



Report

The true price of food

The hidden side of agroindustry on the Iberian Peninsula
Sacrifice zones: Mar Menor, L'Albufera, Doñana and Almería

Spain is the biggest producer of fruits and vegetables in the European Union, accounting for 26% of that market, and the seventh largest producer worldwide. Much of this fresh produce comes from parcels of land where a hyper-intensive system of agriculture has been imposed which is profoundly unsustainable, both socially and environmentally.

As much as three quarters of this produce is destined for export, and appears on the shelves of the large European supermarket chains in countries such as Germany, France and the Netherlands, as well as the UK. These exports represent more than 85% of these countries' total fresh produce market. In Germany's case, one of its largest supermarket groups, Rewe, receives 23.5% of its fruit and vegetables from Spain, of which 20% is ecological.

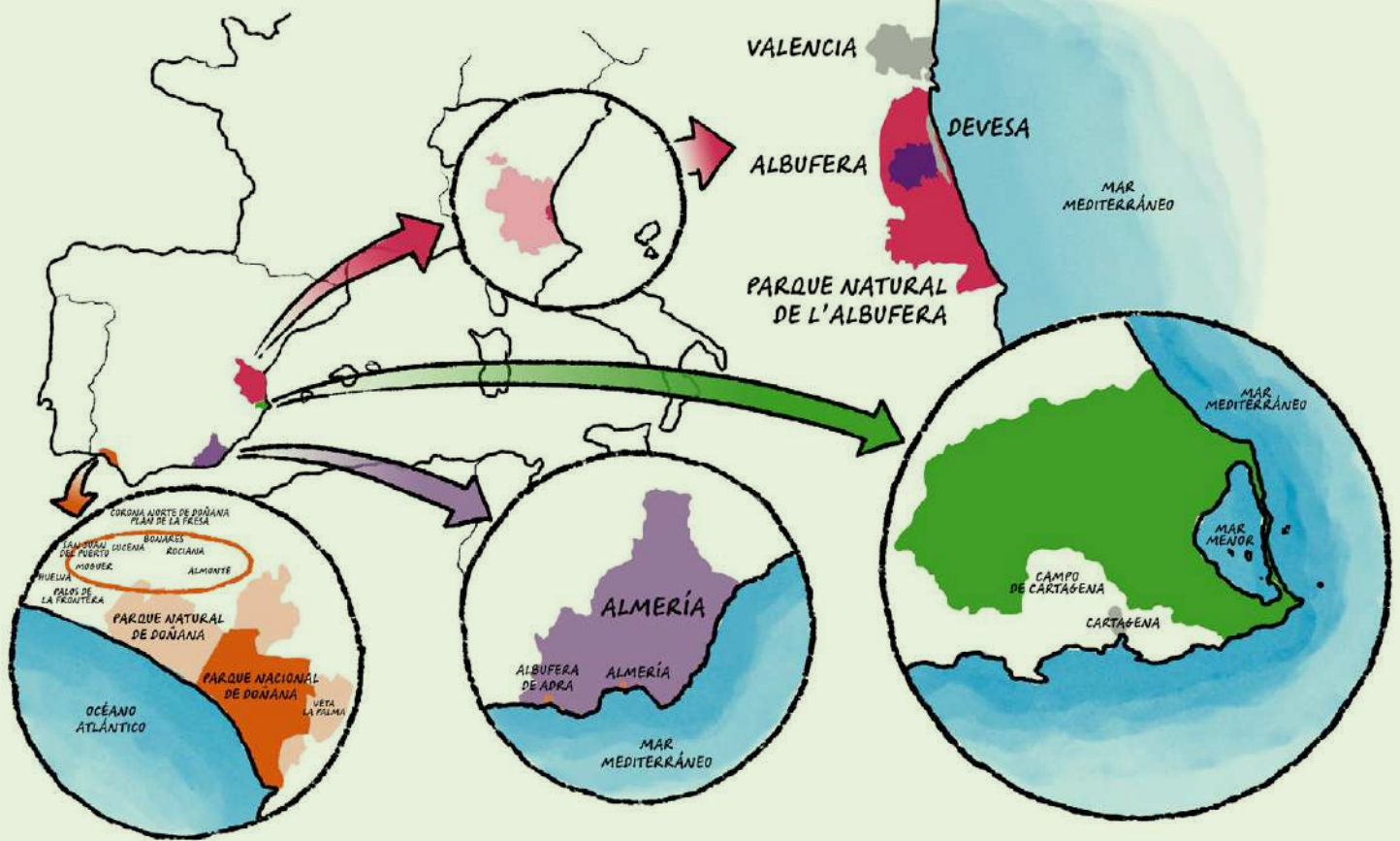
The Mar Menor catchment basin —the region known as Campo de Cartagena (in Murcia)— the “red berry” zone of Doñana, in Huelva and Seville (Andalusia), and the well-known Sea of plastic in Almería (Andalusia) are three hotbeds of hyper-intensive agriculture.

