

# Climate Change, Ethics and the Field of Greed

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I found it hard to believe at first. After all my efforts to be eco-friendly I looked at the figures and I was still part of the problem. I could see the average per person carbon budget was valid, I could see it had importance, I was getting closer but I wasn't there. What added to my dismay was the lack of interest or engagement from dear Dharma friends who understood the figures. They knew they were contributing to the problem, some of them could even talk with feeling about the need to act on climate change and yet they did very little. What was going on?

Let me explain. You might think numbers are not "the stuff" of true Dharma. But numbers give a hard edge, they can be confronting. Leave them out and you risk being disengaged. It's not that we don't relate to numbers at all. If you had a blood test and the results showed something was amiss, something that could harm you, you'd most likely take that on board. But if other numbers showed you were taking more than your personal share of what the earth could cope with, you might not want to know.

This idea of *not taking more than one's share* is ethical territory.

Let's say we take the less ambitious target of keeping global warming under 2°C, rather than the safer and more ambitious figure of 1.5°C. Mainstream reports on what can most likely be put in the atmosphere for the 2°C figure all paint a similar picture, whether they are from the International Panel on Climate Change, the International Energy Agency or other organisations. The numbers in the reports are often so big they don't mean much. There's a table<sup>1</sup> with some of these figures at the end of this article with sources.

The large figures can be brought down to size. With seven billion people, gigatonne figures come down to a budget of around 150 tonnes CO<sub>2</sub>-e (carbon dioxide or equivalent) per person, to be used between now and 2050. That's around 4.1 tonnes per person per year average, roughly the weight of three cars.

This is the upper limit, a limit that still has big risks because of how high it is. It's not clear that a rise of 2°C won't trigger tipping points like large scale melting of permafrost. Let's take this high limit though. That's what we're given if we don't want to cause long term harm, that's our maximum share, that's what we go by if we don't want to be part of the problem. What does it mean in terms of how we live?

		CO <sub>2</sub> -e tonnes
Average annual per person upper limit on emissions for 2°C rise		4.1
Recent average annual per person emissions	USA	21.7
	Australia	14.0
	UK	11.7

Indicative per person per annum CO<sub>2</sub>-e amounts

		CO <sub>2</sub> -e tonnes
Food	Average Vegan diet with all bought food	1.5
	Average Vegetarian diet with all bought food	1.7
	Average diet with all bought food	2.5
Electricity (if not renewable)	Average US	2.8
	Average Australia	2.6
	Average UK	0.9
Gas		variable
Car	small car at 7 litres/100k (34 mpg with US gallons, 40 mpg with Imperial gallons), 15000 k (9320 miles)	2.6
	medium car at 9 litres/100k (26 mpg with US gallons, 31 mpg with Imperial gallons), 20000 k (12427 miles)	4.6
Flights*	1000 km (621 miles), eg London - Berlin (return, economy) Sydney - Brisbane (return, economy)	0.5
	4000 km (2486 miles), eg San Francisco - New York (return, economy)	2.0
	6000 km (3728 miles) eg Paris - New York (return, economy) Frankfurt - Delhi (return, economy) Sydney - Singapore (return, economy)	3.0
	17000 km (10564 miles) eg London - Sydney (economy, return)	8.0
Train	1000 km (621 miles), eg London - Berlin (return, economy)	0.16
Products and services	Variable depending on how much is bought or built, includes services provided by Government, rarely below 2.0 tonnes in US, UK or Australia.	2.0+

Sources: shrinkthatfootprint.com; routerank.com; climatefriendly.com; carbonindependent.org; carbonneutral.com.au; Environmental Protection Authority, Victoria, Australia; Guardian Carbon Calculator. \* Flight calculations are for full impact, including radiative forcing.

As you can see, flights can make a very big contribution to your footprint. Flying less or stopping flying completely is one of the simplest ways to reduce your carbon footprint. Using only renewable energy, eating no meat, less meat or becoming vegan are also helpful. Buying less also makes a big difference but this difference is often hard to quantify.

