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Killer Slime, Dead Birds, an Expunged Map: The Dirty Secrets of European Farm Subsidies

By Matt Apuzzo, Selam Gebrekidan, Agustin Armendariz and Jin Wu

Algae at Bon Abri beach in Brittany, France, in July. Andrea Mantovani for The New York Times

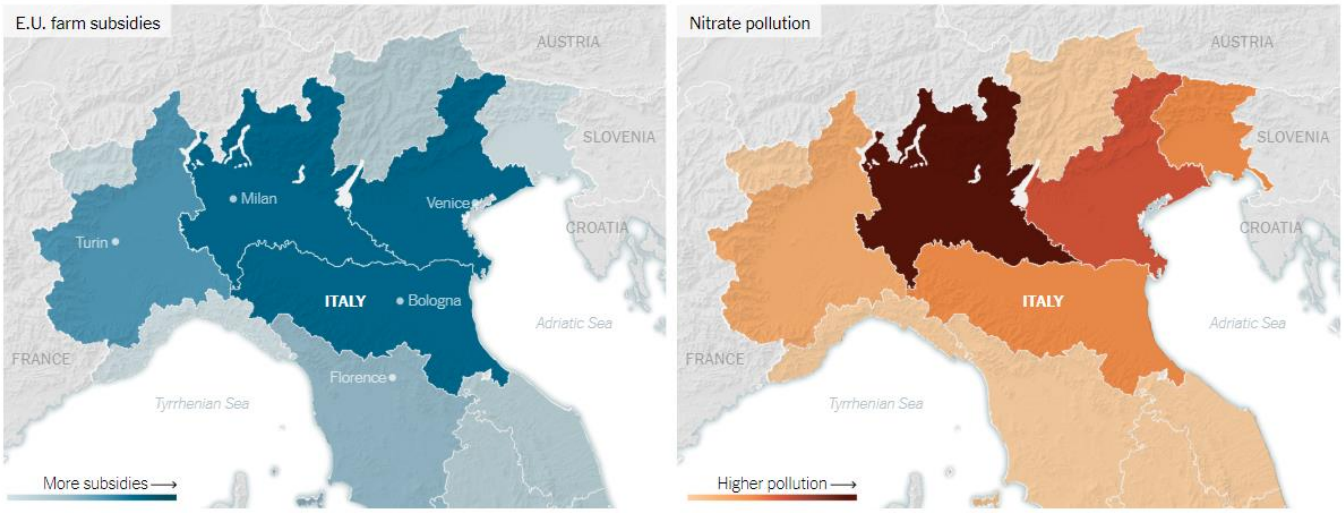
In the spring of 2017, a European Union working group of environmentalists, academics and lobbyists was having a technical discussion on green farming practices when a map appeared on an overhead screen. In an instant, the room froze.

A farm lobbyist objected. Officials murmured their disapproval.

The map juxtaposed pollution in northern Italy with the European Union subsidies paid to farmers in the region. The overlap was undeniable and invited a fundamental question: Is the European Union financing the very environmental problems it is trying to solve?

The map was expunged from the group's final reports, those in attendance say. But using the European Union's own economic models, The New York Times created an approximation that confirms what European officials did not want seen: The most heavily subsidized areas had the worst pollution.

Overlapping E.U. subsidies with Italy's nitrate pollution



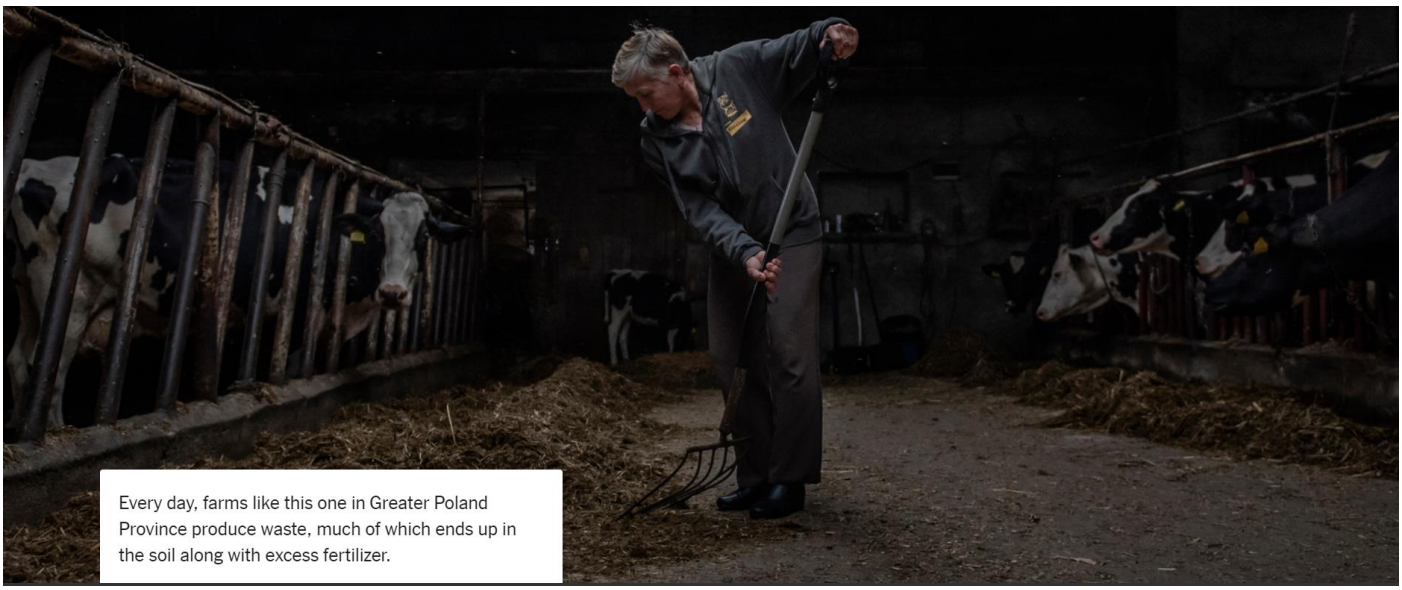
Sources: Common Agricultural Policy Regionalised Impact (CAPRI) modelling system; data extracted by Torbjorn Jansson, at the Swedish University of Agricultural Sciences

