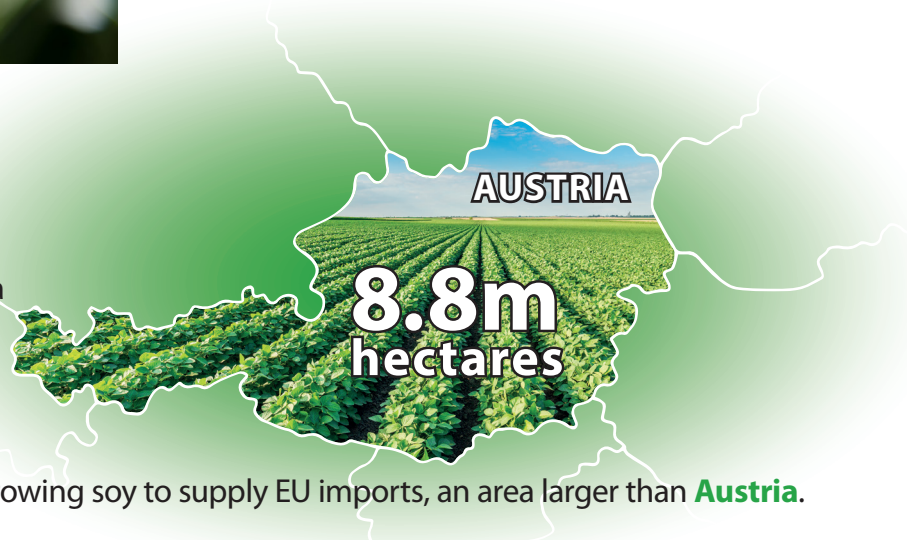


Soy

An area of forest the size of Portugal was lost globally between 2010 and 2015 because of EU consumption of commodities grown on deforested land, much of it illegal.¹² Such destruction often violates the rights of local communities and indigenous peoples, causes massive biodiversity loss, and contributes to climate change. Fern is calling for an EU Action Plan to ensure imports for forest-risk commodities are legally sourced and ecologically viable.

5.2m hectares in Brazil
2.7m hectares in Argentina
0.9m hectares in Paraguay



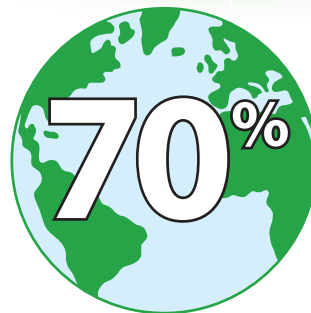
A total of **8.8m hectares** is taken up with growing soy to supply EU imports, an area larger than **Austria**.



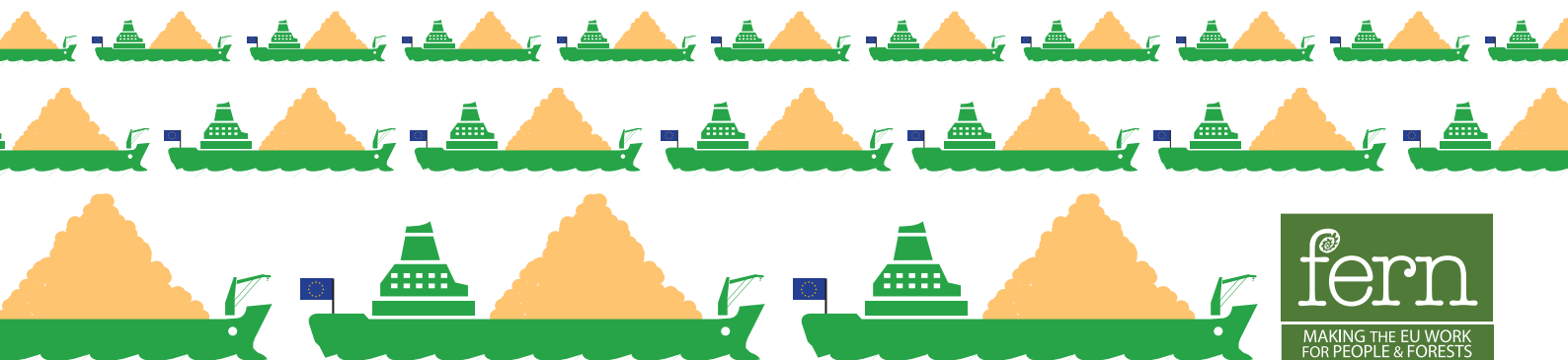
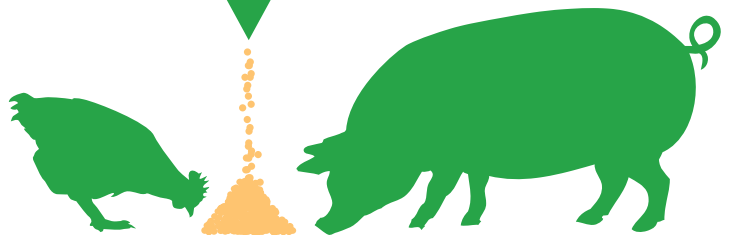
Soy expansion accounted for **nearly half** of all forest destruction embodied in EU crop imports and 19% of all global deforestation due to agriculture between 1990 and 2008, according to a European Commission study.

