 1 POSTDOC, 4 PHD STUDENTS, 4 MS STUDENTS, 6 UNDERGRADUATE STUDENTS

Postdocs (*current student, **former student)

Postdoc: Dr. Cristina Quintas Soriano**

Thesis title: Predicting impacts of future policy-based land use scenarios on Idaho’s Ecosystem Services and implications for human wellbeing

Institution: Idaho State University

Advisors: Antonio J. Castro (ISU) and Jodi Brandt (BSU)

Visiting Postdoc: Dr. Juan M. Requena-Mullor**

Thesis title: Land use legacies and ecosystem services

Institution: Idaho State University

Advisors: Antonio J. Castro (ISU)

PhD students (*current student, **former student)

Student: Aline Pingarroni * (September 2018 - September 2021)

Dissertation title: Ecosystem Services bundles in Mexican tropical ecosystems

Institution: Idaho State University and National University of Mexico

Advisors: Patricia Balvanera (UNAM, Mexico) and Antonio J. Castro (US)

Student: Cristina Quintas Soriano** (January 2012-July 2016)

Dissertation title: Evaluation and characterization of ecosystem services in semi-arid environments of southeastern Spain

Institution: University of Almeria, Spain

Advisors: Antonio J. Castro (US) and Marina Garcia Llorente

Student: Juan Requena Mullor** (January 2012- April 2015)
Dissertation title: Ecology of European badger in arid and semiarid landscapes
Institution: University of Almeria, Spain
Advisors: Enrique López Carrique (UAL, Spain) and Antonio J. Castro (University of Oklahoma, USA)

MS student (* current student, ** former student)

Student: Adam Eckersell * (June 2016 - June 2020)
Dissertation title: Managing Idaho's landscapes for Ecosystem Services
Institution: Idaho State University
Advisors: Antonio J. Castro (US)

Student: Dainee Gibson ** (June 2016 – May 2018)
Dissertation title: Managing Idaho's landscapes for Ecosystem Services
Institution: Idaho State University
Advisors: Antonio J. Castro (US)

Student: Cristina Quintas Soriano**, September 2012
Dissertation title: Evaluación de servicios de los ecosistemas del agua en sistemas áridos y semiáridos: análisis espacial y demanda social
Institution: University of Almeria, Spain
Advisors: Antonio J. Castro (University of Oklahoma, USA) and Marina Garcia Llorente (Autonomous University of Madrid, Spain)

Student: Juan Miguel Requena Mullor**, September 2012
Dissertation title: Modelos de distribución del Tejón euroasiático en paisajes áridos: una aproximación basada en imágenes de satélite
Institution: University of Almeria, Spain
Advisors: Enrique López Carrique (UAL, Spain) and Antonio J. Castro (University of Oklahoma, USA)

Undergraduate student's supervision (*current student, **former student)

Student: Shannlyn Spotted Elk * (September-December 2017)
Thesis title: Salmon fly ecosystem services
Institution: Idaho State University, MILES Undergraduate Research and Internships
Advisors: Antonio J. Castro (ISU)

Student: Loni Nelson* (June-December 2017)
Thesis title: Salmon fly ecosystem services
Institution: Idaho State University, MILES Undergraduate Research and Internships
Advisors: Antonio J. Castro (ISU)

Student: Sandra Carillo* (June-December 2016)
Thesis title: Managing Idaho's landscapes for Ecosystem Services
Institution: Idaho State University, MILES Undergraduate Research and Internships
Advisors: Antonio J. Castro (ISU)

Student: Estela Okech** (June-August 2016)
Thesis title: Managing Idaho's landscapes for Ecosystem Services
Institution: Idaho State University, MILES Undergraduate Research and Internships
Advisors: Antonio J. Castro (ISU)

Student: Jessica Hamway** (June-August 2016)
Thesis title: Managing Idaho's landscapes for Ecosystem Services
Institution: Idaho State University, MILES Undergraduate Research and Internships (MURI)
Advisors: Antonio J. Castro (ISU)