European Union leaders boast about their green credentials, but in doing so they sidestep an undeniable tension between facts and wishful policymaking. This month, European leaders set ambitious goals to fight climate change and save species from extinction. Yet one of the biggest impediments is the bloc's $65-billion-a-year agricultural subsidy program that is intended to support farmers.

Europe spends nearly 40 percent of its budget on the program, and recent investigations by The Times show that it is underwriting anti-democratic forces across the continent and is administered by officials who benefit from the payments. In response, Europe's new farm commissioner is investigating ways to tighten the system.

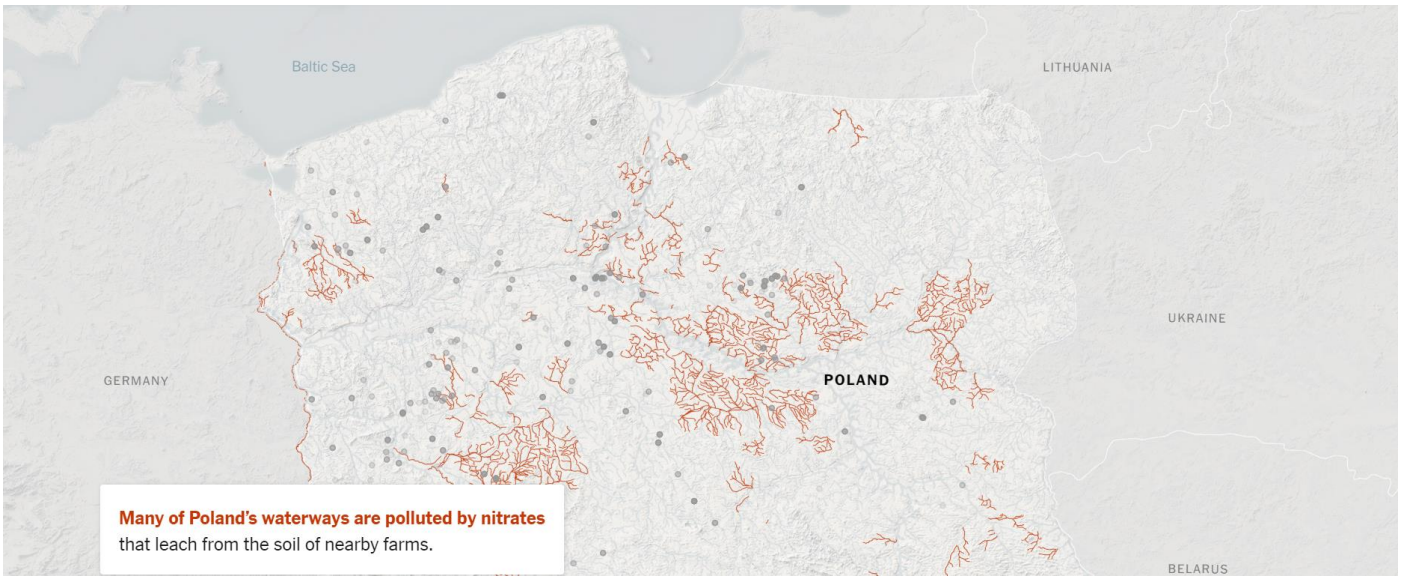
The farm subsidies have also had serious environmental consequences and left pockmarks across Europe. Decaying algae belches deadly gas onto beaches in northwestern France. Dwindling bird populations threaten the balance of entire ecosystems. Greenhouse gas emissions from agriculture are on the rise.

And in the Baltic Sea, decades of farm runoff has helped create huge dead zones.

