

INTRODUCTION

The soil seems to be inexhaustible. It is just there, beneath our feet. Under the fields, grass and trees. We live on and from the soil, but we pay it scant attention. A few wine lovers say that each soil has its own bouquet, but how many of us can actually taste it? When we sit down to dine, who thinks of the soil where most of our food grows?

It is important to do exactly that. Soils are the basis of our food production. They supply plants with nutrients and water. Those nutrients are an ingredient in every potato, every loaf of bread, every grain of rice and every plate of cornmeal we eat – and in every pork chop and roast chicken too. Without healthy soils, it is not possible to produce healthy food.

But soils do not just produce food: they do many other things too. They filter rainwater and turn it into clean drinking water. They regulate the climate, for after the oceans, the soil is the world's largest carbon sink: it stores more carbon than all the world's forests put together. And soils are teeming with life! A handful of earth contains more organisms than the planet's entire human population. Two-thirds of all species live hidden below the surface.

The international community has set itself three important goals: to stop the loss of biodiversity, keep global warming to 2° Celsius, and ensure everyone has the right to adequate food. Without fertile soil, none of these objectives will be achieved. For the soil can do its job only if the life it contains is intact, the humus layer is healthy, and land rights are protected. Despite the vital functions it performs, we fail to protect the soil. Through misuse, we lose something like 24 billion tonnes of fertile soil every year.

There are various reasons for this loss. Cities and roads are spreading. Asphalt and concrete seal the surface and damage fertile soil irreparably. A falling population does not stop the damage: in Germany, 77 hectares of soil lose some or all of their functions every day. That is the size of 100 football pitches that are no longer available to grow food. Farming, which is so dependent on the quality of the soil, bears its share of the blame.

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Heavy tractors compact the ground; pesticides and fertilizers decimate soil organisms; wind and water carry away fertile earth.

We are using the world's soils as if they were inexhaustible, continually withdrawing from an account, but never paying in. For it takes several thousand years to build a thin layer of fertile topsoil, but only an hour of heavy rain to lose it. From a human time perspective, soils are a non-renewable resource.

That is not all. Around the world, access to land is very unevenly distributed. Landless rural people and those who farm tiny plots find it hard to feed themselves. The average European needs 1.3 hectares – two football pitches – to produce all of the food and other products he or she consumes each year. That is about six times more than is available to each Bangladeshi. Almost 60 percent of the area consumed by Europeans lies outside the European Union.

Global demand for food, fodder and biofuels is on the rise. So too are land prices. In many regions, the struggle for secure land rights is a struggle for survival for individuals and communities. The global

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significance of soils demands global responses – responses that take the human rights of land users seriously. Yet opposition from Germany sank a proposal for a common European policy for protecting the soil. Timid reforms to the Common Agricultural Policy show how difficult it is to change existing structures and to promote sustainable, equitable production methods.

2015 is the International Year of Soils. In this year, the United Nations wants to further the goal of soil protection. This Soil Atlas shows what can succeed and why the soil should concern us all. We need to fight for a just and sustainable soil and land policy. And when we are doing our weekly shopping, perhaps we need to think a little about what we can do to conserve the soil on which we depend.

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