35m tonnes

of soy a year are imported by the EU, representing **13%** of global output in 2013.



Over **70%** of world soy production goes into animal feed, mainly for pigs and chicken but also for farmed fish, cattle and other livestock.



Soy – a major cause of deforestation

Soy is the second largest agricultural driver of deforestation after cattle products (with agriculture responsible for about 70 per cent of all deforestation).^{3,4} According to a 2013 study for the European Commission, soy expansion was responsible for nearly half (47 per cent) of the deforestation embodied in products imported into the European Union between 1990 and 2008.⁵

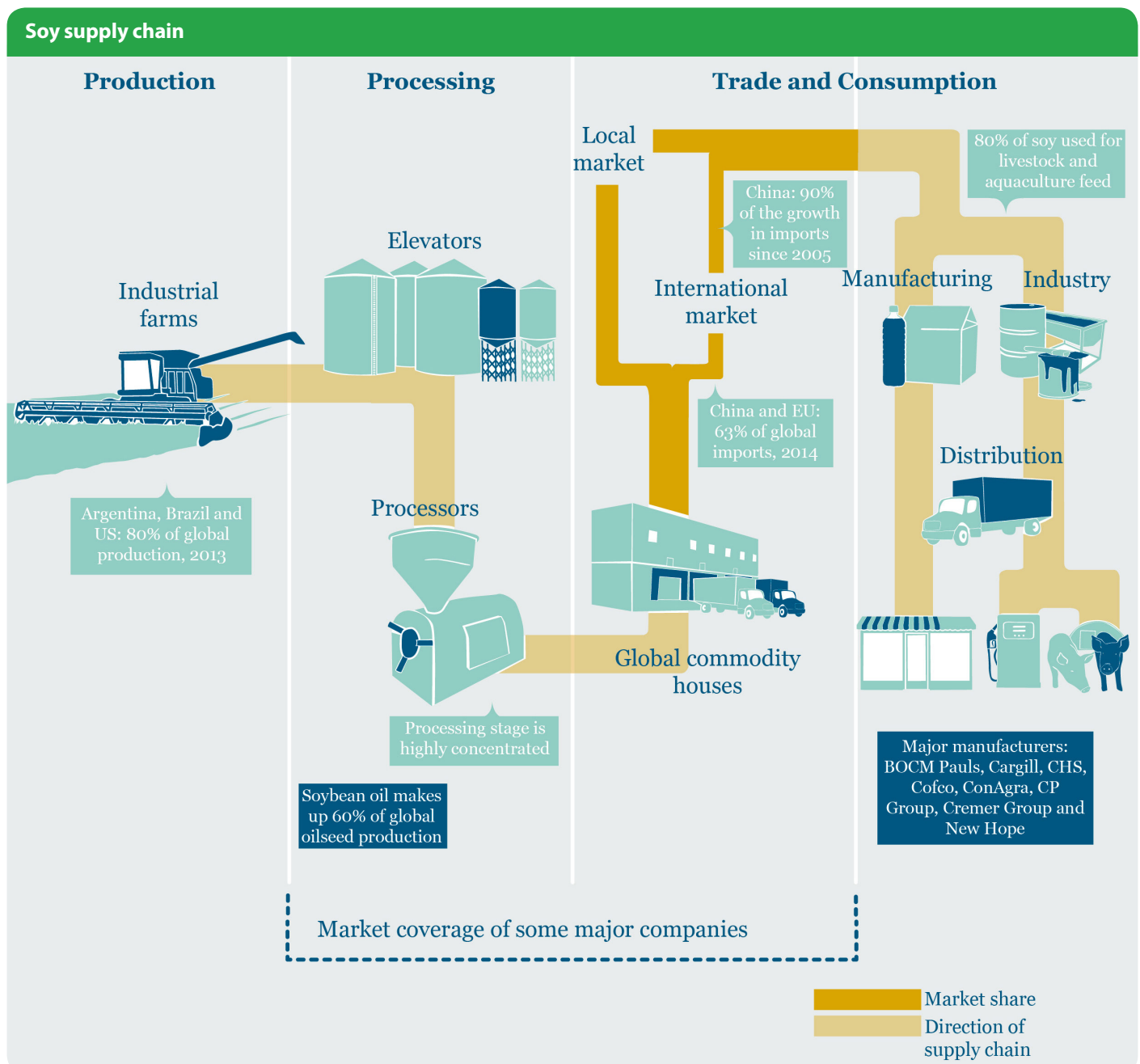
Uses of soy

Soy is grown for its nutritious edible bean which has a protein content twice the proportion found in pork and three times as much as eggs.⁶ The beans are crushed to make soybean

meal and soybean oil. 70–75 per cent of world soy production goes into animal feed, primarily for pigs and poultry but also for farmed fish, cattle and other livestock. In addition, soy is used for industrial applications – including biofuels (mainly in the European Union) and in a host of other food and non-food products.

Soy production and consumption – global trends

Production is concentrated. Three countries – the United States, Brazil and Argentina – accounted for 80 per cent of global output in 2013.⁷ Other significant producers include China, India, Paraguay, Canada and Ukraine. Growing global



demand for meat and dairy products has powered a surge in soy cultivation to produce high protein animal feed. Over the period 1993 to 2013 alone, global soy production more than doubled (up 140 per cent).⁸ In 2016, total global output of soy was 313 million tonnes, and the UN Food and Agriculture Organization (FAO) believes production will carry on rising to 390 million tonnes by 2050.^{9 10}

About two thirds of global soy output is exported.¹¹ China and the EU are the main international buyers, accounting between them for 63 per cent of global soy imports in 2014.

While it remains a very significant player in traded soy, the EU's share of the market has declined in recent years. In 2000, the EU took 35 per cent of global soy imports; by 2014 the figure was down to just below 20 per cent.¹² This relative decline was mainly due to the rise of China as a destination for trade in soy. China has accounted for more than 90 per cent of the increase in global soy imports seen since 2005.¹³ The EU remains the largest importer of soybeans from Brazil, South America's largest soy producer.¹⁴