In addition, this model, dedicated chiefly to exports, is present in other lands on the peninsula, namely the Ebro Valley, Málaga's tropical

coast, Granada, plus the north west of Murcia, among others. This model frequently affects landscapes and habitats which are, in theory, lawfully protected, but in practice, far from it.

The case of the coastal lagoon of L'Albufera, in Valencia, is strange: although local rice is not destined for export, paradoxically, it is the rice imported from distant countries that is setting prices and standards that are making it difficult for the famous Valencian paella to include rice grown in the region itself.

Hyper-intensive farming models have highly negative socio-environmental repercussions in the areas and communities where they are imposed, and this is in addition to the problems of climate change these zones are already undergoing. Added to the reduction in net annual rainfall and the increasing frequency of extreme weather episodes in the south of the Iberian Peninsula as a result of climate change, we can add both the over-exploitation and the pollution of the water bodies. These water bodies include both surface bodies – marshes, coastal lagoons, rivers and other channels, as well as subterranean water courses. In addition their management and governance have many problems. The desiccated Doñana, or the eutrophied Mar Menor have become sad symbols



This report is informed by four case studies, all carried out in Spain. The first three affected areas, which are designated Priority EU Habitats, and classified as coastal lagoons, refer to the Mar Menor, Doñana, Valencia's Albufera. Jointly, these three together represent 90% of the highly threatened national habitat. The fourth refers to an entire province: Almería.

of agrarian extractivism, the consequences of which we are already experiencing first-hand.

However, the unsustainability of this system is not only found only in the exploitation of natural resources, it also manifests itself in the endangerment of the human rights of thousands of workers – mostly migrant day labourers in vulnerable situations. These are people who come to work in conditions of semi-slavery, living in barely habitable shacks and settlements. Their working conditions are sub-standard, in order to maintain the margins of the global market which constantly squeezes workers to eke out ever more profits. Without the over-exploitation of natural resources and the exploitation of workers, both national and foreign, the current agro-export model would not be able to function.

In addition, regional statistics show that this model is not compensatory for local populations, nor is its contribution to the GDP as important as certain sources would have us believe. In fact, in spite of the high financial returns

of the sector, the kind of employment that this agriculture sector creates is highly precarious.

Data on income distribution shows that provincial economies based on industrial agriculture occupy the lowest positions in wealth classifications. The distribution of benefits is highly unjust, since a part of the business community monopolises the majority, while the majority of workers earn figures which tend to be below the poverty line.

Regional net earnings per capita. 2021 (INE)	
1º Gipuzkoa	16.887 €
3º Madrid	16.146 €
5º Barcelona	15.297 €
39º Granada	11.100 €
42º Murcia	11.023 €
45º Málaga	10.929 €
49º Huelva	10.609 €
51º Almería	10.103 €



The case of Mar Menor: a foretold disaster

L The numerous ecosystem services and the environmental value of the Mar Menor are still reflected today —despite its being on the verge of collapse— in the biodiversity of its fauna and flora, which includes endemic, native and/or threatened species, such as the emblematic seahorse (*Hippocampus guttulatus*) or the pen shell (*Pinna nobilis*).

The degradation of this unique ecosystem has several causes. Among them, the absence of planning stands out. This is both in urban planning and also in the conversion to the massive irrigation system in the Campo de Cartagena and to intensive livestock farming. It also includes the profound impacts created by the mining industry of previous years.

The consequences of hyper-intensive irrigation in Campo de Cartagena —begun in the 1980s with the arrival of the waters of the Tajo-Segura Transfer— despite its high level of modernisation in recent years, continues to deposit tonnes of nutrients, such as nitrates and phosphates. These nutrients, mostly coming from agricultural fertilisers, are the cause of the eutrophication crisis of Mar Menor and, consequently, the ecological collapse of this coastal lagoon of major ecological importance, including beyond Spain.

The precarious situation of Mar Menor is also very likely due to the exploitation of more irrigated hectares than are officially allowed: the Segura

Hydrographic Confederation (CHS) recognised, in December 2020, the existence of 9,500 hectares of illegal irrigation in the Campo de Cartagena.

Civil society groups campaign for an end to industrial agriculture around Campo de Cartagena, which is one of the principal causes of the continued eutrophication of the Mar Menor hypersaline coastal lagoon.

