



## The climate crisis in Mediterranean Europe:

### cross-border and multidisciplinary issues on climate change

Jonathan Gómez Cantero, Carolina Morán Martínez, Justino Losada Gómez, Fabio Carnelli (Eds.)

### Globalization, Anthropocene and invasive alien species

Mario Corral Ribera<sup>1</sup>

#### Abstract

Since 15th century, different human activities have exerted pressure on the environment. Given these human-induced changes in terrestrial systems and their impact on the environment, it is justified to assign the term Anthropocene to the current geological era (Crutzen, 2006). In this context, this research focuses its study on the relationship between globalization (commercial exchange), the Anthropocene and biological invasions.

Currently, the commercial model is considered, linked to economic development and globalization, as the main causative agent of the loss of biodiversity on a global scale (Bright, 1999; Davis, 2003; Perrings *et al.*, 2005; Meyerson & Mooney, 2007; Von der Lippe & Kowarik, 2008).

The emission of greenhouse gases, desertification or contamination of water resources influence on biodiversity, intensifying the expansion of invasive alien species (Ehrenfeld, 2003).

**Keywords:** Globalization. Anthropocene. Biological invasion. Invasive Alien Species (IAS).

#### Works cited

- Aparicio, A., 2014, “Historia Económica Mundial 1950-1990”, Economía Informa, 385, 70-83.  
Bases de datos de la Organización Mundial del Comercio (OMC).  
[https://www.wto.org/spanish/res\\_s/statis\\_s/statis\\_s.htm](https://www.wto.org/spanish/res_s/statis_s/statis_s.htm): (Última consulta 22/08/19).
- Bright, C., 1999, “Invasive species: pathogens of globalization”, Foreign Policy, 116, 50-60.
- Begon, M., Harper, J. L., & Townsend, C. R., 1999, Ecología: individuos, poblaciones y comunidades. Omega, Barcelona.
- Capdevila, L., Zilletti, B., & Suárez-Álvarez, V. Á., 2013, “Causas de la pérdida de biodiversidad: Especies Exóticas Invasoras”. Memorias Real Sociedad Española de Historia Natural. 2a.época, 10, 55-75.
- Charles H., Dukes J.S., 2008, “Impacts of Invasive Species on Ecosystem Services”. In: Nentwig W. (eds) Biological Invasions. Ecological Studies (Analysis and Synthesis), vol 193. Springer, Berlin, Heidelberg, 217-237.
- Crutzen, P. J., 2006, “The Anthropocene”. Earth system science in the anthropocene Springer, Berlin, Heidelberg, 13-18.
- Davis, M. A., 2003. “Biotic globalization: does competition from introduced species threaten biodiversity?” Bioscience, 53, 5, 481-489.
- De la Dehesa, G., & Krugman, P., 2007, Comprender la globalización. Alianza editorial, Madrid.

<sup>1</sup> Corresponding Author. Universidad Autónoma de Madrid. Personal de Investigación en Formación. Departamento de Geografía, e-mail: mario.corral@estudiante.uam.es.



The climate crisis in Mediterranean Europe:

cross-border and multidisciplinary issues on climate change

Jonathan Gómez Cantero, Carolina Morán Martínez, Justino Losada Gómez, Fabio Carnelli (Eds.)

Ehlers, E., & Krafft, T., 2006, "Managing global change: earth system science in the Anthropocene", Earth System Science in the Anthropocene, Springer, Berlin, Heidelberg, 5-12.

Ehrenfeld, D., 2003, "Globalization: effects on biodiversity, environment and society", Conservation and Society, 1, 1, 99-111.

European Alien Species Information Network (EASIN). Recurso web: <https://easin.jrc.ec.europa.eu/easin> (Última consulta 17/06/2019).

European and Mediterranean Plant Protection Organization (EPPO). Recurso web: <https://www.eppo.int/> (Última consulta, 17/06/2019).

European Network on Invasive Alien Species. Gateway to information on Invasive Alien Species in North and Central Europe (NOBANIS). Recurso web: <https://www.nobanis.org/> (Última consulta, 17/06/2019).

Fernández Durán, R., 2011, El Antropoceno: la expansión del capitalismo global choca con la biosfera. Virus, Barcelona.