Student: Kelsey N.W. Bowman**, June 2014
Capstone title: Perceptions vs. Realities: A Multidimensional Approach to Evaluating Carbon Related Ecosystem Services in the Kiamichi Watershed (published as a book chapter, see Castro et al. 2015)
Institution: University of Oklahoma
Advisors: Antonio J. Castro (University of Oklahoma, USA)

NATIONAL AND INTERNATIONAL PRESENTATIONS (*graduate student ** postdoc advised)

- Quintas-Soriano, C.,* Brandt, J., **Castro, A.J.** Social-Ecological Systems dynamics and social perceptions toward ecosystem services. US Regional Association of the International Association for Landscape Ecology. Chicago, Illinois, USA, April 8-12, 2018. Oral Presentation
- Quintas-Soriano, C.,* Brandt, J., **Castro, A.J.** Social values of ecosystem services across semi-arid watersheds in the Western United States. US Regional Association of the International Association for Landscape Ecology. Chicago, Illinois, USA, April 8-12, 2018. Poster Presentation
- Nelson, L*, Eckersell, A.*, Quintas-Soriano, C.,** Van Kirk, R., Baxter, C.V., The importance of relational values in a riverine social ecological system. Annual meeting Society for Freshwater Science "Navigating Boundaries in Freshwater Science". Detroit, Michigan, USA, May 20-24, 2018. Poster Presentation
- Eckersell, A*., Quintas-Soriano, C**., Nelson, L.*, Van Kirk, R., Baxter, C.V., **Castro, A.J.** A study of relational values in a social-ecological river system: connections between fishing and human well-being Annual meeting Society for Freshwater Science "Navigating Boundaries in Freshwater Science". Detroit, Michigan, USA, May 20-24, 2018. Oral Presentation
- **Castro, A.J.**, Vaughn, C., Quintas-Soriano, C., Ferreira-Rodríguez, N. Do people know the role of mussel-related ecosystem services for human wellbeing? Annual meeting Society for Freshwater Science "Navigating Boundaries in Freshwater Science". Detroit, Michigan, USA, May 20-24, 2018. Oral Presentation
- Martín-López, B., Lozano, J., Olszańska A., **Castro, A.J.**, Cortés-Avizanda A., Morales-Reyes, Z., Malo, A.F., Moleón, M., Sánchez-Zapata J.A., Dorresteyn I., Fischer, J., Kansky, R., Pascual, R., von Wehrden, H. Understanding human-carnivore relations: a systematic review. Pathways Europe, Goslar, Germany – September 16th – 19th, 2018. Oral Presentation
- Carabbasa, V., Diaz, E., Franco, K., Kallen, S., Campo, J., Andreu, V., Gimeno, E., Gonzalez, F., Viera, G., Crescenzo, V., Bertaina, F., **Castro, A.J.**, Gutierrez, I., Kourkoumpas, D., Grammelins, P., Alzañiz, J.M. Life the Green Lin: restoring degraded

areas with the cocoon ecotechnology. Conference TERRAenVISION Environmental Issues Today: Scientific Solutions for Societal Issues, Barcelona (Spain), 29th-2nd February, 2018. Poster Presentation