It's not a matter of a totally rigid per person budget. One's ability to not take more than one's share is partly dependent on circumstances. Some people simply can't afford to have completely renewable electricity, others can't reduce the amount they drive, or have a real need to fly for work which can't be avoided. The common pattern though, is that people overplay or exaggerate their need for travel, including travel for work.

Another consideration is your background. If you have taken many overseas holiday flights for instance, then in terms of giving other people opportunities, you have less of a case to continue those trips than someone who has never before been overseas and can only do that by flying.

One of the difficult areas is what's been called love miles. If you have a close relationship to someone living in another part of the world, caring for that relationship and caring for the planet is not easily done. It's not as if the first automatically trumps the second.

Most of us take more than our share, even if we accept the science and care for the world. What's striking are the various ways we turn away, blame others, or don't really want to know. These are forms of *avidya*. We're sometimes intentionally oblivious, even obstinately oblivious.

How do we turn away? Here are eight views.

1. *My actions aren't going to make any real difference.*

One person's actions make at least as much difference as a statement and a demonstration as they do in terms of contributing or not to climate change on a physical level. If I take a 14 hour train trip rather than a one and a half hour flight, people notice. That's in addition to acting responsibly. How we live has an influence as a model or example for others, whether it's living a high-flying high emissions lifestyle, which might feel quite fun and adventurous, or a simpler and more caring existence.

If we just look on the scale of the big picture, one person's actions are so small to be almost insignificant. But it's like voting. One vote usually doesn't make a huge difference but if lots of people don't think their vote makes a difference and don't vote, then it does make a difference.

If we look on the scale of a person, we make a difference whatever we do: it's a matter of what sort of difference we want to make.

2. *It's not so bad, let's deal with it when the time comes.*

If we're in a first world country and middle aged or older, and we think only about what effect climate change will have on us, we may not be so concerned. We might get floods, cyclones, heat waves, high food prices or refugees coming from places where there have been big crop failures and resultant instabilities, but this doesn't have to be a big deal.

For a subsistence farmer though it's another story. He or she is much more vulnerable to extreme weather and altered weather patterns. It's our high emissions lifestyle that is

already contributing and will further contribute to problems for people in poorer countries.

The general consensus is that the window to limit global warming to 2°C is closing. 2°C is already a big risk in terms of extreme weathers. The 2°C mark was set because it was considered achievable, not because it was considered wonderfully safe.

There are also disturbing IPCC projections of over 4°C by 2100 if we don't take concerted action. That figure would mean an average temperature higher than the earth has had in 15 million years.

Sadly it's not possible to change to a low emissions society quickly. You can't suddenly change your power generation to renewable energy or replace planes with high speed rail, or suddenly get people to shift their sense of entitlement. It's a slow process. If you're driving fast and coming into a sharp corner, you need to start turning the steering wheel at the beginning of the corner, not when you're half off the road and scraping the bushes.

### *3. Let's focus on the big polluters first or on government policy or divestment.*

No-one is saying that taking personal responsibility is sufficient. Focussing on the impact of large corporations and government policies is vital, but if one doesn't take responsibility oneself, pointing the finger can have echoes of the pot calling the kettle black, despite the differences in scale.

It's also the case that government policy for reduced emissions is more likely to succeed when there have been shifts in societal attitudes. That cultural change happens person by person.

### *4. We should just buy carbon offsets and become carbon neutral.*

Carbon offsets can be helpful but offset marketing and rhetoric is often not so helpful. It can give the impression that offsets are a personal solution to issues of responsibility. Offsetting has been compared to donating money to the RSPCA or an animal shelter and because of this feeling it's okay to kick your dog. One balances the other and your short term harm to the dog is considered neutralised. But while the analogy is stretched, in that harm from emissions is much more diffusely spread out than the harm from kicking the dog, the idea that you can totally absolve yourself from the impact of your emissions doesn't stand up well to scrutiny.

