

# Limits? What Limits?

## The Difficult 3<sup>rd</sup> Ethic of Permaculture

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Permaculture is often seen as no more than a clever way of gardening or ecological farming. But there is a lot more to it than mouldy carpets on allotment sites: it is a design science that can guide everyday and strategic decisions informed by ecosystem understanding. Understanding the natural laws and patterns operating in the world is fundamental to integrating ourselves into the planetary system we depend upon. Such patterns apply not only to bacteria, fungi, plants, animals and the ecosystems they make up. They are equally applicable and discernible in the human realm, in our interactions with each other and the world around us. People are never separate from nature, never operating outside its laws.

At the core of permaculture lies a triple bottom line: the ethics. Two of them, Earth Care and People Care, both seem logical, self-explanatory and are hardly contested within permaculture circles. In contrast, the third ethic is variously expressed as 'Fair Share', 'Limiting Resource Use & Population', 'Limiting Population and Consumption', 'Redistribute Surplus', 'Living within Limits' and so on. Although there is a large overlap between many of these expressions, it leaves this area ill-defined and open to interpretations which are in some cases mutually exclusive.

My feeling is that one reason for this lack of clarity is the embarrassment of many people to use the original phrasing "setting limits to populations", which for many has overtones of genocide, eugenics and discussion about worthy and unworthy lives. It has also aroused antagonism from campaigners for global justice, especially for the rights of migrants.

If in doubt, it is always worth going back to the original text. In the *Permaculture Designers Manual* Mollison sets out the following ethics:

1. Care of the Earth: Provision for all life systems to continue and multiply.
2. Care of People: Provision for people to access those resources necessary to their existence.
3. Setting Limits to populations and consumption: by governing our own needs, we can set resources aside to further the above principles.

This puts the population issue into context and places responsibility on the individual. Unfortunately this subtlety is lost in the abbreviation of the phrase.

The popular rephrasing to 'Fair Shares' was first coined by Danish permaculture pioneer Tony Andersen in the early 1980s. It avoids the uncomfortable discussion about limits, but does not solve it – while abbreviating "redistribute surplus" adequately, it leaves out entirely the crucial concept of limits encapsulated in the third ethic. I believe that 'Fair Shares' arose from a genuine interest in highlighting the social component of permaculture in practice. A part of the success of the phrase is probably how easy it rolls off the tongue – but this advantage disappears in different languages. Precision has been exchanged for easy digestion.

In the phrasing, "Limiting population and consumption" both aspects are given equal weight, and 'consumption' does not distinguish between overall and individual consumption. From an ecological perspective, population is one of (at least) three variables determining overall resource use – number of individuals, individual consumption and efficiency of resource use. The ecological crisis is in its essence one of consumption and pollution (wasted resources).

### **Living within Limits – the ecological imperative**

Understanding limits is fundamental to finding our place in the global ecological web. It may help to look closely at the term 'carrying capacity' which is defined by ecologists as

*"the population size of a given species that the environment can sustain in the long term, given the food, habitat, water and other necessities available in the environment".<sup>1</sup>*

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<sup>1</sup> Definitions of carrying capacity differ according to author and subject. Here I go with the wisdom of the crowd, citing [www.wikipedia.org](http://www.wikipedia.org)

In terms of resource use, carrying capacity is reached when the resources used by one species are equal to the resources available. As soon as resource use approaches carrying capacity, population growth slows down. Whenever it rises above carrying capacity, resources run low and/or the parent ecosystem degrades, with negative long-term effects for the species in question, and of course other species. What usually happens is that this “overshoot” is corrected by death rates rising above birth rates, and the number of individuals sinks back below carrying capacity.

As animals with a choice, we have the understandable desire to live above mere subsistence level. How far above this level we find ourselves varies widely, by birth much more than by choice. Even underprivileged Westerners are likely to have a higher consumption rate than relatively well-off inhabitants of the majority world. Keeping global human resource use below carrying capacity could be termed the *ecological challenge* within permaculture ethics. ‘Ecological Footprinting’ applies this idea by attempting to set an average level of individual resource use that is sustainable, i.e. close to or, better, below carrying capacity. This average footprint is dependent on the total population figure – if the number rises from 7 to 10 billion there will be less to go round between us. And the ‘safe limit’ of variously three, two or one billion people assumes a current average Western lifestyle as the unquestioned baseline.