Foreman, P., 1995, Historia económica mundial: Relaciones económicas internacionales desde 1850. Prentice Hall, Madrid.

Genovesi, P., & Shine, C., 2004, "European strategy on invasive alien species: Convention on the Conservation of European Wildlife and Habitats", Nature and Environment, 137, 18, 1-68.

Global Register of Introduced and Invasive Species (GRIIS). Recurso web: <http://www.griis.org/> (Última consulta 17/06/2019).

International Union for Conservation of Nature (2011). Global Invasive Species Database. Checklist dataset <https://doi.org/10.15468/aaobov> accessed via GBIF.org on (Última consulta 17/06/2019).

Lambdon, Philip; Pyšek, Petr; Basnou, Corina; Hejda, Martin; Arianoutsou, Margarita; Essl, Franz; Jarošík, Vojtěch; Pergl, Jan; Winter, M.; Anastasiu, P.; Andriopoulos, P.; Bazos, I.; Brundu, Giuseppe; Celesti-Grapow, Laura; Chassot, P.; Vilà, Montserrat ,2008, "Alien flora of Europe: species diversity, temporal trends, geographical patterns and research needs". In: Handbook of Alien Species in Europe. Invading Nature - Springer Series in Invasion Ecology, vol 3. Springer, Dordrecht.

Lodge, D., 2006, "Six degrees of separation? Trade globalization and changing linkages among freshwater ecosystems. Ecology in an era of globalization: challenges and opportunities for environmental scientists in the Americas". Proceedings of the Ecological Society of America International Conference, 8-12.

Margalef, R., 1974, Ecología. Ediciones Omega, Barcelona.

Mauser, W., 2006, "Global change research in the anthropocene: Introductory remarks", Earth System Science in the Anthropocene, Springer, Berlin, Heidelberg, 3-4.

Meyerson, L. A., & Mooney, H. A., 2007, "Invasive alien species in an era of globalization", Frontiers in Ecology and the Environment, 5, 4, 199-208.

Ministerio para la Transición Ecológica (MITECO). Recurso web: <https://www.miteco.gob.es/es/biodiversidad/temas/conservacion-de-especies/especies-exoticas-invasoras/ce-eei-lista-UE.aspx>. (Última consulta 16/06/19)

Palomo, L. J., Gisbert, J., & Blanco, J. C., 2007. Atlas y libro rojo de los mamíferos terrestres de España. Madrid: Organismo Autónomo de Parques Nacionales

Perrings, C., Dehnen-Schmutz, K., Touza, J., & Williamson, M., 2005, "How to manage biological invasions under globalization", Trends in ecology & evolution, 20, 5, 212-215.

Pyšek P., Lambdon P.W., Arianoutsou M., Kühn I., Pino J., Winter M., 2009, "Alien Vascular



The climate crisis in Mediterranean Europe:

cross-border and multidisciplinary issues on climate change

Jonathan Gómez Cantero, Carolina Morán Martínez, Justino Losada Gómez, Fabio Carnelli (Eds.)

Plants of Europe” In: Handbook of Alien Species in Europe. Invading Nature - Springer Series in Invasion Ecology, vol 3. Springer, Dordrecht, 43-61

Ruiz, T., Martín, E., Lorenzo, G., Albano, E., Morán, R. & Sánchez, J.M., 2008, “The Water Hyacinth, Eichhornia crassipes: an invasive plant in the Guadiana River Basin (Spain)”, Aquatic Invasions, 3, 1, 42-53.

Sanz, M., Dana, E., & Sobrino, E., 2004. Atlas de las plantas alóctonas invasoras en España. Dirección General para la Biodiversidad, Madrid.

Tatem, A. J., Hay, S. I., & Rogers, D. J., 2006, “Global traffic and disease vector dispersal”. Proceedings of the National Academy of Sciences, 103, 16, 6242-6247.

Vilà, M., Valladares, F., Traveset, A., Santamaría, L., & Castro, P., 2008, Invasiones biológicas. Consejo Superior de Investigaciones Científicas, Madrid.

Von der Lippe, M., & Kowarik, I., 2008, “Do cities export biodiversity? Traffic as dispersal vector across urban–rural gradients”, Diversity and Distributions, 14, 1, 18-25.