There are certification and quality assurance arrangements for offset schemes, but they tend not to take into account the broader impact of the scheme, other than eventual carbon reduction. Tree planting schemes have problems with one of more of (1) the delay in capture, which can take decades; (2) the temporary nature of the capture; (3) the carbon release when land is initially cleared for planting; (4) the locking up of arable lands; and (5) occasionally the displacement of indigenous people. These problems don't mean the schemes don't have benefits, just that the broader impacts are often very mixed.

Other approaches invest in renewable energy, distributing less polluting appliances or

light bulbs, buying forests that would otherwise be logged or providing contraception to people in developing countries. But there have been ongoing problems with offset schemes providing the funding for programs that would have taken place anyway, without the offset funding. There are also, like in tree planting, issues with time lag: the time it takes between the emissions and the eventual reduction. Some of the airline offset schemes are so minimal that they are largely a marketing exercise. Other programs provide some genuine benefits.

Being directly involved in a carbon reduction arrangement can also be problematic. For instance, if you can afford to own a solar power system which feeds considerable renewable energy into the grid in addition to covering your own power needs, is this going to provide a clear benefit? It depends on the circumstances. The way some government renewable energy targets work is that, if many people feed in more renewable energy to the grid, then others, large corporations in particular, are more likely to be given the right to produce less. If this right is given, then your solar power may not reduce overall emissions at all.

There is also the issue of offset ethics.

We might have the view that we can live a high emissions lifestyle, buy offsets and in doing so absolve ourselves from responsibility for our contribution to climate change. There are problems with this though, even *if* we manage to find offsets that are effective, function quickly, have no adverse consequences and permanently reduce emissions.

One problem is that it looks only into the future, the consequences, and doesn't take into account the sense of fairness or responsibility in the present. It takes the perspective that despite the big issue of too many people living high emissions lifestyles, our own lifestyle and emissions are not a problem if the responsibility can be met by outsourcing the clean-up.

Offsets have been described as functioning psychologically as guilt suppressants.<sup>2</sup> The description may be unkind but the purchase of offsets does lead to people feeling more comfortable with their high emissions activities.

Feeling comfortable with one's balance of harmful and helpful actions is qualitatively different from not harming in the first place. Not harming in the first place has a little more honour, and in terms of emissions it's commonly much more challenging for people in western society. It involves restraint which in the longer term is what is needed. It is also clearly taking personal responsibility. Paying a company to hopefully clean up after us, often in a developing country, means at least some of the responsibility has been passed on.

A second problem with the view that we can live a high emissions lifestyle and consume our way to responsibility through buying offsets is that it ignores the impact of the example we set in leading a high emissions lifestyle. People often talk with enthusiasm about their exciting or stimulating trips overseas or proudly show photos of the distant places they have flown to. This side of the high emissions lifestyle influences others: other people frequently want what we had or find it slightly more challenging to live with

restraint. Offsets do nothing to counter the effect of this modelling.

*5. We'll just rely on geo-engineering.*

This is a bit like smoking and believing a cure for lung cancer will happen soon because it's being worked on. It's possible, but unwise to rely on it. Limited geo-engineering may be used but given the current status of the research, the less we rely on it the better. All the forefront schemes have serious problems. Modelling of sulphate aerosol spraying, putting around 5 million tonnes of sulphur in the upper atmosphere each year to create a shield for the earth, shows that it will damage the ozone layer and weaken the Indian monsoon, affecting the food supply of over a billion people. This is one of the more promising approaches.

An alternative is spraying nanoaluminium, tiny aluminium particles, but there are health issues when these particles come to earth and are inhaled. There's also cloud brightening research, but modelling has shown it leads to complex and unpredictable large scale changes in regional weather patterns.

It is true that the ethics around climate change is dependent on there being no engineered solution. Unfortunately, we don't have many planets to experiment on with this, we have one.