### **The individual factor – towards fair shares?**

Unlike most other animals, we humans have created complex social hierarchies resulting in large differences in individual consumption. As an overall guide we can state that individual consumption is roughly proportional to position in the global economic hierarchy. On a world-wide scale, the majority of nearly seven billion people are living below the one-planet footprint. Of those who live above it, there is still a massive range from the urban working class in the global North to the Gates, Abramovichs and royals of this world. In fact, the top 1% of the global population consumes easily 1,000 times their ‘Fair Share’ of planetary resources. (Fig.1)

Figure 1: One-planet Footprint

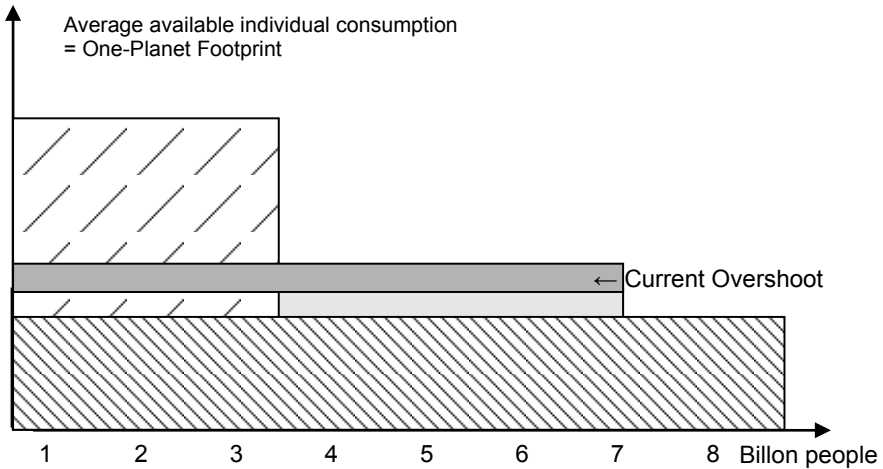


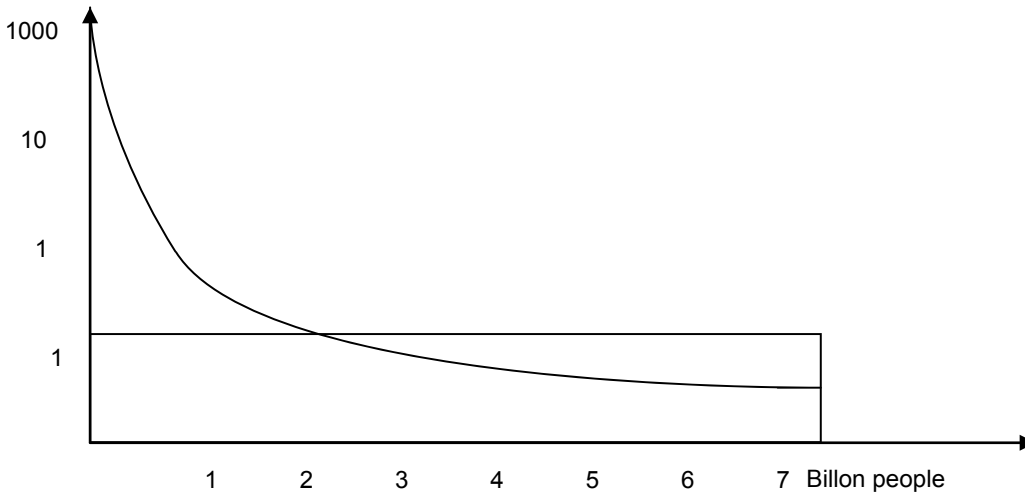
Figure 1: The area within each grey rectangle is equal – reflecting equal total resource use for different numbers of individuals. In other words, the amount of resources available to every one of us depends on how many of us there are. The planet might be able to deal with only two or three billion people living the lifestyle of middle-class Westerners. A world with more of us might still be sustainable, but we all would have to consume fewer resources. As it is, humanity already overshoots its ecological limits by a fair stretch – as symbolised by the dark rectangle. (Please note that this is a simplistic globalised picture, disregarding regional differences in carrying capacity. For more detail on this, see below.