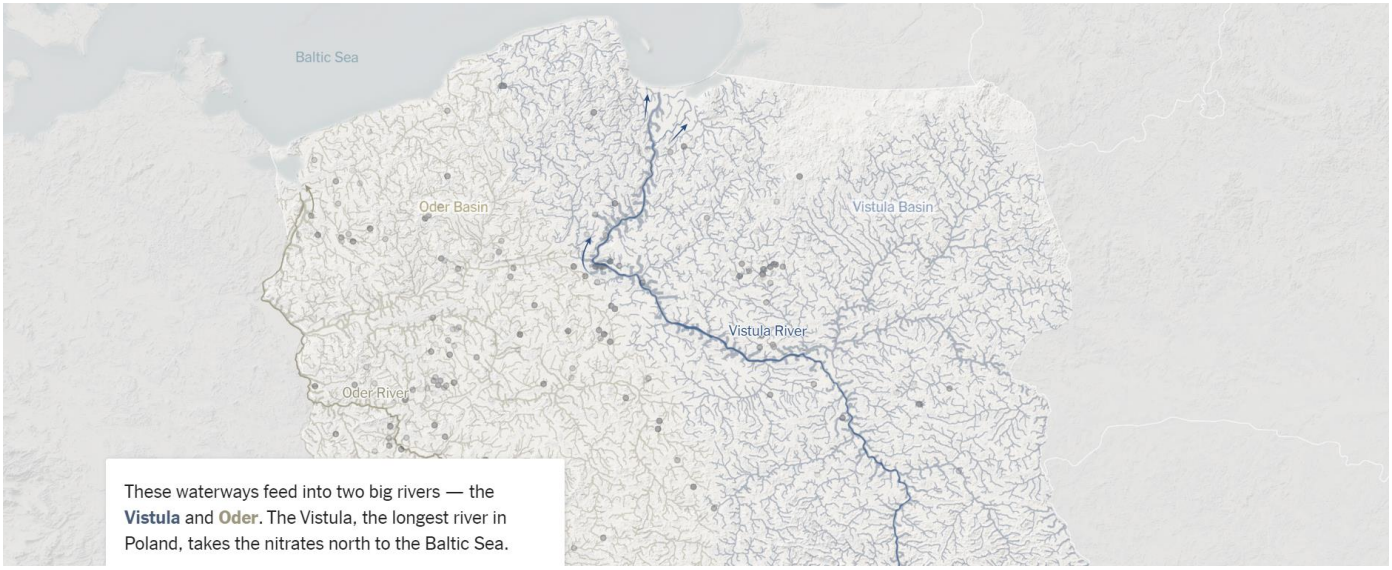


Every day, farms like this one in Greater Poland Province produce waste, much of which ends up in the soil along with excess fertilizer.

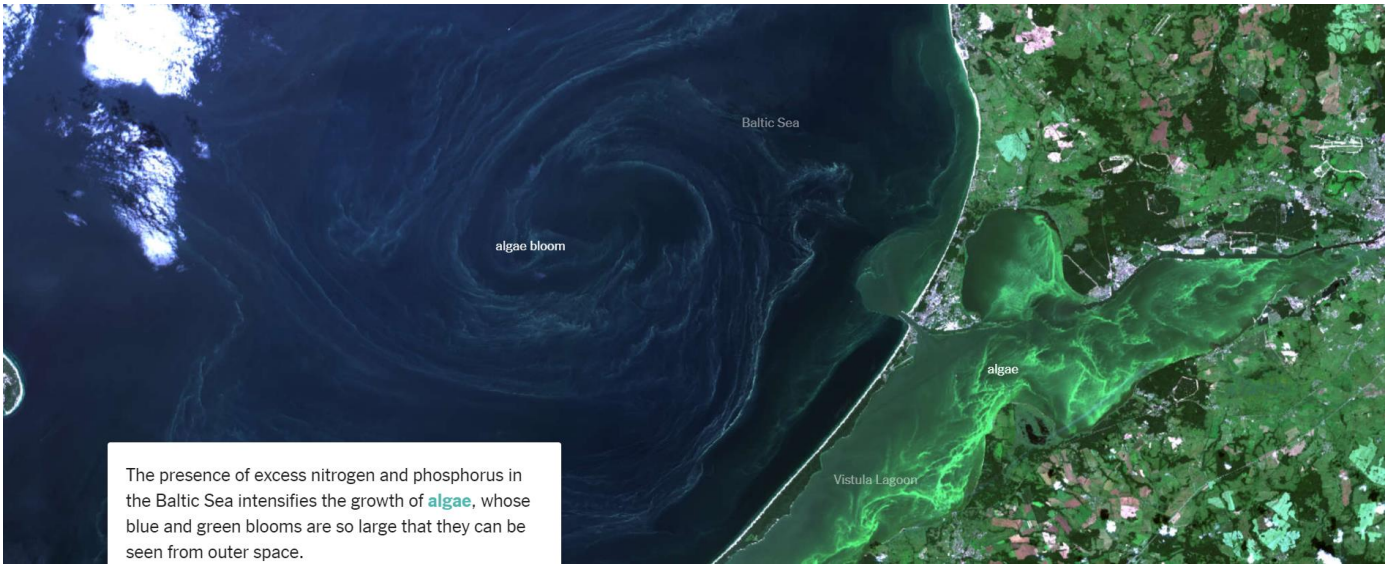
Poland has more farmland than any other country that borders the Baltic Sea. Many of its **big livestock farms** receive European Union subsidies that encourage production.



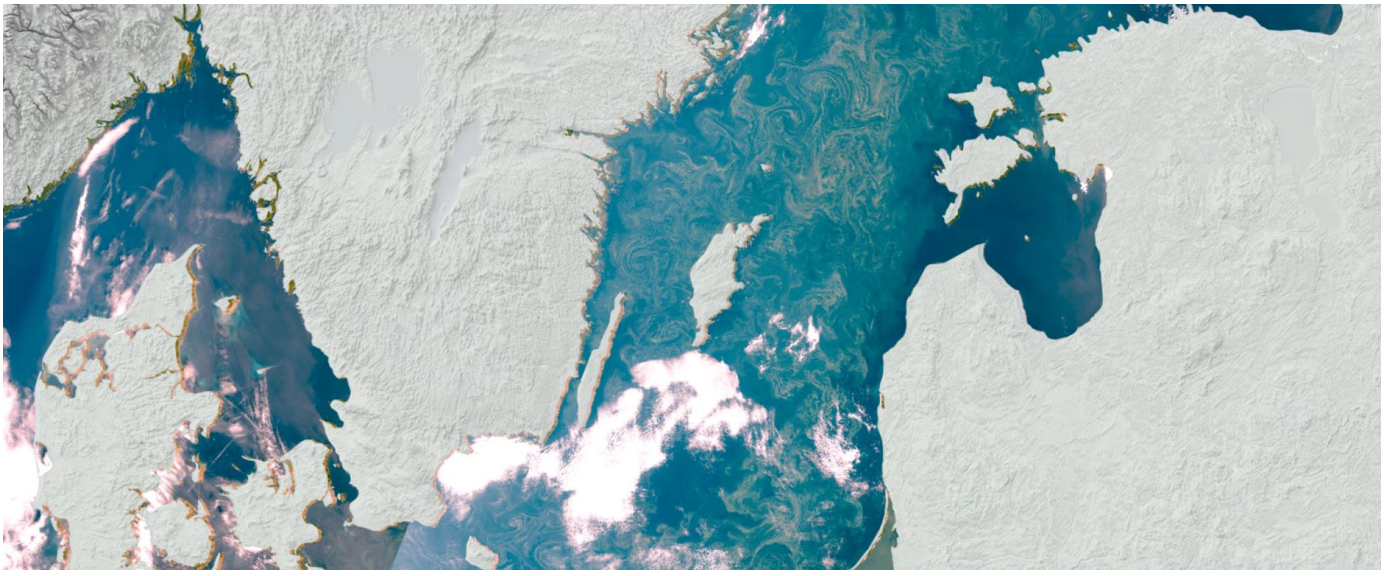
Many of Poland's waterways are polluted by nitrates that leach from the soil of nearby farms.

