

## Permaculture – Outside In

By Graham Bell

It was 1988. I attended a Permaculture Course in Devon. We went to a fundraiser in a village hall in the wilds of Exmoor – as close as you can get to Scotland when in Southern England. The folks behind it were raising money to pay for a Landrover, so that when they went on a Rainforest regeneration project in Cameroon, they'd be able to get about. And then some woman stood up and gave us a rousing talk about Deep Ecology, the gist of which is that we weren't half as close to the core of all things as she was.

Sometimes its easier to say what Permaculture isn't than what it is.

Twenty years is a long time to be angry about such misconceptions. But I have been. And that anger has driven me to find solutions. And that's what Permaculture is. A framework that's accessible to anyone. An infinitely adaptable solution. An ego-free way to work that resists the attempts of every ego to purloin it. A learning process. A design system. The last is the most radical statement. Permaculture. That is: Perm-anent (Agri)culture. It is a solution carved from the wit and intelligence of many thousands of people, which suggests we can actively design the way we live to tread lightly on the planet and yet meet all our human needs.

The arrogance of those young men (we need a Landrover- and we'll show these Africans how to do it) and that young woman (I'm more in touch with ecology than you) are symptomatic of our native disconnection from the source of all bounty – the natural world. We still talk about 'going outside' as if our natural environment is 'indoors'. Yet everything we have, every tool, habiliment, source of food and drink, stems from that real natural environment – 'outside'. The true nature of 'deep ecology' (and who needs a hierarchy of righteousness anyway) is to absorb the lessons of the natural world ('outside') into our hearts and souls ('in'), and neither I nor anyone else is capable of telling you how to do that. Only you can drive that discovery. The last thing Permaculture is, is a religion or belief system. It's about practical solutions to human needs, and that's compatible with any cultural background.

Permaculture proposes that if we *did* less we'd *have* more. That the solution to meeting human needs is to minimise waste and to maximise output. And that the solution to this conundrum is to **think** about what we do and how we use our resources. Thus: pollution is not an absolute it is simply a matter of placement. The waste from one process is actually the input of another. If you direct your outputs to the processes that need them as inputs then we have no pollution. Example 1: a natural forest doesn't build compost heaps. It allows the leaffall and the fallen trunks of trees to rot and build the soil. Check out those fantastic maps of the Soil Survey. Scotland's fertility is built on brown forest soils – millennia of natural decomposition adding humus to the mineral fraction of the underlying rock we know as soil, giving feed to and feeding upon the living biota of the earth. The result of the aforementioned process continuing since the Ice Ages. Example 2: Coal fired power stations pollute through their flue gasses. These are actually rich in sulphur dioxide

(terrible isn't it – prime cause of acid rain?). Well, no, just a useful input being wasted. Put electrostatic scrubbers in the chimneys and you can extract the prime ingredient of sulphur as gypsum, best known as what makes plasterboard. Dead useful building material.

Permaculture people are used to learning and understanding these kinds of solutions. The world is not a problem it's an opportunity. Nature is our model. What would Scotland be if we left it alone? Climax forest, varying according to place – ash on the wet, limey soils of Dumfries & Galloway, birch on Highland carr, pine in the Highlands proper, oak in the Borders etc. That's where you guys come in. Want to reforest Scotland? Then just walk away and let it be. Want to still live here but have the best compromise you can? Then check out Permaculture. What is Permaculture? Well it's certainly not something you do. If anything, it's what you don't do. If you accept it then it defines your life. Dangerous ground folks, because find out about it and you'll never go back. It is the inescapable logic of observing and learning from nature and then designing processes for managing all of our human needs that operate on the same principles. Scary – and utterly satisfying.

It occurs in three forms: people who are doing it but don't know the word, people who are doing it but say they aren't, and people consciously endeavouring to do it. There is no complete Permaculture. It is a process. Item 2 in what it isn't: it isn't organic gardening. Because the understanding that gave birth to the concept came from looking at systems to provide food, fuel and fibre which were in harmony with natural systems, rather than destructive of them Permaculture was born as 'Permanent Agriculture. And so most people's introduction was through growing fruit and vegetables. As time went by it became clear that ecological solutions to human occupation of the planet require understanding of every aspect of life, from construction through energy management to transport and money management. All of these processes have the power to harm, preserve or better still, enrich our environment.

