



MIREN ONAINDIA

Professor on Ecology and UNESCO Chair on Sustainable Development and Environmental Education. University of the Basque Country: www.ehu.eus/cdsea

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Summary:

Professor Onaindia has experience conducting research on socio-ecosystem assessments. She has been involved in the design and implementation of the *Millennium Ecosystem Assessment in Biscay* and *the Basque Country*, currently active.

Experienced in developing conceptual frameworks on the contribution of biodiversity and ecosystem services to human well-being, especially focused in Biosphere Reserves, as a Director of the Scientific Committee in the UNESCO MaB (Man and Biosphere) Programme.

Collaboration with international research groups, and active member of the *Sub-Global Assessment Network* (meeting in Biscay, 2011), and the *Ecosystem Services Partnership*. Published around 70 scientific papers on the subject and done important dissemination work to the general audience, stakeholders and decision-makers.

-Granted complement *A-Excellent* from the *UniBasque*, the basque Agency for Assessment of Academic Quality

- Granted 4 research recognition (Sexenio), and one recently asked (Sexenio de transferencia, 2019)

1- Studies

Degree on Biological Science. University of the Basque Country. Spain. 1976.

PhD on Ecology. University of the Basque Country. Spain. 1985.

2- Professional experience

- Professor on Ecology. Plant Biology and Ecology Department. Faculty of Science and Technology. University of the Basque Country. Spain. From November 2009.

- General Coordinator of the UNESCO Chair for Sustainable Development and Environmental Education. University of the Basque Country. Spain. From July 2004.

- Lecturer on Ecology. Plant Biology and Ecology Department. Faculty of Science and Technology. University of the Basque Country. Spain. From April 1980 to October 2009.

Invited Lecturer:

- Invited Fellowship (Linacre College). University of Oxford. Forestry Institute. Department of Plant Sciences. Oxford, U.K. 1990 (three months) and 1998 (six months).
- School of Agriculture. University of Santo Domingo. República Dominicana, 2002.
- Institute of Biological Research. University of Veracruz. México, 2003.
- University for the international cooperation. San José. Costa Rica, 2009.
- University of Nevada, Reno, USA, 2013.
- Universidad Amazónica Ecuador, IKIAM, 2017.

3- Designated positions

Vice-Dean of the Faculty of Science and Technology. University of the Basque Country: from October 1997 to April 2000.

Director of International Relations. University of the Basque Country: from April 2000 to June 2001.

General Coordinator of the UNESCO Chair for Sustainable Development and Environmental Education. University of the Basque Country (www.ehu.es/cdsea). Since 2004.

President of the Scientific Committee in the Spanish MaB Programme. From 2007 to 2012. Currently Member of the Committee.

Adviser of the Basque UNESCO Center in Bilbao, since 2004.

Editor of the Journal: Forum of Sustainability, UNESCO Chair. University of the Basque Country. Since 2007.

4- Teaching activities

4.1 Teaching experience

Teaching in Biology and Environmental Sciences Degree: Ecology, Land Management, Methods for Ecology, Environmental Impact.

Teaching in postgraduate Master courses and Doctorates : Doctorate on Ecology, Doctorate on Biodiversity and Ecosystem Management, Doctorate on Environmental Agroecology.

Director of the “Master on Environment, Sustainability and Sustainable Development Goals (SDG)”. University of the Basque Country. Spain.

4.2 Director of Ph D projects (most in relation with the project during the last 10 years):

- Evaluación de las funciones y servicios de los ecosistemas del cinturón verde del Bilbao metropolitano. Bases científicas para la ordenación del territorio. University of the Basque Country. 2013

- Evaluación de las funciones y servicios de los ecosistemas forestales en Bizkaia. Criterios para una gestión forestal sostenible. University of the Basque Country. 2013

- Assessment of the ecosystems services of the Bilbao metropolitan green belt. Scientific basis for sustainable landscape planning. University of the Basque Country. 2014

- Ecosystem services assessment in Biscay: seeking Landscape management strategies towards sustainability. University of the Basque Country. 2014
- Evaluación de la Biodiversidad y de los Servicios Ecosistémicos a nivel local en la Amazonía Ecuatoriana. University of Santiago de Compostela. 2017
- Ecosystem services assessment in Urdaibai Biosphere Reserve social-ecological system: Insights into management strategies. University of the Basque Country. 2018