- López-Rodríguez, M.D., **Castro, A.J.**, Castro, H., Jorroto, S., Cabello, J. A context-specific boundary object to strengthen collaborations across science, policy and society. 5th European Congress of Conservation Biology. 12th - 15th of June 2018, Jyväskylä, Finland. Oral Presentation
- Ibarrola Rivas, MJ, **Castro, A.J.**, Galicia, L., Kastner, T., Nonhebel S., Turkelboom, F. II Tracing Tomato Teleconnections: What the consumer doesn't know about the tomato on his plate. Conference of the Programme on Ecosystem Change and Society 2017, Oaxaca, Mexico. Oral Presentation
- Quintas-Soriano, C., Brandt, J., Gibson, D., Narducci, J., García-Llorente, M., Vaughn, C., Running, K., Baxter, C., **Castro, A.J.** Exploring the effects of Social-Ecological dynamics on stakeholder preferences on relationships between ecosystem services: a PECS-WaterSES analysis. II Conference of the Programme on Ecosystem Change and Society 2017, Oaxaca, Mexico. Oral Presentation
- **Castro, A.J.**, Quintas-Soriano, C., Brandt, J., Narducci, J., Gibson, D., Vaughn, C., Julian, J., Atkinson, C., Running, K., Burnham, M. Water scarcity and governance across freshwater Social-Ecological Systems (WaterSES): a Program on Ecosystem Change and Society (PECS) perspective. II Conference of the Programme on Ecosystem Change and Society 2017, Oaxaca, Mexico. Oral Presentation
- Brandt, J., Quintas-Soriano, C., Gibson, D., Narducci, J., **Castro, A.J.** Social mapping of ecosystem services supply: a case study in the semi-arid western United States. II Conference of the Programme on Ecosystem Change and Society 2017, Oaxaca, Mexico. Oral Presentation
- Nelson, L., Eckersell, A., **Castro, A.J.** Salmonflies: the Hidden Key to Family Cohesion. ICUR. Boise, Idaho from 26-27 July 2017 Poster Presentation
- Nelson, L., Eckersell, A., **Castro, A.J.** Salmonflies: the Hidden Key to Family Cohesion. EPSCoR Conference. Pocatello, Idaho from 12-13 October 2017 Poster Presentation
- Eckersell, A, Quintas-Soriano, C., Gibson, D., Nelson, L., **Castro, A.J.** Investigating Intrinsic, Instrumental, and Relational Values in the Henrys Fork Watershed. MILES Annual Meeting 2018. Idaho State University. October 11-13 2018. Poster Presentation
- Quintas-Soriano, C., Brandt, J., Running, K., Baxter, C., Gibson, D., Narducci, J., **Castro, A.J.** Social-ecological systems can influence on ecosystem service perceptions. Annual MILES conference 2017. Poster Presentation
- Quintas-Soriano, C., Brandt, J., Gibson, D., Narducci, J., Vaughn, C., Running, K., Baxter, C., García-Llorente, M., Julian, J., Atkinson, C., Burnham, M., Martín-López, B., Egoh, B., Liao, H., Norström, A., **Castro, A.J.** Investigating water scarcity and governance across social-ecological systems (WaterSES): a program on ecosystem change and society (PECS) perspective. Natural Capital Symposium. 20-23 March 2017, Stanford University. Poster Presentation
- Quintas-Soriano, C., Brandt, J., **Castro A.J.** Land use scenarios and ecosystem services within the Program for Ecosystem Change and Society (PECS). 2016 Idaho EPSCoR Annual Meeting, October 20 Coeur d'Alene, Idaho. Oral Presentation
- Gibson, D., Quintas-Soriano, C., Narducci, J., Brandt, J., **Castro, A.J.** What is the role of public and private lands in Idaho for conserving ecosystem services? Natural Capital Symposium. Palo Alto, California, from 20-23 March 2017. Poster Presentation