Official agricultural data from the Region of Murcia for 2021 indicate that, of the total exports of fruits and vegetables in billions of euros, Germany leads the market as a buyer, with 28%, followed by the United Kingdom (18%), France (17%) and the Netherlands (7%). And, in that year, according to Murcia's Regional Statistics Centre, (CREM), 67% of Spain's export of lettuce, one of the star products of Campo de Cartagena, came from the Region of Murcia.

One of the great successes of social protest aiming to protect the Mar Menor has been the approval by the Popular Legislative Initiative (ILP) of Law 19/2022, which recognises the denomination of 'legal entity' of the Mar Menor and its basin. This Law, in force since 30 September 2022, represents a new paradigm for the legal defence of ecosystems in Europe. And there are other movements that have been set up to defend other natural spaces which follow the Mar Menor drainage basin movement. These include the twinned National Park and the Doñana area.



Burning of the stubble continues in the rice fields of Albufera despite being inadvisable. Photo: Fundació Assut.

The case of L'Albufera in Valencia: the rice field landscape

Despite its anthropisation for centuries, the L'Albufera Natural Park is one of the territories of greatest biological interest in Valencia. Its ornithological importance and diversity is striking, due to its more than 350 species of birds, of which about 250 are regular visitors each year and within those, approximately 90 of which use the lagoon as a breeding ground.

The environmental collapse of L'Albufera occurred less than a hundred years ago alongside the arrival of urban and industrial development alien to the local populations that lived off the lake. Meanwhile, a higher concentration of nutrients from various sources – urban, industrial, and agricultural – and insufficient and/or uneven water inputs have caused the lake waters to become eutrophic, with its aquatic macrophytes (submerged plants) unable to maintain the original transparency of the water.

Rice cultivation has also contributed, to a certain extent, to the worsening of the environmental quality of L'Albufera. The 14,100

hectares destined for rice cultivation represent 91% of the rice fields in the Valencian countryside (15,447 total hectares) and 67% of the protected environment (of 21,120 total hectares). Almost all Valencian rice is from L'Albufera and a large part of L'Albufera is rice fields.

The area changed, from the 1970s onwards, from traditional land working, founded on manual labour, animal labour and use of organic, natural fertilisers, to intensive mechanised farming based on use of chemical fertilisers and synthetic pesticides. This has continued until the present. Ingredients in the synthetic fertilisers, which are rich in nitrates, transform the chemical composition of the lakes, bringing more nutrients to the phytoplankton and increasing the problem of eutrophication and reduction of salt of the naturally saline waters.

The rice fields in the area have been part of the landscape for centuries. Therefore, appropriate agricultural practices could be part of the recovery of the L'Albufera environment, an icon of Valencian identity.



The case of Doñana: the eco-social paradox

The Doñana National Park is a mosaic of marsh, forest, river, lakes, beaches and dune landscapes which boasts enormous biodiversity: 1,535 species of plants and 720 of vertebrate animals, of which 467 are species of birds.

The pressure of the great changes made at the end of the 20th century in this territory continues to cause pernicious effects on the values of this space. These changes, such as the diversion of the Guadiamar River channel, have deprived the marsh of its main contribution of water. In addition there is uncontrolled or illegal exploitation in most cases of groundwater

for agriculture, tourist developments at the coastal centre of Matalascañas and the added problem of the high concentration of use in the summer months.

Since 2014 alone, there have been 151 disciplinary proceedings in forestry issues, 43 in water matters and two in urban-planning issues. At least 420 illegal wells have been closed and several condemnatory judicial sentences have been issued. For the most part, these legal judgments have been made on irrigated lands where red fruits are grown for export. According to Datacomex, in 2021-2022 Andalusia produced 97.3% of Spanish strawberries and almost 29%

MAIN EUROPEAN EXPORT MARKETS



Destiny of strawberry, raspberry and blueberry exports from Huelva, in 2022. Image: Ecologistas en Acción. Source: Datacomex, 2022. Secretary of state for commerce.

of strawberries in the EU. It also contributed 33% and 23% of blueberries and raspberries to the EU, being the first and second European producer, respectively, of these fruits.

According to the MITECO Framework of Actions (2023), in the area of influence of the Doñana natural area, the irrigated area dedicated to strawberries is 3,875 hectares, to blueberries, 1,150 hectares and to raspberries 234 hectares. The vast majority of this production is exported to northern Europe.

The provinces of Huelva and Almería occupy the unfortunate top rankings in terms of settlements of people who work in the fields and often lack the most basic of employment and human rights. In 2021, there were 41 settlements in the strawberry area of Huelva, in the municipalities of Lepe, Moguer, Palos and Lucena, with approximately 3,500 inhabitants concentrated especially during the main harvest months, March and April. In the 2022/23 crop year, 25 settlements have been counted, most of them in the Doñana area.