4.3 Direction of 30 Research Master's Thesis

5- Publications most in relation with the project during the last 10 years

5.1 Journals

Otero, J. & Onaindia, M. 2009. Landscape structure and live fences in Andes Colombian agrosystems: Upper basin of the Cane-Iguaque River. *Journal de Biología Tropical. Internacional Journal of Tropical Biology* 57(4)

Onaindia, M. & Mitxelena, A. 2009. Potential use of pine plantations to restore native forests in a highly fragmented river basin. *Annals of Forest Science* 66: 13-37

Rodriguez-Loinaz, G., Amezaga, I., Onaindia, M. 2011. Efficacy of Management Policies on Protection and Recovery of Natural Ecosystems in the Urdaibai Biosphere Reserve. *Natural Areas Journal* 31: 358- 367

Martín-López, B., Iniesta-Arandia, I., García-Llorente, M., Palomo, I., Casado-Arzuaga, I., García Del Amo, D., Gómez-Baggethun, E., Oteros-Rozas, E., Palacios-Agundez, I., Willaarts, B., González, J. A., Santos-Martín, F., Onaindia, M., López-Santiago, C., Montes, C. 2012. Uncovering Ecosystem Service Bundles through Social Preferences. PlosOne DOI: 10.1371/journal.pone.0038970

Onaindia, M., Fernández De Manuel, B., Madariaga I., Rodríguez-Loinaz G. 2013. Co-benefits and trade-offs between biodiversity, carbon storage and water flow regulation. *Forest Ecology and Management* 289:1- 9.

Rodriguez-Loinaz, G., Amezaga, I., Onaindia, M., 2013. Use of native species to improve carbon sequestration and contribute towards solving the environmental problems of the timberlands in Biscay, northern Spain. *Journal of Environmental Management* 120: 18-26.

Palacios, I., Casado, I., Madariaga, I., Onaindia, M., 2013. The relevance of local participatory scenario planning for ecosystem management policies in the Basque Country, northern Spain. *Ecology and Society*, 18 (3): 7.

Onaindia, M., Ballesteros, F., Alonso, G., Monge-Ganuzas, M., Peña, L. 2013. Participatory process to prioritize actions for a sustainable management in a biosphere reserve. *Environmental Science and Policy* 33: 283-294.

Casado, I., Madariaga, I., Onaindia, M. 2013. Perception, demand and user contribution to ecosystem services in the Bilbao Metropolitan Greenbelt. *Journal of Environmental Management* 129: 33-43.

Palacios, I., Casado, I., Madariaga, I., Onaindia, M. 2013. The relevance of local participatory scenario planning for ecosystem management policies in the Basque Country, northern Spain. *Ecology and Society* 18 (3):7.

Palacios-Agúndez I., Onaindia, M., Postchin, M., Tratalos, J.A., Madariaga, I., Hainesyoung, R. 2015. Relevance for decision making of spatially explicit, participatory scenarios for ecosystem services in an area of high current demand. *Environmental Science and Policy* 54: 199-209

Peña, L., Casado-Arzuaga, I., Onaindia, M. 2015. Mapping recreation supply and demand using an ecological and a social evaluation approach. *Ecosystem Services* 13:108-118.

Caballero-Serrano, V., Onaindia, M., Alday, J. G., Caballero, D., Carlos Carrasco, J., McLaren, B., Amigo, J., 2016. Plant diversity and ecosystem services in Amazonian homegardens of Ecuador. *Agriculture Ecosystems and Environment* 225: 116-125.

Caballero-Serrano, V., Alday, J.G., Amigo, J., Caballero, D., Carlos Carrasco, J., McLaren, B., Onaindia, M. 2017. Social Perceptions of Biodiversity and Ecosystem Services in the Ecuadorian Amazon. *Human Ecology* 45: 475-486.