- Gibson, D. Quintas-Soriano, C., **Castro, AJ**. Implementing ecosystem service valuation into land trust conservation in the Portneuf watershed. Idaho EPSCoR MILES Annual Meeting. Pocatello, Idaho, from 12-13 October 2017. Poster Presentation
- Cristina Quintas-Soriano*, Marina García-Llorente, Megan Meacham, Albert Norström, Garry Peterson, **Castro, A.J.** Integrating the biophysical and social perspective in ecosystem service bundles. S4 Ecosystem service trade-offs and synergies: patterns across case-studies. European Ecosystem Services Conference. Antwerp, Belgium, from 19-23 September 2016 Oral Presentation
- Velazco-Muñoz, J., * Aznar-Sanchez, J. Marina García-Llorente, **Castro, A.J.** Ecosystem Service Assessment as a Tool for Sustainable Development in Vulnerable Mountain Areas. The Cultivation of Almond Trees in the Arid Agroecosystem of Southeastern Spain. European Ecosystem Services Conference. Antwerp, Belgium, from 19-23 September 2016 Poster Presentation
- Manuel Paquenco-Romero, María Vallejos, Javier Cabello, Hugo Berbery, **Castro, A.J.**, José Paruelo, Howard Epstein, Esteban Jobbágy, Julio Peñas, Néstor Fernández⁸, Cecilio Oyonarte, Domingo Alcaraz-Segura. Essential social-ecological functions to refine the conceptual framework of ecosystem services. European Ecosystem Services Conference. Antwerp, Belgium, from 19-23 September 2016 Poster Presentation
- Cristina Quintas-Soriano*, **Castro, A.J.**, Marina García-Llorente. Disentangling ecosystem service bundles in drylands of the Iberian Peninsula. I Congreso de Biodiversidad y Conservación de la Naturaleza, Universidad of Almeria, Spain. 29-30 September 2016 Poster Presentation
- Juan Miguel Requena Mullor*, E. López, **Castro, A.J.**, D. Alcaraz Segura, H. Castro, A. Reyes, J. Cabello. Novel remote-sensing based approach to forecast habitat quality under climate change scenarios. I Congreso de Biodiversidad y Conservación de la Naturaleza, Universidad of Almeria, Spain 29-30 September 2016 Poster presentation
- Domingo Alcaraz-Segura, José M. Paruelo, Camilo E. Bagnato, E. Hugo Berbery, Javier Cabello, **Castro A.J.**, Beatriz P. Cazorla, Howard Epstein, Néstor Fernández, Esteban G. Jobbágy, Cecilio Oyonarte, Manuel Pacheco, Julio Peñas, María Vallejos. Remotely-sensed Ecosystem Functional Types: monitoring functional diversity at the ecosystem level. 2016 GEO BON Open Science Conference & All Hands Meeting 4th - 8th July 2016, Leipzig, Germany Oral Presentation
- **Castro A.J.**, Ecosystem Services bundles in Spanish Drylands, Natural Capital Symposium 2016, Stanford University, Palo Alto, CA, 21-24 March, 2016 Poster Presentation
- Rodgers, D., Baxter, C., Lybecker, D., Lohse, K., Delparte, D., Smith, R., Larson, D., **Castro A.J.** Investigating Mid-Sized Cities in the Rural Western US as Social Ecological Systems: the MILES Program (Managing Idaho's Landscapes for ES). Program for Ecosystem Change and Society (PECS) conference “Social-ecological dynamics in the Anthropocene”, Stellenbosh, SouthAfrica, 3-5 November, 2015 Oral Presentation
- **Castro A.J.** Supply and Demand of Ecosystem Services across Spanish Drylands. The Ecosystem Services Partnership (ESP) conference, “Ecosystem Services for Nature, People and Prosperity”. Stellenbosh, SouthAfrica, 9-13 November, 2015 Oral Presentation
- **Castro A.J.** Caryn C. Vaughn Jason P. Julian. Characterizing ecosystem service bundles for analyzing trade-offs in watershed management. Annual meeting of Society for Freshwater Science”. Milwaukee, Wisconsin, 17-21 May 2015 Oral Presentation
- **Castro A.J.**, Caryn C. Vaughn Jason P. Julian. An ecosystem services framework to sustain biodiversity in a watershed in conflict: socio-cultural and monetary valuation. Annual meeting of Ecological Society of America, Baltimore, Maryland, 8-14 August 2015 Oral Presentation