*6. Most people aren't going to get on board with personal carbon budgets.*

This could well be the case in the short or medium term, which makes it more of a challenge to act in a responsible way yourself. It's harder to live with restraint when people around you aren't living with that restraint.

Many shifts in view in the past have taken time. Changes to the idea that slavery was ethical took years and it's likely some people kept slaves because it was both convenient and the norm.

*7. I need to nourish myself or balance my own well-being with the well-being of the planet.*

Behind this view is often an attitude of not caring so much about the impact of one's actions or not giving so much importance to the well-being of the planet.

Engaging with ethics is a process which can take time. While it's not a matter of living in accordance with a particular ideal, it does often involve looking at how one nourishes oneself.

*8. It's an environmental issue, not an ethical one.*

This is a reframe which people make when either they haven't understood the ethics or they have understood but wish to distance themselves and lessen their sense of responsibility. It's both an environmental and an ethical issue.

There are other attitudes too, including those that question the science.

The issue of *not taking more than your share* can be seen in another way. It can be seen as a case of ecological debt. Ecological debt has been described in these terms:

*If you take more than your fair share of a finite natural resource you run up an ecological debt. If you have a lifestyle that pushes the ecosystem beyond it's ability to renew itself, you run up an ecological debt.*<sup>3</sup>

Ecological debt can be owed to other people, individuals in other species, species as a whole, future people, generations or species. No-one is going to come knocking on your door asking for a debt repayment, it's a question of your willingness to look at it or not.

There's a study on the psychodynamics of ecological debt<sup>4</sup> that was conducted by psychotherapist Rosemary Randall. It outlines what can happen as people come to terms with this sort of debt. I was struck by how well it captured what had happened to me.

It can be a slow dawning process or journey that some of us take or are taking. It hinges on our relationship to others and to the natural world and the journey moves away from the sense of disregard and unexamined entitlement. The journey involves reframing our identity and making changes to how we live. There is often a sense of loss, and it's not uncommon to have conflicts with old friends centred around ecological debt. Once the connection between our lifestyle and ecological debt is made, the knowledge can't be brushed away.

The process is a type of awakening.

Many people don't even start the journey. They only acknowledge their impact in a peripheral way and they don't relate to the idea they are personally indebted. They might find the idea not only threatens their lifestyle but challenges their sense of themselves as a good person.

Other people go a little way on the journey but don't go further. They may see that their lifestyle is part of the problem but they either rationalise this one way or another or their sense of responsibility for it appears weak. They might just take relatively easy steps to reduce their footprint.

I see this pattern often in the Dharma community, both in teachers and long-term practitioners who appear to understand the harmful impact of their lifestyle. I had imagined, maybe unrealistically, that people involved with Dharma practice long term become a little more inquiring, kind and predisposed to ethical action. I know this happens at times, but it doesn't seem as widespread as I had hoped. Maybe it is just very slow and happens in limited areas.

The pattern of not engaging can manifest in different ways. A teacher might talk eloquently about the need for engaged practice but then lead retreats in exotic locations so that a whole group of people take high emissions flights. Or long-term practitioners might go on regular long distance overseas holidays, or make very little effort to combine trips or limit other flights which would reduce their footprint. They could agree that it probably isn't so good for the environment but do so with a tone similar to saying the weather isn't ideal.

I know it takes time to see one's own part in the problem. I know the figures haven't been laid out for everyone. But after making allowances for people for some years, people who understand what is at stake and their own part they play, I come to the view that many practitioners are reluctant to take responsibility.

Maybe they've become dependent on a high emissions lifestyle. Maybe they've bought the offset publicity and thought they could pay for less responsibility.

How they live looks like it has quite an element of greed in it, whether it's acknowledged or not. Greed is often behind the pattern of taking more than one's share. At times it is as if there is an unseen field of greed and this field exerts an influence. We're in the field and it has a magnetic pull. It pulls on everyone or at least most people. Those of us trying to build another influence struggle with the field. It feels like going against the stream.

Dharma teachings could help here but they don't always get applied to how we live.