Discovered (well you can't invent nature) by Bill Mollison and David Holmgren in Tasmania back in the seventies Permaculture isn't about techniques at all. It's about how you see things and how you consciously plan and design life support systems for society. It's unashamedly humano-centric in the sense that we recognise we're designing for human needs, but it's also rooted in the biological imperative of polyculture and so respectful of all life forms.

There are lots of one sentence definitions: 'global revolution disguised as gardening', came from that misconception mentioned earlier. I like 'Designing in five dimensions – the three of physical space, add time and relationships.' It's not the number of elements in your polyculture that create yield, it's the relationships between them, and the ability to exploit them whilst maintaining the fertility of the original system. Even organic agriculture is short on aspects of this dimensionality. Whilst soil building brings in the vertical dimension so missing in chemical agriculture, it propounds fallow (bare land is not what nature chooses) and tends to separate arable/livestock/woodland into blocks, when together they can create more yield for less work.

On the other hand a wild forest is a perfect model for study. Don't get too excited. The nearest real one is in Slovenia. But let's take the remnant Caledonian Pine Forest at Rothiemurchus as an example. There are climax trees (pines) sub-climax trees (birch and rowan) shrub layer (juniper, whins, broom) pioneer species (the legumes again, docken). Lack of natural regeneration led to experimentation with livestock and it was found that deer cattle and now pigs were beneficial to enabling seed to germinate through their natural screening action. There are wetland adapted plants. There's an amazing wealth of fungi. Whilst the species range is limited (to organisms that thrive in that particular range of soil conditions and climate) so it is in any location. The fertility of the systems comes from how the individual species contribute to overall patterns of growth, decay and renewal. It isn't all climax trees. There are plenty of open clearings offering opportunities for grazing and for new growth. Bracken restores depleted potassium levels. Legumes build nitrogen. *Sphagnum* and *Juncus* build organic soil content. No-one rakes up the detritus, everything is feeding on the next organism in the chain. Fungi create living processes in the soil to break down nutrients and make them available.

What happens if you copy that model in a garden? You might have climax nut trees, understorey apples and pears, a shrub layer of currants, a herb layer of cut and come again salads. Call-ducks might free-range and keep down slug populations. You might have an area for chickens or pigs. Their ability to free-range (or not) would depend on how much land you had available. If penned then part of your crops would be feed for them (e.g. comfrey, artichokes), You would encourage fungi, legumes and green manures. You might keep some clearings for dug crops such as beans, potatoes, brassicas, carrots and onions. We might practice mulching to suppress weeds, maintain water levels and feed the soil.

In Permaculture we observe before we act. Then we act as little as we need to. It's the living practice of 'ahimsa' Ghandi's favourite word, often translated inaccurately as 'non-violence' but perhaps more correctly as 'constructive harmlessness'. In a simple example: why cut fence posts on a saw mill, when they're stronger if you rive them along the grain? Why treat them with chemicals when charring the point in the ashes of a fire creates rot resistance in the ground? In fairness I suspect very little of this 'wisdom' is new to the average Reforesting Scotland buff. You will know and practice many aspects of Permaculture already. The beauty of the subject is that it gives you an in-depth framework and a knowledge community to pursue these ideals in a structured way. Although the structure may like as not be fractal and random in the true way of natural forms, and the knowledge and understanding will never stop coming in every eclectic way you can imagine. Just like wilderness forests really.

At the end of the day you might just say this is all common sense. Well that's exactly what it is – common sense that isn't common enough. The Permaculture networks are about exchanging information and understanding. You can go on courses. These are listed on the Permaculture Association

website and in the magazines. There'll be a starter day at Dundee University on March 10<sup>th</sup> 2007.

If you doubt the strength of this worldwide movement (it runs to hundreds of thousands of people) just google on that irritating word: 'Permaculture'. In the words of the long-forgotten children's newspaper: Look and Learn. And more importantly be inspired – to stunningly powerful (in)action.

Graham Bell lives in the Borders with his family and is author of 'The Permaculture Way' and 'The Permaculture Garden. Recommended websites:

[www.permaculture.org.uk](http://www.permaculture.org.uk)

[www.permaculture.co.uk](http://www.permaculture.co.uk)

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