Deforestation and human rights concerns in South America

The relationship between soy cultivation and deforestation in South America is complex. While some forests have been cleared for soy and other crops, more frequently forests are initially cut down to make way for cattle ranching.¹⁵ Soy cultivation follows a little later which indirectly leads to more deforestation as cattle are displaced to new frontier areas.¹⁶ The land area devoted to soy cultivation in South America increased by more than half (56 per cent to 51.6 million hectares) over the ten years to 2013.^{17 18}

Expansion of soy cultivation across South America has led to problems including soil erosion, water depletion, and pesticide contamination.¹⁹ The runoff from soy production can carry substantial levels of agrochemicals, suspended soil and organic matter. This is a major source of freshwater and groundwater contamination, which can have serious impacts on the health of people and wildlife.²⁰

Soy expansion has led to a variety of social problems: small farmers who are entirely dependent on access to local resources have struggled to cope with their environment being turned over to industrial scale farms; large corporations have forced people to hand over land, sometimes with violence and intimidation; subsistence farmers without official title to land have seen their livelihoods threatened.²¹

Indigenous communities have been among those most affected. To take just one example, the NGO Survival International reports that Guarani people who once occupied large areas in Mato Grosso do Sul, one of Brazil's main soy

growing regions, are now: "...squeezed into tiny patches of land surrounded by cattle ranches and vast fields of soy and sugar cane. Some have no land at all and lived camped by the roadsides."²² Tensions between Guarani communities and farming interests over the demarcation of indigenous land rights have led to a cycle of land invasions, killings and suicides.²³

International soy supply chain

Soy is grown on farms of widely varying sizes. In Brazil and Argentina, cultivation is increasingly in the hands of large enterprises, ranging in size from roughly one thousand hectares to 100,000 hectares. Smaller family farms are also involved. Soybeans are a crop on hundreds of thousands of smallholdings of less than 50 hectares in regions of South America, Africa and Asia.²⁴