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The theoretical one-planet footprint appears again in figure 2, this time overlaid with the actual distribution of individual consumption.

In addition, much of the resource use of the global North is externalised to other regions of the world, damaging or destroying ecosystems the consumers don't directly depend upon and reducing the carrying capacity of those regions in a way indigenous consumption would not. Bluntly put, and in direct contradiction to the tabloid perspective, it's over-consumption in the North, not over-population in the South that's the bigger problem.

Figure 2: Distribution of individual resource use<sup>2</sup>



All this suggests that:

- a) Reducing population numbers in the global South is completely ineffective, or else advocating mass extinction or genocide at the lower end of consumption. Here are the people who are much less implicated in unsustainable resource use on a global scale.
- b) The greatest scope in reducing resource use lies at the upper end of the scale. Reducing population figures at the top end (let's say, somewhat arbitrarily, above 10 personal footprints) would be much more effective. Due to the power concentrated in this section, this is unlikely to happen without great and violent resistance.
- c) Reducing individual consumption in the high-consumption quarter therefore appears to be the most viable strategy for achieving sustainable levels of global consumption. This of course is naïve and simplistic, as we are alienated producers as well as consumers. Reducing consumption must therefore go hand in hand with recreating patterns of self-empowered, self-directed production and reproduction of society. In other words, 'Fair Shares' as a *social imperative* need to cover resources, labour and surplus.

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<sup>2</sup> This is an extremely crude and imprecise representation.

d) If consumption in the rich quarter is successfully brought down to one-planet level, there is scope for a moderate expansion of the global population and to increase resource use in the lower half. This necessity points to the 'Fair Share' ethic, the *behavioural challenge* contained within permaculture ethics.

A political conclusion may be to demand institution of a *maximum income* as well as a minimum one, which would go a long way to reduce the resource gap between rich and poor. Interestingly, Plaid Cymru included this demand in their campaigning platform for the last general election. This might be an economic mechanism to make one-planet behaviour more likely.

### **More is different, or how much space is enough?**

We have to acknowledge that 'more is different' especially so when talking about population figures. In other words, it's not as simple as saying that double the number of people have half the amounts of resources each available to them. Sheer numbers of us can push out other species and degrade ecosystems, although we know little about where exactly that threshold lies. Pressures on biodiversity, regional water use etc. probably mean that in some parts of the world resource use needs to be below the arithmetical average for one-planet living, whereas other regions (not least Britain) are fortunate to offer above-average conditions for existence. This engenders difficult debates about what a locally acceptable population limit may be, how to redistribute resources to make sustainable living in different areas possible. It also means accepting that 'everybody is equal' only to the extent that everybody's basic needs must be met – how these needs are met has to vary according to regional conditions, and regional cultures are often an expression of these differences. However, intelligent application of ecosystem thinking can increase local carrying capacity, not only for humans but for a wide variety of species, and this may be a good avenue for the redistribution of surplus created elsewhere.

In its original reading 'Fair Shares' is also meant to include fairness between humanity and other species. This leads back to the ecological imperative mentioned earlier – nature has a way of reigning in species that overshoot their carrying capacity at the expense of others. In this reading, fair shares in the short term are no more than self-interested self-preservation in the long term.

As mentioned before, regions vary greatly in their ecosystem carrying capacity. 'Fair Shares' here means responsibility to support more sparing resource use in fragile ecosystems, to accommodate people in more abundant regions, to increase ecosystem stability and abundance where necessary.

## **The efficiency factor**

What does efficiency mean in ecological terms? One measure could be: how much are our human processes integrated into the bio-geochemical processes of the planet? Permaculture as a practical branch of the new biospheric sciences attempts to maximise humanity's integration with the pre-existing natural world and its self-regulatory mechanisms. Our challenge is to become very good at it, to increase our understanding of how ecosystem processes function and how we can usefully contribute to and integrate with them, rather than parasitically exploit them. This is the *design challenge* inherent in all permaculture activity.

