

CGC1P – Unit 3 Lesson 1

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The ecological footprint is a very simple tool to tell us how much nature do we have, how much do we use. If we divide the planet's ecological capacity by the number of people what we get is about 2 hectares per person. Then we can compare that area with the area necessary for us to produce food, fibres, absorb CO₂, host our infrastructure. And when we add it up, for example in the United States, it adds up to roughly 9 to 10 hectares of ecological capacity to provide for an average American. That means that if everyone lived like an American, it would take about six planets. But we only have one! And some of it we should leave for other species.

Now world-wide we already use 20% more than what nature can regenerate every year. That means every year, we use what nature takes one year and about two and a bit more months to regenerate. So overall, we are running on ecological debt.

The footprint helps us to preserve our ecological assets, by being a way of being able to keep our books, to make sure that what we spend ecologically does not exceed what we earn. Now we have no books. Any company that doesn't have its books will go bankrupt over time. And that's what we are preparing for ecologically. Without books for our ecological resources we will continue to spend more than what we get from nature, thereby liquidating our assets. We need to protect our assets. That's at the core of sustainability. The ecological footprint helps us to do that.

What about the ecological footprint of cities?

A huge part of our resources are spent in cities. The way we build our cities determines how much we'll use cars or public transportation, how big the houses are, how well they are insulated. A lot of it is organized through local planning and the way we set our standards in cities. That's a big opportunity for cities because cities also spend a lot on building their infrastructure, so at the same time that we can make our cities much more ecologically effective we can also reap some of the benefits locally again.

The ecological footprint can be a very useful tool to monitor whether we actually move in the right direction, because it helps us to analyze or to summarize how we draw on nature in a simple comprehensive format. Similar to the GDP, the Gross Domestic Product that helps us to find out how much money is changing hands in the economy - very useful in order to look at the health of an economy - we also need to look at the ecological footprint to look at the health of the ecosystem services that support our economy. That we can do not only at the national level or the global level, we can also do it at the city level or even at the individual level. When cities start to measure their own ecological footprint, they have a comprehensive tool to see whether actually they're moving in the right direction.

Are most cities running ecological deficits?

Presumably footprint analysis shows that most cities are way ecologically unsustainable at the moment. Is that true? Obviously cities on their own have a hard time to be sustainable. For example when we analyze Paris, we found that the area supporting Paris is about 300 times larger than Paris itself! Now is that a problem? If there are 300 Paris areas available to support Paris, obviously not. But we are in a world that is ecologically constrained. Already today we use 20% more than Earth can regenerate.

So cities is really where the action happens, where we have to find out how can we use city structures more effectively so all people can live well within the limited capacity that we have, now roughly 2 hectares of ecological capacity per person world-wide. How can we build cities that can operate on that budget? That's the big challenge and that's where we can make a huge contribution.