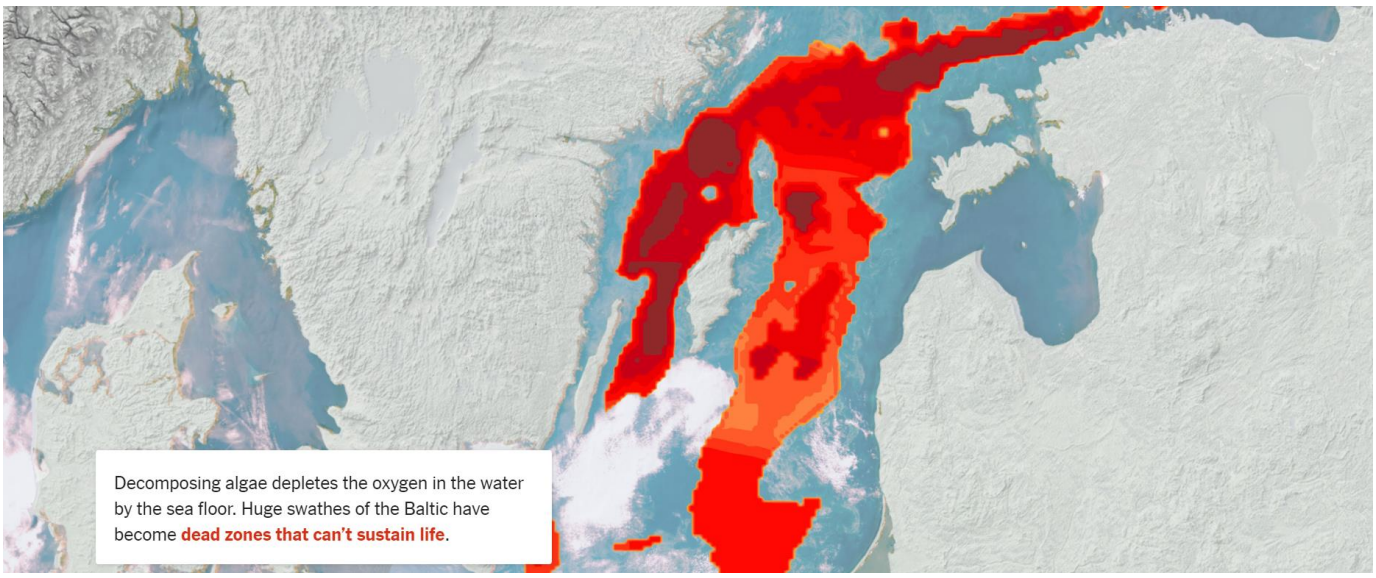


These waterways feed into two big rivers — the **Vistula** and **Oder**. The Vistula, the longest river in Poland, takes the nitrates north to the Baltic Sea.



The presence of excess nitrogen and phosphorus in the Baltic Sea intensifies the growth of **algae**, whose blue and green blooms are so large that they can be seen from outer space.





This month the European Commission president, Ursula von der Leyen, announced a "green deal" intended to make Europe the first climate-neutral continent by 2050.

"This is Europe's man-on-the-moon moment," she said.

To reach that moon, though, Europe must go through the farm — and for decades powerful interests who benefit from the subsidy program have fought to preserve the status quo.

Opposition is already gathering to the broader plan. Poland, heavily dependent on coal for power, has opted out of the deadline for being climate-neutral.

European officials have said for years that "greening" the farm bill would help reduce emissions, preserve grassland and save wildlife — ignoring internal auditors who found these efforts too vague and too modest. Years of scientific research and internal documents have shown the failures of those reforms.

Phil Hogan, who until recently was the European agricultural commissioner, said many had considered greening “the answer to all our prayers.”

“We now know it hasn’t worked,” Mr. Hogan said.