Castillo-Eguskita, N., Rescia, A. J., Onaindia, M. 2017. Urdaibai Biosphere Reserve (Biscay, Spain): Conservation against development? *Science of the Total Environment* 592. p. 124–133

Ximena Salinas, C., Onaindia, M., Mendieta, J. 2017. Landscape, sustainability and the socio-economy in the coastal Urdaibai Biosphere Reserve, Northern Spain. *Journal of Biodiversity and Environmental Sciences (JBES)* 10 (1): 150-160.

Castillo-Eguskita, N., Martín-López, B., Onaindia, M. 2018. A comprehensive assessment of ecosystem services: Integrating supply, demand and interest in the Urdaibai Biosphere Reserve. *Ecological Indicators* 93: 1176-1189

Onaindia, M., Fernández de Manuel, B., Rodríguez-Loinaz, G., Peña, L., Madariaga, I., Palacios-Agúndez, I., Ametzaga-Arregi, I. 2018. Land use efficiency through agrological capacity and ecosystem services analysis approach. *Land Use Policy* 78: 650–661

Rodríguez-Loinaz, G., Peña, L., Palacios-Agúndez, I., Ametzaga-Arregi, I., Onaindia, M. 2018. Identifying Green Infrastructure as a Basis for an Incentive Mechanism at the Municipality Level in Biscay (Basque Country). *FORESTS* 9 (1), 22

5.2 Book chapters

Onaindia, M. 2009 Ecological sustainability. In: *Forest regeneration: Ecology, Management and Economics*. Nova Science Publishers, Inc. NY pp:129-138. ISBN: 978-1-60692-2

Bernal, H., Sierra, C.H., Onaindia, M., González Vega, T. A. Editors. 2011. Bosques del mundo, cambio climático y amazonía. 328 pp. AMASSUNU editorial. Bilbao. ISSN: 978-84-615-6723-2

Palacios-Agúndez, I; Casado-Arzuaga, I.; Arana, X.; Madariaga, I.; Onaindia, M. 2011. La Evaluación de los Ecosistemas del Milenio en Bizkaia: trabajando de lo local a lo global y viceversa, pp. 53-66. In: Nekane Viota y Mainer Marañá (Ed.). Servicios de los ecosistemas y bienestar humano. La contribución de la Evaluación de los Ecosistemas del Milenio. UNESCO Etxea. Bilbao

Onaindia, M. and Rodríguez-Loinaz, G. 2013. An evaluation of ecosystem services as a base for sustainable management of a region. In: **Ayestarán, I., Onaindia M.** Editors. *Sustainable development, ecological complexity and environmental values*. University of Nevada, Reno pp: 9-18. GE160.S7S87

Onaindia, M., Fernández De Manuel, B., Madariaga I., Rodríguez-Loinaz G. 2015. Highlighting synergies and trade-offs between biodiversity, carbon storage and water flow regulation using spatial analysis: Basque Country (Spain) forests. In: European Commission. Mapping and assessment of forest ecosystems and their services. Joint Research Centre, Forest Resources and Climate Unit, Ispra, Italy.

Onaindia et al., 2019. Co-creation of sustainable knowledge in biosphere reserves. In: Reed, M. G. and Price M.F. UNESCO Biosphere Reserves. 978-1-138-36931-3. Routledge, Taylor and Francis Group. London, UK.

5.3 Publications for transference of knowledge

Onaindia, M. 2010. Garapen iraunkorra gaur. Ekologiaren iraunkortasuna. *Jakin*, 177-178: 33-50. ISSN: 0211/495X

Onaindia, M.; Peña, L., Rodríguez-Loinaz, G. 2010. Evaluación de los servicios de los ecosistemas como base para la gestión sostenible del territorio. *Forum de Sostenibilidad* 4: 21-31.

Onaindia, M. 2010. Servicios ambientales en reservas de biosfera españolas. 238 pp. Organismo Autónomo De Parques Nacionales. Madrid. NIPO: 781-10-040-5. BI-3084-2010

Palacios, I., Casado-Arzuaga, I., Arana, X., Madariaga, I. Onaindia M. 2010. Escenarios de futuro en Bizkaia. Journal *SUSTRAI*, 93: 62-65.

