



PRESS RELEASE

Article published in People and Nature

"Superfoods", a super-impact on the environment

Eating quinoa may not be as "eco-friendly" as you think: the environmental impact of "superfoods" under the spotlight







- The growing consumption of "superfoods", such as quinoa or avocado,is having a growing environmental and social impact worldwide that is not being taken into consideration, according to a study published by Ainhoa Magrach and María José Sanz, BC3 researchers.
- The unsustainable management of these superfoods could also cause them to lose their nutritional and natural properties.

[Bilbao, 29 April, 2020] So-called "superfoods", such as quinoa or avocado, are being increasingly consumed in western diets which are seeking new ways of achieving healthy, "eco-friendly" diets. However, this growing demand is **increasing their environmental and social impact worldwide**, and this is not being taken into consideration. A study published in the journal *People and Nature* by **Ainhoa Magrach and María José Sanz, researchers at the Basque Center for Climate Change (BC3)**, offers an initial approach to the current impacts of the various superfoods that we eat worldwide and various recommendations to avoid negative effects on ecosystems and on a social level.

"Much has been written about the impact of crops such as palm oil and their obvious effects on ecosystems. Yet superfoods, which we associate with sustainable production and traditional use, are starting to follow the same path due to their increase in demand. It is still not too late in this case to try and prevent this demand from having catastrophic consequences," said Magrach.

The BC3 researchers have analysed **six of the most popular superfood crops** worldwide by reflecting the various environmental impacts of this expanding sector, including water depletion (e.g., avocadoes or almonds), soil degradation (e.g., quinoa), reduction in biodiversity (e.g., acai), or the increase in land transformation inside natural habitats (e.g., coconut, cacao).

Traditionally, local communities have been exploiting these crops sustainably for millennia. However, as they are now regarded as "superfoods", they have become global products in great demand. The production of many of these crops is now **controlled by large corporations that encourage short-term profit** over long-term sustainability. The grip of these corporations could continue to erode local food-producing systems which, in many cases, used to be healthy, sustainable and socially fair for millions of local communities and farmers.

Likewise, the reduction in their genetic variability and their use in single-crop farming suggests that they will undergo significant reductions in production and





that there will be potential changes in the distribution of areas suited to theirproduction. With the intensifying of production, **this could lead to some of their supposed properties being lost.** What is more, right now it is not known how these crops are going to respond to **climate change.**

"The challenge in achieving sustainable food production will only be addressed if **measures on various fronts** are adopted; these range from changing production practices to consumer diets and governance," Magrach and Sanz concluded.

Recent studies suggest that **superfoods are a broad category of products that share a set of common features:** they have higher nutritional qualities, they are grown "naturally", in other words, with little or no technological intervention, and are associated with indigenous peoples and traditional production practices often in remote locations. In fact, many of these superfoods are basic, traditional foods that have been used for millennia by different indigenous communities to prevent diseases, but which have now become global agricultural products, very popular among middle- and high-income sectors in western societies.

The study also shows that **we need to invest more resources** to quantify the effects that the rapid conversion of land is having in the areas where these crops are grown.

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Additional resources

Photo_01: Image provided by the researchers

Photo_02: Evolution in world production over time of four of the main superfoods covered in case studies between 1960 and 2016 that show A) all the crops together for comparison purposes and B) each individual crop. NB the axis in B) is different for each crop (source: FAOSTAT, 2018).

Photo_03: Global distribution of the growing areas of three of the main superfoods studied.





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Magrach A, Sanz MJ. Environmental and social consequences of the increase in the demand for 'superfoods' world-wide. People Nat. 2020, doi: <u>https://doi.org/10.1002/pan3.10085</u>

About BC3

The Basque Centre for Climate Change (BC3) is an international, interdisciplinary research centre for the study of climate change and has its headquarters in Bilbao. It has been promoted by the Basque Government to encourage science and research. The centre's partners include Ikerbasque, the UPV/EHU-University of the Basque Country and Ihobe, the Basque Government's Public Environmental Management Partnership; the centre is one of the BERCs (Basque Excellence Research Centres).