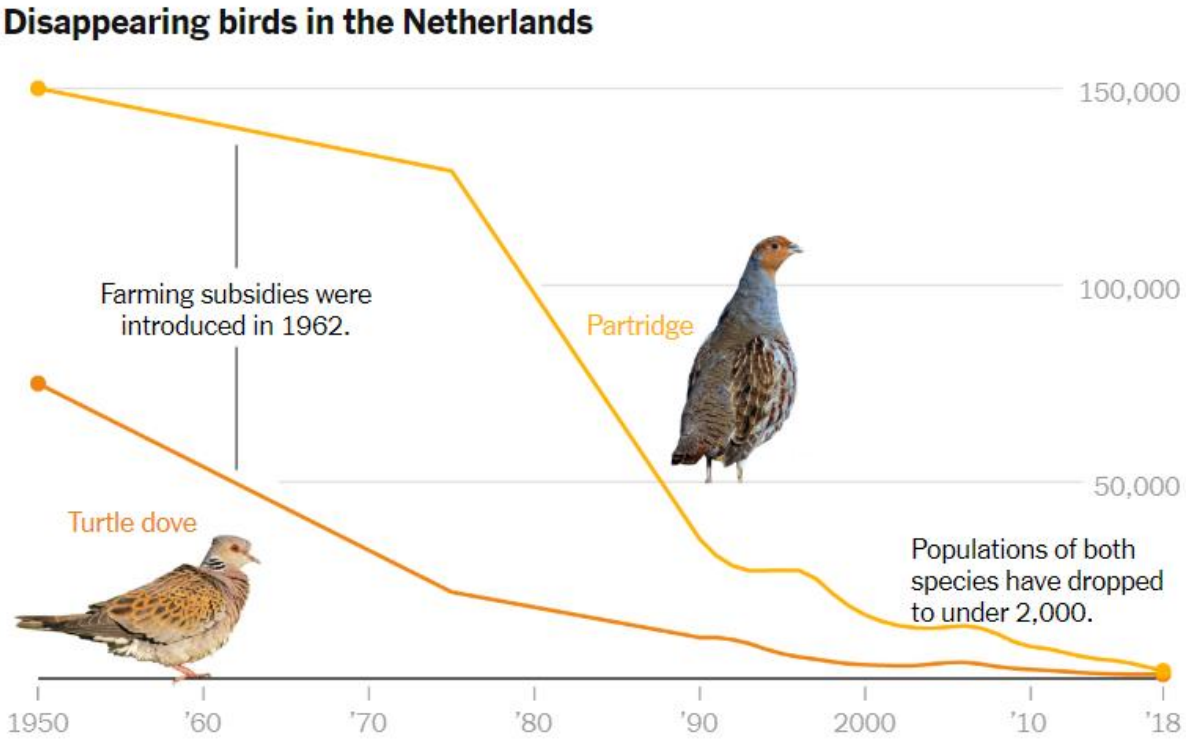
The question now is whether European policymakers are prepared to confront the contradictions in the farm program — or whether they will hide them from public view, as happened with the expunged map in 2017.

“That map said, ‘There’s a problem. Let’s look at how to solve the problem,’” said Faustine Bas-Defossez, an environmental activist who, on behalf of the European Environmental Bureau, attended the meeting at which the map was presented. “But they didn’t want to talk about it.”

NORTH BRABANT, NETHERLANDS — To assess Europe’s mounting biodiversity crisis, look to the gray partridge. If you can find one.

The chunky, shy farmland bird is what scientists call an indicator species, a sign of a healthy balance between humankind and nature. If the partridge population declined, say, 20 percent, scientists would grow alarmed.

Yet in less than three decades the partridge population in the Netherlands has fallen more than 90 percent. Britain has experienced similar declines.



Sources: Institute for Water and Wetland Research, Radboud University; Getty Images | Note: Bird populations before 1990 were estimated in 1950 and in 1975.

“We are talking about a collapse,” said Frans van Alebeek, an ecologist with BirdLife Netherlands, a wildlife protection group. “There are tipping points in ecology, where entire systems just suddenly collapse. I don’t know how much farther we can go.”

Today, European farms unfurl to the horizon like carpeting. But the vast beauty is misleading. Butterflies are vanishing and insects are dying off, threatening to unravel the food web that supports life.

Partridges were once ubiquitous, nesting in tall hedges where chicks fed on seeds and insects. But for years farmers have cleared more land to maximize profits and qualify for more subsidies, replacing hedges, flowers and tall grass with crops. The heavy use of fertilizer and pesticides has worsened soil contamination, leaving partridges and other birds without food.

Gray herons on a farm in the Dutch village of Almkerk, where ecologists are conducting an experiment to try to bring back wildlife. Andrea Mantovani for The New York Times

European Union officials have known for nearly two decades about the dire consequences of agricultural policy on wildlife. In 2004, scientists released two reports that blamed farm subsidies for a decline in bird populations and “severe adverse effects on farmland biodiversity.”

Internal reports were equally gloomy. A 2004 document predicted that farmland wildlife would decline once new European Union members became eligible for subsidies. Studies have shown those predictions to be correct.

Since then, conservation efforts have repeatedly been watered down. In 2006, most European Union countries endorsed a soil bill that could have benefited wildlife. But Britain, France and Germany led a minority coalition to block it.

Frans van Alebeek, an ecologist with BirdLife Netherlands. He and his colleagues rent small pieces of farmland in one of the most intensive farming regions in the Netherlands, and add hedges, flowers and other features. Andrea Mantovani for The New York Times

In 2011, the European bloc set a goal of halting and reversing species decline by 2020. To that end, European officials approved a policy requiring farmers to set aside small plots for grassland or hedges.

“Imagine being a bird here. Imagine being a butterfly here,” Mr. van Alebeek said. “There is no food for you. There is no coverage.” Andrea Mantovani for The New York Times

But under pressure from lobbyists, the law was changed to allow farmers to grow certain crops on these plots. Scientists say this loophole has gutted the policy, because farmers continued to harvest the conservation land — but European officials emphasized the policy's potential and hailed it as a success.

