

Antonio J. Castro

Assistant Research Professor

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The Social-Ecological Research Lab

www.antoniojcastro.com

Professional Preparation

University of Granada	Granada, Spain	Biological Sciences	B.S. 2003
University of Almeria	Almeria, Spain	Pedagogical Edu Sciences	M.S. 2006
Autonomous University of Madrid	Madrid, Spain	Environmental Science	M.S. 2007
University of Almeria	Almeria, Spain	Arid Zones Ecology	Ph.D. 2009

Professional Appointments

Idaho State University, USA	Research Assistant Professor	2015-Present
University of Oklahoma, USA	Postdoctoral Associate	2012-2015
University Amsterdam, Netherland	Visiting Postdoctoral Associate	2011-2012
Charles Sturt University, Australia	Visiting Postdoctoral Associate	2010-2011
University of Almeria, Spain	Graduate Research Assistant	2005-2010

RESEARCH AND TEACHING INTERESTS

Social-Ecological Systems (SES): spatial characterization and delimitation of SES, services-providing units, ecosystem services beneficiaries, social sampling, human-environmental conflicts

Conservation Biology: semi-arid ecosystems, watershed management, protected areas, mammal conservation, science-policy interface, environmental education

Ecosystem Services: biophysical quantification, socio-cultural assessment, economic valuation, trade-offs analysis, biophysical mapping, stakeholders perception and preferences analysis

Landscape Ecology: watershed management and planning, GIS, eco-regionalization, ecological modeling, spatial analyst, land use-land cover change, remote sensing, water balance, carbon cycle

THESES DISSERTATION

2010– Castro, A.J. Ecosystems and Human Wellbeing: ecological and economic assessment of ecosystem services for conservation planning. PhD-thesis, University of Almería, Spain

2006– Castro, A.J. Assessing ecosystem services for conservation planning. Diploma of Advanced Studies (DEA, equivalent to Master degree), University of Almería and Autonomous University of Madrid, Spain

PUBLICATIONS

ACADEMIC IMPACT OF PUBLISHED WORK

1 book, 2 book chapters, 22 journal articles, 15 articles submitted/in preparation

Google Scholar h-index = 8 (e.g., 246 total cites, 178 from 2011)

Research Gate score: 22.63

Professional homepage or website:

Google Scholar: <https://scholar.google.es/citations?user=5oYZIVIAAAAJ&hl=es&authuser=1>

Research Gate: https://www.researchgate.net/profile/Antonio_Castro11

PEER REVIEWED PUBLICATIONS (*graduate student advised)

24. 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^x, Pablo Luis Peri, Raktima Mukherjee, Réka Aszalós, S.B. Roy, Sandra Luque, Verónica Rusch . When we cannot have it all: Ecosystem Services Trade-offs in real-life planning contexts. Submitted to *Ecosystem Services*
23. Martín-López, B, Palomo, I., García-Llorente, M., Iniesta-Arandía, I., **Castro, A.J.**, Gómez-Baggethun, E., Montes, C. (accepted with minor revisions). Delineating social-ecological systems boundaries: a social-ecoregional approach. Submitted to *Land Use Policy*
22. Requena-Muyor, J.M.*, Lopez, E., **Castro, A.J.**, Cabello, J., Reyes, A., Segura-Alcaraz, D., Castro, H. (accepted with minor revisions). Modeling and monitoring habitat quality from space: the European badger. Submitted to *Plos ONE*
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-Muyor, 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*

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. (edts), *Biodiversity in Ecosystems - Linking Structure and Function*, Universidad Publica de Navarra, Spain
<http://www.intechopen.com/books/biodiversity-in-ecosystems-linking-structure-and-function/social-perception-and-supply-of-ecosystem-services-a-watershed-approach-for-carbon-related-ecosystem>
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-Muyor, 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
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>

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)

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)

Peer-reviewed publications submitted for publication

Quintas-Soriano, C.*, García-Llorente, M., Meacham, M., Norström, A.V., Peterson, G.D, **Castro, A.J.** Disentangling ecosystem service bundles in drylands of the Iberian Peninsula. *Ecosystem Services Journal*

Balvanera, P., Calderon-Contreras, R., Ruiz Mercado, I, Geijzendorffer, I., Jacobs, S., Felipe Lucia, M., **Castro, A.J.** Integrating place-based insights into global sustainability research. *Sustainability Science*

Castro, A.J., Egoh B. O'Farrel P. (2016). Introduction to the Special Issue: Ecosystem Services in dryland systems of the world. *Journal of Arid Environments*

Quintas-Soriano, C.*, **Castro, A.J.**, García-Llorente, M. (2016). Supply and Demand of Ecosystem Services across Spanish Drylands. *Journal of Arid Environments*

Emilio Rodríguez-Caballero, **Castro, A.J.**, Sonia Chamizo, Cristina Quintas-Soriano, Marina García-Llorente, Yolanda Cantón, Bettina Weber. Ecosystem services provided by biocrusts: The missing gap in dryland management. *Journal of Arid Environments*