Practices related to ethics can have a low profile in Dharma teachings and lay Dharma centres. This has been written about elsewhere.<sup>5</sup> There might be rules for conduct during a retreat and an explanation of precepts at the beginning of a retreat, but that is often the extent of the focus on *sila*. There's a narrowness in how we approach precepts and *sila* at times.

For example, the precept of *not taking what is not given* was talked about by the Buddha in terms of individual ownership only. There was no issue of taking something that wasn't owned by someone. Our perspectives are much broader now, we can see what's happening to the whole planet. Given that the Buddha's focus was on reducing suffering, given that he talked about caring for both those alive and those not yet born, maybe it is time to broaden the focus of the precept to include, for instance, what we're given in terms of our share of the carbon budget. The share comes from scientific understanding, not from individual ownership.

Whether or not you accept this broadening or engage with precepts, if you have a genuine well-wishing for other beings and an open curious attitude, you tend to start looking at the ways in which you help or harm others. A careful investigation includes both direct and indirect ways. It includes the help and harm to others whom you may not know or see.

Being eco-friendly can sound soft and cuddly but we could take the metaphor of choosing not to be an animal that uses its burrow as a toilet. There are fresher options for us. We can take up the rich practices of looking at our helpful and harmful impacts, looking at where we may be preoccupied with our own wants and taking more than our share. It might be sobering and challenging at times, but there's a sense of being honourable and a sense of having in our heart both the world and our transient selves.

## References:

### 1. World emissions budgets

2013 IPCC report limit	890 gigatonnes (Gt) of CO <sub>2</sub>
International Energy Agency limit for 2012 - 2050	1020 Gt CO <sub>2</sub>
Australian Climate Authority limit for 2013 - 2050	1100 Gt CO <sub>2</sub> -e

Sources: IPCC 2013 Climate Change Report; International Energy Agency: World Energy Outlook 2012; Australian Climate Change Authority.

2. See Keith Hyams and Tina Fawcett: The Ethics of Carbon Offsetting. Wiley Interdisciplinary Reviews: Climate Change (2013) .

3. Andrew Simms: Ecological Debt: the Health of the Planet and the Wealth of Nations, London: Pluto Press (2005).

4. Rosemary Randall, Great Expectations: The Psychodynamics of Ecological Debt, in Sally Weintrobe (ed) (2013) Engaging with Climate Change: Psychoanalytic and Interdisciplinary Perspectives, Routledge: London and New York.

5. Gil Fronsdal: The Curious Absence of the Precepts, in Inquiring Mind, Vol 17, No 4. Fall 2000.

### Note on Carbon Footprint Calculators:

Different footprint calculators can give different results for the same activity. Some calculators don't take into account the effect of greenhouse emissions other than carbon. The full climate impact of a long distance flight for instance is considered to be 2-4 times the actual amount of CO<sub>2</sub> released, according to the IPCC.

Footprint calculators are often associated with offset schemes which can have their own agenda of presenting a low footprint, so as to provide a cheaper service. The effectiveness of at least some of the offset schemes are questionable.

Calculators which take into account flights, vehicle emissions, electricity, gas, food, products and services include one at [www.carbonindependent.org](http://www.carbonindependent.org) and one at [www.resurgence.org/resources/carbon-calculator.htm](http://www.resurgence.org/resources/carbon-calculator.htm) .

### Calculating flight emissions:

For longer flights (over 1000 kilometres) find the distance between cities in kilometres (possibly with <https://www.distancefromto.net>), multiply by 0.243 grams (from Wikipedia article on Environmental Impact of Air Travel, calculation including radiative forcing), divide the result by 1000 and you have the result in metric tonnes.

For shorter flights, between 500 and 1000 kilometres with jet engines, the same procedure can be used, but the emissions may be 10 or 20% higher. These flights may have less radiative forcing but higher carbon emissions per kilometre, due to the emissions from take-off not being offset by a long flight.

For short flights with turbo-prop aircraft, the emissions are lower per kilometre.