"In theory, a lot has been accomplished," said Ann van Doorn, an ecologist at Wageningen University in the Netherlands who has documented the links between farm subsidies and a decline in local bird and insect life. "In reality, it's so disappointing."

A few experiments offer hope.

Out in the agricultural flatlands, Mr. van Alebeek, the Dutch ecologist, is working with colleagues and local government officials to rent small portions of farmland in North Brabant, one of the most intensive farming regions in the Netherlands. They add hedges, flowers and other features.

In summer, these farms are distinguished by the colors and textures that break the monotony of row crops. In winter, the most noticeable difference is the birds. Crows, pheasants, pigeons and gulls dart across the sky or peck about the hedges.

Partridge populations on these farms have largely stabilized, Mr. van Alebeek said, while insect life has significantly increased.

It would take little from the farm budget to institute these kinds of changes across Europe, he said. Even so, the European Union is expected to fall well short of its biodiversity goals next year.

Its own report card recently found "no significant progress."

BRUSSELS — Late last year, European officials proposed dedicating 25 percent of future budgets toward fighting climate change, demonstrating their ambition to become a green superpower.

That might have forced a serious reconsideration of the farm subsidies that environmentalists say are most harmful to the environment. But things are not quite as they seem.

A pig farm in Brittany, France.Andrea Mantovani for The New York Times

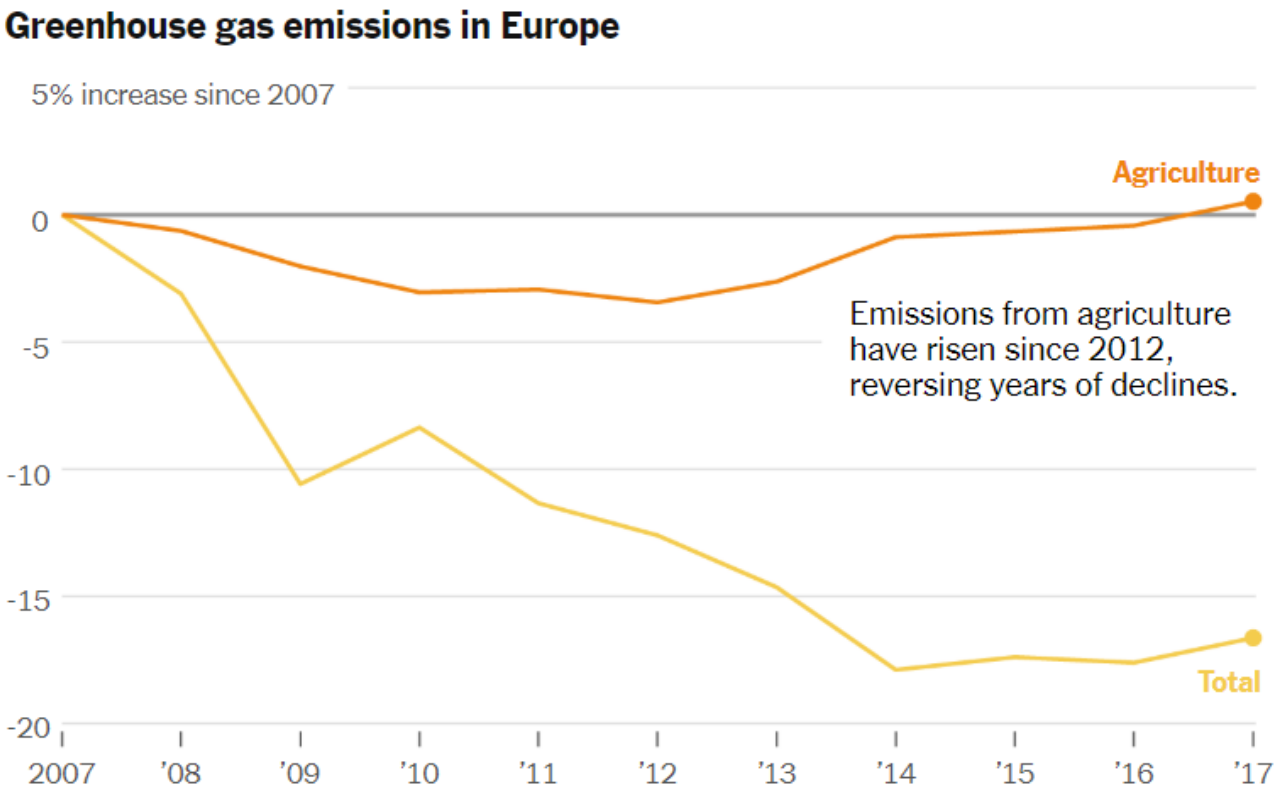
A farmer spreading manure slurry on a field in Poland in October. Laetitia Vancon for The New York Times

European officials have written the farm bill to automatically label a portion of the subsidies as addressing climate change. Auditors have criticized this accounting as unsound and unrealistic.

European leaders stand by their methods, but environmentalists call it “greenwashing” to avoid politically difficult changes.

What is undeniable is that greenhouse gas emissions from agriculture are rising, reversing years of declines, according to European Union data.

Farming accounts for about 10 percent of Europe’s greenhouse gas emissions. A significant share of the emissions comes from farm animals that digest their feed and burp out methane, a potent greenhouse gas. Fertilizers contribute by releasing nitrous oxide. And decaying manure releases methane and ammonia.



Source: Annual European Union greenhouse gas inventory 1990–2017 and inventory report 2019, European Environment Agency.

Some subsidies, like those that directly support livestock farming, are making things worse, according to a report prepared for the European Commission. It said that environmental measures in the farm bill were unlikely to significantly reduce emissions.