- Quintas-Soriano, C., * García-Llorente, M., **Castro A.J.**, Castro, H. Social perceptions about land use-land cover in semi-arid Spanish environment. III Mini-Simposio de Investigación en Ciencias Experimentales. Universidad de Almería, España. 4 Noviembre 2014 Poster Presentation
- Requena-Mullor, J.M.*, Lopez, E., **Castro, A.J.**, Virgos, E., Castro, H. Landscape factors influencing the feeding habits of European badger (*Meles meles*) in Mediterranean arid context. III Mini-Simposio de Investigación en Ciencias Experimentales. Universidad de Almería, España. 4 Noviembre 2014 Poster Presentation
- Jason P. Julian, **Castro A.J.**, Caryn C. Vaughn, Carla Atkinson. Effects of Drought and Water Resource Management on Biophysical and Sociocultural Ecosystem Services in South-Central United States. AGU Fall Meeting, San Francisco (US), 15–19 December 2014, Oral Presentation
- Marina García-Llorente, Iván López, Irene Iniesta-Arandia, **Castro A.J.**, David del Álamo, Marta Hernández, Cristina Quintas, Elisa Oteros, Izaskun Casado, Ignacio Palomo, Berta Martín-López, Erik Gómez, José A. González, Carlos Montes, Igone Palacios, Miren Onaindia. Ecosystem services demand across Spanish ecosystems. NRG BESS Early Career Researcher Conference Southampton (UK), 8th – 9th September 2014, Oral Presentation
- Quintas-Soriano, C*., García-Llorente M, **Castro A.J.** How are perceived the impact of land use-land cover on ecosystem services in semi-arid regions? 2014, NRG BESS Early Career Researcher Conference. Southampton (UK), 8th – 9th September 2014, Oral Presentation
- García-Llorente, M., **Castro, A.J.**, Quintas-Soriano, C., López I, Castro H, Montes C, Martín-López B. The value of time in conservation: the importance of time-sharing activities on local empowerment. Resilience 2014: Adaptation, Transformation & Development. Montpellier, France, May 4-8, 2014. Oral Presentation
- **Castro, A.J.**, Vaughn, C.C., Garcia-Llorente, M. Julian, J. Exploring the sociocultural and economic value of ecosystem services for watershed management. Joint Aquatic Sciences Meeting “Bridging Genes to Ecosystems: Aquatic Science at a Time of Rapid Change”. Portland, Oregon, 18-23 May 2014 Oral Presentation
- **Castro, A.J.**, Vaughn, C.C., Garcia-Llorente, M. Julian, J. Ecosystem Services across US watersheds: a systematic review. Joint Aquatic Sciences Meeting “Bridging Genes to Ecosystems: Aquatic Science at a Time of Rapid Change”. Portland, Oregon, 18-23 May 2014 Poster Presentation
- **Castro, A.J.**, Vaughn, C.C., Garcia-Llorente, M. Julian, J. Socio-cultural evaluation of ecosystem services for watershed management: the Kiamichi River in SE Oklahoma. 61st SWAN, Annual Meeting of the Southwestern Association of Naturalists, Stillwater (OK), 17-20 April 2014 Oral Presentation
- Quintas-Soriano, C*., **Castro A.J.**, García-Llorente, M., Cabello, J., Castro, H. Water regulation service from supply to social demand in semiarid systems. II Mini-Simposio de Investigación en Ciencias Experimentales. Universidad de Almería, España. 15 Noviembre 2013 Poster Presentation
- **Castro, A.J.**, Vaughn, C.C., Julian, J.P. Valuing ecosystem services from supply to demand side: an interdisciplinary approach for decision making in south-eastern watershed of Oklahoma. Freshwater Mollusk Conservation Society Symposium, Guntersville (Alabama, US), March 10-14, 2013. Oral Presentation
- Vaughn, Caryn C., Atkinson, C.L. Allen, D.E., **Castro, A.J.**, Sansom, B. and Tweedy, B. Ecosystem Services Provided by Freshwater Mussels. Preparing for the Challenges Ahead by the American Fisheries Society, Little Rock (Arkansas, US), September 2013. Oral presentation