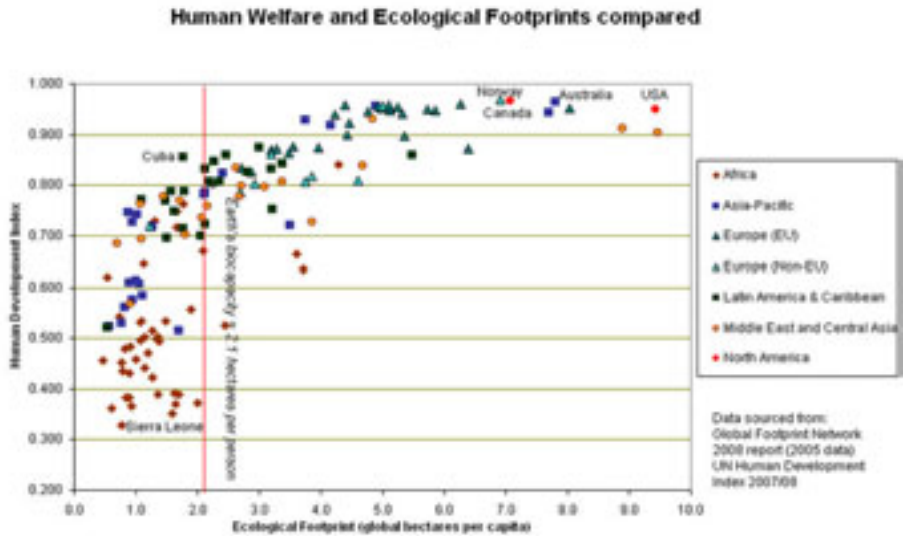
It has been rightly pointed out that increased efficiency alone does not necessarily lower overall resource use, as it may simply free them up to be wasted elsewhere. If we are better integrated into the biospheric processes this may matter somewhat less.

Do people in rich countries have an advantage in terms of efficient resource use, as they have better access to energy saving technology? If they do, this is probably more than balanced by access to energy wasting technologies, as long as there is no strong cultural bias towards energy saving. In our culture, access to efficiency goes hand in hand with access to profligacy.

## **People Care**

The three ethics of 'Living within Limits', 'Earth Care' and 'Fair Share' can thus be directly derived from ecological reasoning. The fourth ethic, People Care, is largely contained within the first three – caring for future generations follows from living within limits, caring for people all over the world from accepting and responding to regional differences, limiting and redistributing consumption patterns. Caring for neighbours, friends, family and self makes ecological sense as we and our immediate associates are the key resource in our lives.

People Care is in essence about the quality of human life. This has much less to do with the amount of resources we use than we are led to believe. Figure 4 makes this clear – countries high up on the ‘human welfare index’ range in their (average per capita) ecological footprint from under one planet's worth to near five planets. Perhaps the most important aspect of life quality is the relationships we allow to flourish among ourselves, and this is a quality hard to quantify and therefore usually absent in the league tables of societies.



## The end of the beginning

At the end of this stage of my own exploration I see the three ethics of Earth Care, People Care and Fair Shares underpinned by Living within Limits as the ecological imperative. Contained within them are four challenges:

- The *ecological imperative* of keeping resource use within carrying capacity.
- The *social challenge* of creating equitable patterns of labour, production and the sharing of surplus.
- The *behavioural challenge* to the rich of the world (which probably includes you, the reader) of reducing their consumption.
- The *design challenge* of integrating human activity into the processes of the living earth.



In practice, these ethics can guide strategic and everyday decisions. These ethics are like a compass, guiding us towards a world in which we care for ourselves, other people and future generations, and the earth that sustains us. Any decisions and plans can be tested against them. Without them, permaculture would be no more than clever design, to be used or abused at will.

This has been a very short and incomplete exploration of the subject – other variables such as the age ‘crisis’ (opportunity) in the global North, dropping birth rates and reasons for them have not been discussed here. Some of these subjects are discussed elsewhere in these pages. I don’t claim to have a complete understanding of the whole complexity of this issue. I do have great curiosity for other views on this subject though, so please respond with your own thoughts.

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