Trading and processing of soy is mostly done by very big companies. Four giant global supply chain companies – ADM, Bunge, Cargill and Louis Dreyfus (known as ABCD) – dominated the market for decades and still have an influential role. In recent years China's COFCO and Japanese trading companies, including Marubeni, Mitsui and Itochu have increased their share of the market, especially for soy imports to Asia.^{25 26}

A significant amount of soy production comes from illegally cleared land. Research for Fern concluded that the EU imported around three billion euros' worth of illegally produced soy in 2012.²⁷

Private sector initiatives and a moratorium in Brazil

A number of companies in the soy sector have announced voluntary commitments to eliminate or reduce deforestation from their operations, but the policies tend to be less well defined and are generally less common than, for example, in palm oil.²⁸ There is a certification scheme for soy, run by the Roundtable on Responsible Soy Association (RTRS).²⁹ Founded in 2006, the RTRS launched its first certification standard for responsibly produced soy in 2010, although so far the scheme covers less than two per cent of global production, a much lower proportion than equivalent certification measures in palm oil and timber.³⁰

In 2006, after pressure from NGOs, soy bean processors and exporters operating in Brazil agreed not to buy beans produced on Amazon farmland deforested after 2006.³¹ The Soy Moratorium was made permanent in 2016. It has been a success in that the proportion of Brazilian soy cropped on newly deforested land in the Amazon region fell from about 30 per cent before the measure to just one per cent following its introduction. However, the overall impact on deforestation in Brazil is less clear. To some extent, forest loss has been displaced to other parts of the country which are not covered

by the moratorium, for example, the Cerrado in central Brazil where deforestation remains rampant.^{32 33}

How much soy do we consume in the EU?

The EU produces most of its own meat but 97 per cent of the soy meal used in animal feed is imported. Poultry and pork production – two areas of fast-rising demand – are especially dependent on imported soy, as neither chickens nor pigs can digest grass. Cattle and other ruminant animals do feed on the local pasture but their diets are often supplemented with protein concentrates, including soy meal, seen as essential for achieving higher yields.

Becoming self-sufficient in soy would require an additional 12-13 million hectares of farm land in the EU to be used for soy cultivation – more than 10 per cent of the total EU arable land area.³⁴ Instead EU demand is mostly met by soy grown on land in South America.

EU policies driving demand for soy

EU farm policies have played a role in encouraging soy imports. Early versions of the Common Agricultural Policy incentivized EU farmers to produce meat and cereals rather than protein crops such as soy. International trade rules have also had an impact. Since the 1960s soy imports into the EU have been almost duty free while tariffs on some other agricultural products have remained, giving farmers in the EU more reasons to feed their animals on cheap imported soymeal.³⁵

The EU is the main market for soy oil as a biofuel; but use of soy oil as a feedstock for biofuels has declined since 2010³⁶, unlike palm oil and rapeseed oil. The EU Renewable Energy Directive (2009), which encouraged greater use of biofuels, has thus had a less dramatic effect on EU soy production than on other biofuel crops. The current European Commission proposal (November 2016) to reform this Directive suggests that the maximum contribution from liquid biofuels to meet this target should fall to 3.8 per cent by 2030.³⁷

All references available online at www.fern.org/soyfacts



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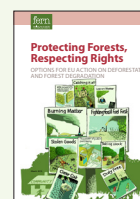
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Policy Recommendations

The EU has made a commitment to end its role in deforestation by 2020.³⁸ This will remain an impossible goal while policies and practices encourage demand for soy, with little concern about the deforestation or human rights violations generated by its production.

The EU must:

- regulate soy supply chains. The EU already regulates supply chains of illegal timber, illegal fishing and conflict minerals. It should now regulate supply chains of other forest risk commodities to ensure EU consumption is legal, free from conflict and does not lead to deforestation. International human rights legislation concerning community tenure rights could be a basis;³⁹
- introduce cross-compliance criteria for animal feed in its Common Agricultural Policy (CAP) and measures to reduce consumption of intensively farmed animal products in a new Food and Farm Policy replacing the CAP;
- ensure that the reform of the Renewable Energy Directive introduces strict social safeguards, immediately terminates all support (e.g. state aid and tax incentives) for land-based biofuels, and phases out these biofuels as soon as possible;
- develop an "Action Plan to Protect Forests and Respect Rights" to allow it to meet its commitments to stop deforestation, respect rights, and tackle climate change made in multiple instruments including the New York Declaration on Forests, the UN Sustainable Development Goal 15, and the Paris Agreement.⁴⁰



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