- Iniesta-Arandia, I., García-Llorente M, Martín-López, B., **Castro A.J.**, Aguilera P, Montes C. La evaluación de los servicios de los ecosistemas: una aproximación socio-ecosistémica a la gestión de cuencas hidrográficas. VII Congreso Ibérico sobre gestión y Planificación del Agua. Talavera de la Reina, (Spain), February, 2011. Oral Presentation
- García-Llorente, M., Martín-López, B., Nunes, P.A.L.D., **Castro, A.J.**, and Montes, C. Social preferences for future land use scenarios in a semi-arid watershed: Potential conflicts between the management of ecosystem services. ACES 2011: Conservation Conflicts: strategies for coping with a changing world. Aberden (Scotland), 2011. Oral Presentation
- Cabello, J., Alcaraz-Segura, D., Ferrero, R., **Castro, A.J.**, and Liras, E. Controls of the spatial and inter-annual response of vegetation greenness in scrublands and grassland of the Iberian southeast. 12th European Ecological Federation Congress. Ávila (Spain), 2010. Oral Presentation
- Cabello, J., Liras, E., Alcaraz-Segura, D., **Castro, A.J.**, and Oyonarte, C. Ecosystem functioning in the dry Iberian Southeast: baseline conditions and temporal trends during a positive NAO period. XIII OPTIMA. Antalya (Turkey), 2010. Oral Presentation
- Ulzurrun, E., Martín-López, B., **Castro, A.J.**, and Aguilera, P.A. Explorando el valor socioeconómico de los servicios suministrados en ecosistemas semiáridos. IX Congreso de la Asociación Española de Ecología Terrestre. Úbeda (Spain), October 2009. Poster Presentation
- **Castro, A.J.**, Cabello, J, Martín-López, B, Liras, E, López, E, Aguilera P. Mapping providing and benefitting units of ecosystem services. EURECO-GFOE. ISBN: 978-3-00-025522-9. Leipzig (Germany), 2008. Poster Presentation
- **Castro, A.J.**, Cabello, J., Alcaraz-Segura, D., Paruelo, J.M., Liras, E., López, E., Aguilera, P., Willaarts, B. Eficiencia en el uso de la Luz: una variable clave en la descripción de las ganancias de carbono por los ecosistemas. I Congreso Nacional de Biodiversidad. Segovia (Spain), 2007. Oral Presentation
- Aguilera, P., Reche, F., López, E., Schimtz, M.F., **Castro, A.J.**, Willaarts, B. Aplicación de las redes bayesianas a la caracterización del Habitat de la tortuga mora (Testudo Graeca) en Andalucía. I Congreso Nacional de Biodiversidad. Segovia (Spain), 2007. Poster Presentation
- Willaarts, B., Aguilera, P., López, E., **Castro, A.J.**, Moreira, J.M. Sectorización ecológica de la Sierra Norte (Sevilla): cambios estructurales e implicaciones en el ciclo hidrológico (periodo 1956-2003). Lisboa (Portugal), 2007. Poster Presentation
- López, E., De Miguel, J.M., Aguilera, P., Diaz, F., Cabello, J., **Castro, A.J.** Fragmentación de habitat de las especies amenazadas en Andalucía. I Congreso Nacional de Biodiversidad. Segovia (Spain), 2007. Poster Presentation
- **Castro, A.J.**, López Carrique, E., Aguilera, P., Willaarts, B. Valoración ecológica de bienes y servicios ambientales: Capacidad potencial de recarga de acuíferos en el Poniente de Almería. Poster presented at the National Congress Unity and Diversity. A legacy of Ramon de Margalef. Barcelona (Spain), 2005. Poster Presentation
- Willaarts, B., Aguilera, P., López-Carrique, E., **Castro, A.J.**, Influencia de los cambios de uso del suelo en el ciclo hidrológico en la Sierra Norte de Sevilla". Poster presented at the National Congress "Unity and Diversity. A legacy of Ramon Margalef", Barcelona (Spain), 2005. Poster Presentation
- López-Carrique, E., Rodríguez, M.A., Aguilera, P., Cruz, S., **Castro, A.J.**, Willaarts, B. Connectivity analysis between steppe-lands in Almería province (SE of Spain). Conference Proceeding presented at International symposium on ecology and conservation of steppe-land birds, Lleida (Spain), 2004. Oral Presentation