Madariaga, I.; Arana, X.; Casado-Arzuaga, I; Palacios-Agúndez, I; Onaindia, M. 2011. Evaluación de los Ecosistemas del Milenio en Bizkaia. Conocimiento compartido entre la comunidad científica, política, gestora y la sociedad civil, pp. 47-52. In: Nekane

Viota y Maider Maraña Edts. Servicios de los ecosistemas y bienestar humano. La contribución de la Evaluación de los Ecosistemas del Milenio. Ed. UNESCO Etxea. Bilbao

Bernal, H., Sierra, C.H., Onaindia, M., González Vega, T. A. Editors. 2011. Bosques del mundo, cambio climático y amazonía. 328 pp. AMASSUNU editorial. Bilbao. ISSN: 978-84-615-6723-2.

Onaindia, M., Soto, M., Urrutia, M. B. 2013. La sostenibilidad: un punto de vista desde la biología. Iraunkortasuna: biologatik ikuspegi bat, p35-62. En: Lasagabaster, I. (ed.). La sostenibilidad desde la Universidad: una reflexión Interdisciplinar. Iraunkortasuna Unibertsitateik abiatuta: disciplina arteko hausnarketa. Universidad del País Vasco. ISBN: 978-84-9860-766-6.

Onaindia, M. 2018. Transformar el mundo: la agenda de Naciones Unidas para el desarrollo sostenible. IN: Sodupe, K. and Molina, G. ED. Gobernanza para un sistema energético sostenible. Universidad del País Vasco. ISBN: 9788490829004.

6- Research experience most in relation with the project during the last 10 years
Director of research projects financed by public institutions

TITLE: Evaluación de los servicios de los ecosistemas a través de indicadores de biodiversidad estructural y funcional. Cod.: CGL2008-05579-C02-01/BO
FUNDING: Ministerio de Ciencia e Innovación.
PERIOD: July 2008 to December 2011

TITLE: Cambio Climático: Impacto y adaptación. IE07-205; IE09/26; IE10/33
FUNDING: Consejería de Industria. G.V. Convocatoria Eortek.
PERIOD: December 2007 to June 2011

TITLE: Evaluación de la funcionalidad del bosque en la cuenca del río Mape. PA08/10
FUNDING: UPV/EHU y Departamento de Agricultura G.V.
PERIOD: January 2008 to December 2008

TITLE: Evaluación de los ecosistemas del Milenio en Bizkaia.
FUNDING: Diputación foral de Bizkaia
PERIOD: January 2008 to December 2014

TITLE: Vínculos entre indicadores de biodiversidad estructural y funcional a diferentes escalas espaciales. Aplicación de los indicadores para la evaluación de los servicios de los ecosistemas en Bizkaia.
FUNDING: Departamento de Educación, Universidad e Investigación. Gobierno Vasco. Subvención general a grupos de investigación
PERIOD: January 2010 to December 2012

TITLE: Evaluación de los servicios de los ecosistemas del País Vasco.
FUNDING: Departamento de Medio Ambiente. Gobierno Vasco
PERIOD: January 2011 to December 2020

TITLE: Evaluación de los servicios de los ecosistemas. Una metodología innovadora para un desarrollo sostenible.

FUNDING: Departamento de Educación, Universidades e Investigación. Gobierno Vasco. Subvención general a grupos de investigación

PERIOD: January 2013 to December 2015

TITLE: Ecosistemas y Cambio climático en Euskadi

FUNDING: Gobierno Vasco

PERIOD: October 2013 to March 2014

TITLE: Cooperación interuniversitaria para la puesta en valor de los ecosistemas y el desarrollo local en reservas de biosfera de República Dominicana y Haití. CUD 2014

FUNDING: Oficina de cooperación al desarrollo. UPV/EHU

PERIOD: June 2014 to June 2015

TITLE: *UE4SD University Educators for Sustainable Development*

Reference number: 540051-LLP-1-2013-1-UK-ERASMUS-ENW

<http://www.ncu.org.cy/ue4sd.html>

FUNDING: European Comisión. EU Lifelong Learning Programme

PERIOD: January 2014 to December 2016

TITLE: *CS4ESD Citizen Science for Education for Sustainable Development*

Reference number: 2018-1-UK01-KA201-048161

FUNDING: European Comisión. EU Lifelong Learning Programme

PERIOD: September 2018 to October 2021

7- Invited conferences (the most relevant of the last 10 years)

Title: Ecosistemas y bienestar humano.