Castro, A.J., Quintas-Soriano, C.*, Egoh B. (2016). Current knowledge and future agenda for dryland systems, **Journal of Arid Environments**

Peer-reviewed publications in preparation:

Castro, A.J., Martin-Mikle, C.J., Vaughn, C., Julian, J.P. Ecosystem services across US-watersheds: a systematic review. **Ecosystem Services Journal**

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. **PloS One**

Trachtenberg, Z., **Castro, A.J.**, Gates, K., Randall, A., Schlupp, I., Soreghan, L., Theriault, N., and Wieters, M. (Inter)facing the Anthropocene: How to represent an interdisciplinary interaction, **Resilience Journal**

Francis Turkelboom, Eszter Kelemen, Marina García-Llorente, Pam Berry, Francesc Baró, Sander Jacobs, Jiska Van Dijk, Michael Leone. Ecosystem Services Trade-offs: insights from 16 case studies. **Ecosystem Services Journal** (Special Issue OpenNESS project)

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 Journal** (Special Issue OpenNESS project).

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

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 por qué de los problemas del agua en ambientes semiáridos: los servicios de los ecosistemas como aproximación. **Eubacteria**, Número 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** Número 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. Jorroto, 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.Jorroto, 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. Jorroto, 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 (Total requested in 2016: \$4,604,856 Total funded 2016: \$139,770)

- 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”. \$40,000 + indirect charges to ISU (Antonio J. 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 C Vaughn, P.I.; Antonio J. Castro co-P.I.).
 - 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., Antonio J. Castro co-P.I.)
 - 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 management for human well-being. Instructor for a graduate course focusing on the role of ecosystem services in linking ecological and socioeconomic systems. Idaho State University, US. Spring 2016.
- 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/Guest lectures

- 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 STUDENT ADVISED SINCE 2010: 1 POSTDOC, 4 PHD STUDENTS, 4 MS STUDENTS, 4 UNDERGRADUATE

Postdoc supervision (*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)

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

Student: Aline Pingarroni * (September 2016 - September 2020)

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 Francisco Velasco Muñoz* (June 2015- June 2018)
Dissertation title: Valoración de los servicios medioambientales del almendro ecológico en el altiplano de Andalucía oriental
Institution: University of Almeria, Spain
Advisors: José Angel Aznar Sanchez (UAL, Spain), Antonio J. Castro (Idaho State University, USA), and Marina Garcia Llorente (IMIDRA, Spain)

Student: Juan Miguel 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's supervision (* current student, ** former student)

Student: Sara Bernardini * (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 – June 2020)
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 (published as a peer-reviewed article, see Quintas-Soriano et al. 2014)
Institution: University of Almeria, Spain
Advisors: Antonio J. Castro (University of Oklahoma, USA) and Marina Garcia Llorente (Autonomus 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 (published as a peer-reviewed article, see Requena-Mullor et al. 2014)
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: Sandra Carillo* (June-December 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: Estela Okech** (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: 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 advised)

- Cristina Quintas-Soriano*, Marina García-Llorente, Megan Meacham, Albert Norström, Garry Peterson, **A.J. Castro**. 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
- Velazco-Muñoz, J., * Aznar-Sanchez, J Marina García-Llorente, **A.J. Castro**. 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
- Manuel Paquero-Romero, María Vallejos, Javier Cabello, Hugo Berbery, **A.J. Castro**, José Puelo, 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
- Cristina Quintas-Soriano*, **A.J. Castro**, 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
- Juan Miguel Requena Mullor*, E. López, **A.J. Castro**, 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 de Almeria, Spain 29-30 September 2016
- Domingo Alcaraz-Segura, José M. Paruelo, Camilo E. Bagnato, E. Hugo Berbery, Javier Cabello, **A.J. Castro**, Beatriz P. Cazorla, Howard Epstein, Néstor Fernández, Esteban G. Jobbagy, 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
 - **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
 - 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-Muyor, 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 AJ**, 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.pecs-science.org/research/projects/waterses.4.408e8bf314fae999b6d4521f.html>

- 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.pecs-science.org/2.1a508a66139b5dba5cb1fc.html>

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 America (ESA) (2013- present)
- Freshwater Mollusks Conservation Society (2013-present)
- Spanish Association of Terrestrial Ecology (AEET) (2005-present)

PROFESSIONAL, EDITORIAL AND REVIEW SERVICE

- Reviewed manuscripts for indexed journals (27 total): *PLoS ONE* (1), *Ecological Economics* (1), *Ecosystem Services* (1), *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 am currently coordinating 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

- Scientific 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)
- Scientific Leader of the WaterSES project within the Program for Ecosystem Change and Society (PECS) <http://www.pecs-science.org/>
- Research Associate to the Spanish Ecosystem Assessment project (www.ecomilenio.com) (2010-present)

LANGUAGES

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

¹ TOELF-IBT certification