- Aguilera, P., López-Carrique, E., Schimtz, M.F., **Castro, A.J.**, Cruz, S., Willaarts, B. Relación infraestructuras viarias-invernaderos en la gestión y conservación de los espacios naturales protegidos de Almería. Conference Proceeding presented at International Symposium of road infrastructures and Protected Areas, Sevilla (Spain), 2004. Oral Presentation

EXTERNAL CONNECTIONS AND PARTNERSHIPS

1.- Recent research efforts and activities

- 1) Selected scientists within the EPSCoR MILES program to present program the accomplishments at the NSF EPSCoR Site Visit scheduled for September 27-28 in Moscow, Idaho
- 2) Selected scientist to participate in two of the concept proposals at ISU and BSU for the 2017 Idaho NSF EPSCoR Research Infrastructure Improvement (RII), Track-1 Competition

2.- International projects and programs

- 1) I act as lead scientist on an international project within the Program on Ecosystem Change and Society (PECS). The tentative project title is “**Water scarcity across watershed Social-Ecological Systems (WaterSES)**”. **WaterSES** is an interdisciplinary group working to understand and compare the social-ecological dynamics causing and caused by water scarcity in three differing watersheds, with the ultimate goal of finding sustainable solutions to balance the water needs of nature and society. Three place-based pilot study areas – arid southern Spain, the south-central Great Plains of Oklahoma (US), and the Portneuf Valley of Idaho (US) – have different climates, water needs and socio-ecological dynamics, but are all experiencing new regional, societal demands for limited water resources. The goal of this working group is to study the social-ecological dynamics of three water-limited systems to propose sustainable water use solutions.

Project Link. <http://www.pecswaterses.com>

- 2) I act as lead scientist on an international project EXPLORA, “Socio-Ecosystem Functional Types: integrating biophysical and social functions to characterize the ecosystems of the Anthropocene” organized by Dr. Domingo Alcaraz at the University of Granada, Spain. The project aims to propose a new concept, Socio-Ecosystem Functional Types (SEFTs), defined as patches of land that share both similar dynamics of matter and energy exchanges between biota and the physical environment, and similar socioeconomic and cultural patterns and dynamics. As part of this collaboration, I am participating in a special journal issue (Ecology and Society Journal), as indicated above, that will summarize the derived results.

Project Link: <http://functionaltypes.caescg.org/>

- 3) I collaborate as lead scientist and PhD advisor in the FOREFRONT program, “Targeting nature’s benefits in agro-forest frontiers: linking actor strategies, functional biodiversity and ecosystem services”. The program applies a landscape approach to particularly dynamic agro-forest frontier areas in three countries in Latin America, that represent a diversity of important drivers shaping land use change and land use conflicts. The landscape approach entails an integrated vision of land use planning, policies and management decisions to

maintain the resilience, productivity and sustainability of landscapes for the benefit of the people who depend on them. Such an integrated vision is important for taking into account the increasing complexity of land issues and the multiple and often competing claims on land use. This research will offer innovative insight into these complexities as well as the analytical and practical tools that are needed to make the landscape approach operational. FOREFRONT uses a comparative approach that builds on the complementary expertise and partnerships among the participating institutes to facilitate cross-country learning.

Project link: <http://www.wur.nl/en/Research-Results/Projects-and-programmes/INREF/Research-programmes-1/Phase-III.htm>

3.- International platforms and partnerships

I act as scientific member or lead scientist at:

- 1) The Ecosystem Services Partnership (ESP): The Ecosystem Services Partnership (ES-Partnership) was launched in 2008 by the Gund Institute for Ecological Economics (University of Vermont, USA) and is now being coordinated by the Environmental Systems Analysis Group (Wageningen University, the Netherlands), supported by the Foundation for Sustainable Development (Wageningen, The Netherlands). The ES-Partnership consists of [institutional and individual members](#).

Website: <http://www.fsd.nl/esp>

- 2) The Program of Ecosystem Change and Society (PECS), which is a Future Earth core-project (jointly sponsored by the United Nations Educational, Scientific and Cultural Organization (UNESCO). PECS aims to integrate research on the stewardship of social-ecological systems, the services they generate, and the relationships among natural capital, human wellbeing, livelihoods, inequality and poverty.