Congress: Proyectar la Sustentabilidad. Una visión Latinoamericana

Place: Cartagena de Indias. Colombia

Year: 2009

Title: UNESCO Chair in relation to Biosphere Reserve: Linking research and management

Congress: World Conference on Education for Sustainable Development. Moving into the second half of the UN Decade

Place: Bonn. Alemania

Year: 2009

Title: Modelo Cátedra UNESCO en relación a las Reservas de Biosfera: La unión entre la Ciencia y la Gestión Ambiental

Congress: Análisis de la situación de la Cátedra UNESCO de Reservas de Biosfera de la UCI de Costa Rica.

Place: San José. Costa Rica

Year: 2009

Title: UNESCO Chair on Sustainable Development at the University of the Basque Country
Congress: Conferencia General de la UNESCO
Place: París. Francia
Year: 2009

Title: Mapping Ecosystem Services in the Urdaibai Biosphere Reserve.
Congress: Ecosystem Services: integrating Science and Practice.
Place: Wageningen, Holand.
Year: 2011

Title: Servicios de los Ecosistemas y Bienestar Humano. Cinturón Verde-Bilbao Metropolitano
Congress: I Congress Internacional “Los caminos de la Sustentabilidad /Sostenibilidad. Experiencias Innovadoras”
Place: UPV/EHU Bilbao
Year: 2011

Title: Medio Ambiente y sostenibilidad en los *curricula* educativos
Congress: Medio Ambiente y sostenibilidad en los *curricula* educativos y en otras actividades universitarias.
Place: UPV/EHU Bilbao
Year: 2011

Title: Medio Ambiente y sostenibilidad en los *curricula* educativos
Congress: II Jornada de sensibilización ambiental en la Facultad de Ciencias: Desarrollo sostenible y educación universitaria.
Place: University of Burgos
Year: 2011

Title: Measuring and monitoring Ecosystem services at the Site Scale. Biscay’s approach
Congress: Sub-Global Assessment Network meeting
Place: UPV/EHU Bilbao
Year: 2011

Title: Identifying hotspots or priority areas for multiple ecosystem services to enhance sustainable land management
Congress: 5th Annual Internacional Ecosystem Services Partnership Conference.
Place: Portland. USA.
Year: 2012

Title: Ecosystem Services Assessment in Urdaibai
Congress: EUROMAB
Place: Brockville. Ontario, Canadá.
Year: 2013

Title: Paisajes Resilientes y Servicios de los Ecosistemas
Congress: Euskal Hiria Kongresua.
Place: Vitoria-Gasteiz.

Year: 2014

Title: Servicios de los ecosistemas en Reservas de Biosfera.

Congress: Taller técnico-científico sobre la Reserva de Biosfera Jaragua-Bohoruco-Enriquillo y la Reserva de Biosfera La Selle. Barahona. Dominican Republic.

Place: Barahona. Dominican Republic

Year: 2014

Title: Implementation of ecosystem services as indicators for landscape management in the Basque Country, Spain.

Congress: SGA Network meeting.

Place: Dubai (United Arab Emirates)

Year: 2014

Title: Ecosistemas y salud

Congress: EcoHealth.

Place: Bilbao

Year: 2014

Title: Postgraduate course on Environment and sustainability: a case of private/public partnership

Congress: Copernicus Alliance meeting,

Place: Madrid

Year: 2015

Title: Contribution to SDG of the UNESCO Chair on Sustainable Development and Environmental Education of the University of the Basque Country.

Congress: High Level Political Forum on Sustainable Development Goals (SDG)

Place: New York

Year: 2018

8. Others. Referee of international Scientific Journals

Ecology and society, Applied Vegetation Science, Sustainability, Environmental Science and Policy, Agriculture, Ecosystems and Environment, International Society of Food, Agriculture and Environment, Forest Ecology and Management, Journal of Environmental Management, Ecological Indicators, Ecosystem Services, Ecological restoration, International Journal of Climate Change Strategies and Management, Forestry, Forest Ecology and Management;