A settlement in the municipality of Lucena del Puerto (Huelva). The population of the settlements changes as the crops are harvested and the workers move to other parts of Spain, such as Almería, the Region of Murcia and Lleida. Photo: Ecologistas en Acción.



The bleakly named "Plastic Sea" of Almería. Photo: <https://www.shutterstock.com/>

The case of Almería province: the sea of plastic

Although the current landscape in Almería is known for the immense areas occupied by greenhouses—which is visible from space—the province of Almería still has enormous biological biodiversity and several biomes of great ecological interest. In fact, just over a quarter of its territory is part of the Natura 2000 Network, which includes areas such as the Albufera de Adra wetlands.

The main reason for environmental degradation in Almería dates back to the expansion, which began in the 1960s, of industrial agriculture in the region. Since then, the expansion of the greenhouse area has been unrelenting: from just 1,000 hectares in the early 1970s, to 32,800 hectares in 2022. This has contributed significantly to the overexploitation and salinization of aquifers and wetlands. Surrounded by greenhouses, these aquifers and wetlands suffer from chemical pollution and the constant dumping of plastics.

Despite the improvement in the efficiency of water use per unit area (partly thanks to

technology) and the increase in biological pest control (which reduces the use of pesticides), the continued expansion of greenhouse areas causes an annual water deficit of 170 hm³ and an unrelenting increase in the consumption of chemical pesticides.

According to a 2023 Pesticide Action Network study, in the Sotomontes wetlands in El Ejido, up to 23 different active substances from banned phytosanitary products are present (such as Isopyrazam, a prohibited carcinogenic substance). In Albufera Honda, in addition to pesticide levels being up to three times higher than those recommended, the samples presented up to eight different toxic substances (including the fungicide Fluopyram).

Of the 2,864,211 tons of fruits and vegetables produced in the province during the 2021/22 campaign, exports accounted for 74.9% of the total, with the main destinations being Germany (37.8%), France (17%) and United Kingdom (14.2%).



A pressing need for the transformation of the agri-food model

The prevailing model of intensive production in these four regions causes the loss of fertile soil and biodiversity. Overuse and pollution from pesticides and plastics have brought local soils and ecosystems —often unique and threatened habitats such as coastal lagoons— to the brink of collapse.

In addition, agribusiness encourages the “uberisation” of production. That concretely means that the large marketeers and/or retailers decide what, how, when and how much

is produced; what the required standards of size, shape, etc are, what inputs are applied; or what prices those who produce —if not themselves— will receive through subsidiary companies.

Consequently, in the regions where agribusiness prevails, farmers have minimal or no decision-making ability over the management of their lands, and are at the mercy of the large supermarket chains and investment funds of northern countries who, by hoarding lands and monopolising modes of production, can ensure

that the food production and distribution chain can only link to them.

Also included within this chain, however, is the consumer mass. Whether from the north or the south, we could, with our actions, collaborate towards the essential transformation of this current system. But in no case will we be able to do so without authorities ensuring the true transparency of the system at all levels — information on origin, characteristics, product traceability, value chain, etc.— and equity.

Nor will it be possible, as long as the (generally) large corporations that sell these products on the shelves are not more transparent about their purchasing mechanisms, and the veracity and quantity of information they provide to the consumer and while they continue not to adapt the standards they set to the reality of food production. In short, it is essential to transform the current global agri-food model into one which is healthier, fairer, more sustainable and local, in short, one which is agroecological.

This report carried out by *Ecologistas en Acción* is a first advance that aims to inform about a complex and opaque export network about which, as major food-consuming societies, we

know very little. It includes the description of the ecological values of three highly threatened ecosystems: the coastal lagoons of Mar Menor (Region of Murcia), Doñana National Park (Huelva and Seville), L'Albufera Natural Park (València) and an entire province, Almería, all territories which have become profoundly affected by agribusiness. It includes information regarding the impacts that have taken these ecologically vital areas to the brink of disaster, as well as the socioeconomic consequences of intensive industrial agriculture. It informs on examples of citizen movements which are fighting to protect these areas and which demand that this destructive trend be reversed.

Furthermore, the report aims to provide data and tools to those who live in the producing areas —which in Europe are concentrated in the south-east and south of the Iberian Peninsula—, and to those who consume a large part of the production - thousands of kilometres to the north, with the objective of motivating reflection on the tremendously negative impact that the current agri-food model has, both on the ecosystems that sustain us, and on the human rights that are meant to protect us.