This was echoed by a damning progress report published this month that showed that the European Union will probably miss its emissions goals for 2050.

“Time is running out to come up with credible responses to bend the trend,” the European Environment Agency said.

Subkowy, a farming village in northern Poland. The entire country was designated a "nitrate-vulnerable" zone last year. Laetitia Vancon for The New York Times

The Vistula River estuary in Poland that connects with the Baltic Sea. Laetitia Vancon for The New York Times

Countries that try to cut farming emissions contend with fierce resistance. This year, Dutch lawmakers proposed halving the number of livestock in order to reduce emissions. Farmers responded by clogging the streets of The Hague with tractors, creating what some described as the worst rush hour in Dutch history.

“This is the reality we live in and in which decisions are made,” said Janez Potocnik, the former European environment commissioner who pushed unsuccessfully for tighter restrictions on methane and other pollutants. “I tried to make changes, and I was always told, ‘You can’t do this.’”

HILLION, FRANCE — Pierre Philippe’s fight began when people and animals started dying on the beaches of northwestern France.

A man’s body was pulled from a pile of green slime. A rider was discovered unconscious beside his dead horse. A beach worker slipped into a coma, and a jogger fatally collapsed.

The reason seemed obvious to Dr. Philippe, an emergency room doctor. Every summer, algae coats the Brittany beaches with bright green slime. As it decomposes, it gives off hydrogen sulfide, a toxic gas that can kill in seconds.

Dr. Philippe tried for years to persuade government health officials to acknowledge the threat, or even discuss it. They refused. “If they recognize the problem, they also indirectly admit responsibility,” he said. “And they know that.”

That’s because talking about the algae meant talking about farming.

The daily collection of green algae from a closed beach in Brittany in July. Andrea Mantovani for The New York Times

André Ollivro remembers asking local health officials about the algae more than a decade ago. Andrea Mantovani for The New York Times

Brittany produces more than half of France's pork and a quarter of its dairy cattle. Livestock manure is spread onto the wheat and cornfields, which exist almost solely to feed the animals. That has left Brittany with France's largest concentration of nitrogen.

Those nitrates are food for green algae: Runoff from regional farms contaminates seawater and contributes to ever bigger algal blooms.

André Ollivro, who owns a bayside cottage, remembers asking health officials about it more than a decade ago. "Kids were playing near the algae and they were getting sick," said Mr. Ollivro, 74. "They were dizzy, feeling nauseous." Soon, the rotting heaps were so high that they blocked access to the beach.

Government officials told him that he and his neighbors were to blame. "They said it was from washing machines, phosphates from the laundry," he said.

Edwige Kerbouriou, a representative of Brittany's agricultural chamber, acknowledged that, for years, officials and farmers did not accept any link between agricultural practices and the green glop washing ashore.

Years of lawsuits and political pressure have forced lawmakers and industry leaders to acknowledge the connection. Tougher nitrate laws have forced changes in fertilization practices, and nitrate runoff has declined. But pollution levels remain high, and most of the region's bays are not on track to meet environmental targets, officials said.

In Brittany, lawsuits and political pressure have forced lawmakers and industry leaders to acknowledge the link between agriculture and toxic algae. Andrea Mantovani for The New York Times

André Pochon, a farmer who witnessed the agricultural development of Brittany, started a petition for sustainable agriculture approaches. Andrea Mantovani for The New York Times

European environmental officials say that addressing nitrate pollution will probably require farmers to make new investments and accept lower production levels. Farmers have said they will not accept regulations that cut into their profits.

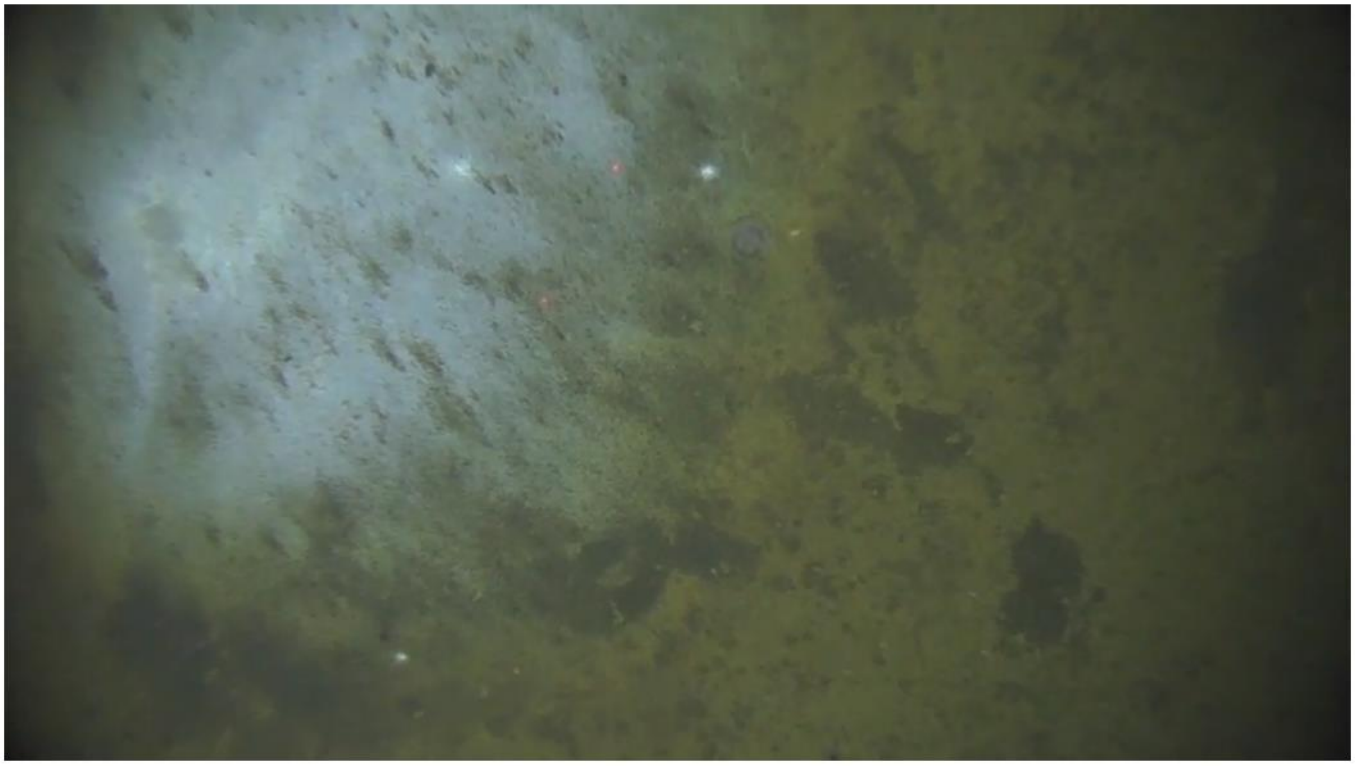
For now, officials in Brittany dispatch backhoes to haul away algae before it can rot and become toxic. And when the problem becomes overwhelming, as it did during a particularly bad summer this year, officials fence off the beaches and post warning signs.