Website: <http://www.pecswaterses.com>

PROFESSIONAL TRAINING

- NSF Communications Workshop, NSF EPSCoR Strategic Communication Online Learning Center, Boise State University, (March, 2016)
- Grant Writers' Seminars and Workshop, ISU Office for Research, Idaho State University, (March, 2016)
- Early Career Professional Development Workshop - South Central Climate Science Center, University of Oklahoma (June, 2014)
- Bootcamp for R programming, University of Oklahoma (April, 2014)
- Techniques in stakeholder participation, negotiation and communication, University of Almeria (June, 2012)
- Statistic with R, University of Almeria (June, 2011)
- Spatial Ecology course with ArcGIS (ESRI), University of Almeria (June, 2008)

PROFESSIONAL TRAINING IN EDUCATION SCIENCE

- Nobel Teaching Training Course, University of Almeria (March, 2012)

- Evaluation of Teaching and Learning, University of Almeria (March, 2012)
- Experiences in European credits: Adaptation to ECTS credit system, University of Almeria (June, 2010)

PROFESSIONAL SCIENTIFIC MEMBERSHIP

- Program for Ecosystem Change and Society (PECS) (2016- present)
- Ecosystem Services Partnership (2014- present)
- Society of Freshwater Science (2014- present)
- Southwestern Association of Naturalist (SWAN) (2014- present)
- Ecological Society of America (ESA) (2013- present)
- Freshwater Mollusks Conservation Society (2013-present)
- Spanish Association of Terrestrial Ecology (AEET) (2005-present)

PROFESSIONAL, EDITORIAL AND REVIEW SERVICE

- 2017- present: Associate Editor of Journal of Arid Environments (Impact factor: 1.86)
- Reviewed manuscripts for indexed journals (28 total): *PLoS ONE* (1), *Ecological Economics* (1), *Ecosystem Services* (2), *Water Resources Research* (1), *Landscape Ecology* (2), *Ecological Applications* (1), *Global Ecology and Conservation* (1), *Sustainability Science* (1), *Environmental Conservation* (2), *Environmental Management* (1), *Environmental Science: Processes and Impacts* (1), *Ecological Indicators* (3), *Landscape and Urban Planning* (1), *Regional Environmental Change* (1), *Land Use Policy* (2), *Populations* (1), *Journal of Arid Environments* (3), *Journal of Environmental Planning and Management* (1), *Water* (1), *Journal of Applied Ecology* (1)
- Reviewed Books (3 total): “*Earth Observation of Ecosystem Services*” (scientific coordinator), “*Valoración de Servicios Ecosistémicos. Conceptos, Herramientas y Aplicaciones para el Ordenamiento Territorial*”, and “*El Río Andarax*”
- I am currently coordinating a Special Issue as an Associate Editor in the Journal for Arid Environments on “Ecosystem Services in dryland systems of the world”. This Special Issue will be in press in December 2016
- I coordinated a Special Session on “Social-Ecological Freshwater Systems” for the Society of Freshwater Science (SFS) Annual 2017 meeting in Raleigh, NC (June 4-9, 2016)

INTERNATIONAL LEADERSHIP POSITIONS

- Leader of the biome Dryland at Ecosystem Services Partnership -[ESP Biome Expert Group 4 on Drylands](#)– (2014- present)
- Member of the Mediterranean Ecosystem Services Working Group at the Ecosystem Services Partnership - [Mediterranean Ecosystem Services Working Group](#) – (2015- present)
- Leader of the WaterSES project within the Program for Ecosystem Change and Society (PECS) <http://www.pecswaterses.com>

- Research Associate to the Spanish Ecosystem Assessment (www.ecomilenio.com) (2010-present)
- Member of the Ecosystem Services Working group (<http://geobon.org/>) within the Group on Earth Observations Biodiversity Observation Network Secretariat (GEO BON)

LANGUAGES

Spanish: native | English: fluent ¹ | Italian: fluent

¹ TOELF-IBT certification