ON THE BALTIC SEA — One morning in November, Daniel Rak, a seasick oceanographer, watched as his colleagues on the research ship *Oceania* lowered cameras and a sensor to the floor of the Baltic Sea.

When the instruments resurfaced, Mr. Rak ducked into an onboard laboratory and confirmed his suspicions: The seafloor did not have enough oxygen to support life. His ship was in a dead zone.

The cameras revealed a barren landscape. There were no worms, no clams and no molluscs.

“They all need oxygen, and they are gone,” he said.



Underwater cameras revealed the barren landscape in parts of the Baltic Sea. Only bacterial colonies can survive there without oxygen. Kajetan Deja, The Institute of Oceanology of the Polish Academy of Sciences

The only signs of life were colonies of luminous bacteria that thrive without oxygen. A scoop of dirt from the seafloor smelled like a thousand rotten eggs.

The Baltic, often compared to a bathtub with stale water, is one of the world's most polluted seas. Things were worse in the 1970s when cities like St. Petersburg, Russia, dumped their wastewater directly into it. Even so, the concentration of nitrogen and phosphorus in some basins of the sea has increased in recent years.

It may take nearly 200 years before parts of the Baltic Sea are restored to a healthy status, according to the European Environment Agency.

Poland, the Baltic's biggest polluter, is also the fifth biggest recipient of European subsidy money, after France, Spain, Germany and Italy. Polish officials deny any correlation, and the country's deputy minister of agriculture, Ryszard Zarudzki, said that the subsidies "impose on the farmers legal obligation to comply with environmental standards."

Six years ago, the European Commission took Poland to court, saying that it was not doing enough to limit nitrate pollution. Polish officials say that the country is unfairly singled out and note that it uses less fertilizer per acre than richer nations like Denmark and Sweden.

The Kacza River estuary in the Baltic Sea near Gdansk, Poland. Andrea Mantovani for The New York Times

Kajetan Deja operating an underwater camera onboard the Oceania research vessel. Andrea Mantovani for The New York Times

But more recently, Poland's government has began taking action. Last year, the government declared the entire country a "nitrate-vulnerable" zone and acknowledged that farms were polluting Poland's water.

A new directive limited how much fertilizers farmers can use and when they can use it. Farmers are now required to store manure and slurry in leakproof silos for half the year.

The new policies have not impressed farmers in Greater Poland Province, which has a large number of livestock farms. Several criticized the requirements as bureaucratic intrusions from Brussels — and a plot to undermine Poland's competitive advantage.

"I think we surprised Brussels, because we were supposed to be consumers and not producers," said Elzbieta Bagrowska, a 60-year-old farmer who raises dairy cows and worries that the new rules will reduce Poland's output. "It may lead to Poles eating Argentine beef and drinking Irish milk," she said.

For decades, the European Union wanted to produce ever more food and profits. Today, it wants to encourage environmental reform. So far, doing both at the same time has proved impossible.

"If you are rewarded for destroying the environment, you will destroy it," said Mr. Potocnik, the former European environmental commissioner. "Because why the hell not."

The Baltic is one of the most polluted seas in the world. Andrea Mantovani for The New York Times

More on the E.U.'s troubled farm payments

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[Who Keeps Europe's Farm Billions Flowing? Often, Those Who Benefit]

[E.U. Defends Farm Subsidy Program Exploited by Autocrats]

Sources: European Union Water Framework Directive; Water Information System for Europe; algae satellite image from Sentinel-3 and Sentinel Vision Portal; oxygen data from the Finnish Environment Institute and the Swedish Meteorological and Hydrological Institute; The European Pollutant Release and Transfer Register (livestock farm data); Institute for Water and Wetland Research, Radboud University; Annual European Union greenhouse gas inventory 1990–2017 and inventory report 2019, European Environment Agency; The Institute of Oceanology of the Polish Academy of Sciences; Common Agricultural Policy Regionalized Impact modeling system (data extracted by Torbjorn Jansson, at the Swedish University of Agricultural Sciences); Getty Images

Milan Schreuer contributed reporting from Hillion, France, and Joanna Berendt from Sopot, Poland.