



*for a living planet*

## Manifesto Footprints: The Eco-Challenge

Which parties will really reduce Scotland's global environmental impact?

### Summary

All the political parties have been working hard to set out their green credentials. Using new software, predictions on key policies from the seven main parties on energy, food, travel and waste were commissioned by WWF Scotland to illustrate whether Scotland's global environmental impact, as measured by the Ecological Footprint, would increase or reduce in 2012, 2020 and 2050.

Scottish Labour, Scottish Liberal Democrats, the Scottish National Party and the Scottish Socialist Party all have a set of policies which would pretty much stabilise Scotland's footprint over the next four years. The Scottish Conservatives and Solidarity would see Scotland's footprint rising, and the Scottish Greens would see it fall by over 7% by 2012. But by 2020 much more is needed.

With their proposed policies, the Conservatives and Solidarity would produce major rises in Scotland's footprint by 2020, Labour a slightly smaller rise and the Lib Dems and SNP would only manage to hold our footprint steady. The SSP would manage a small reduction by 2020 and the Greens an impressive 20% reduction.

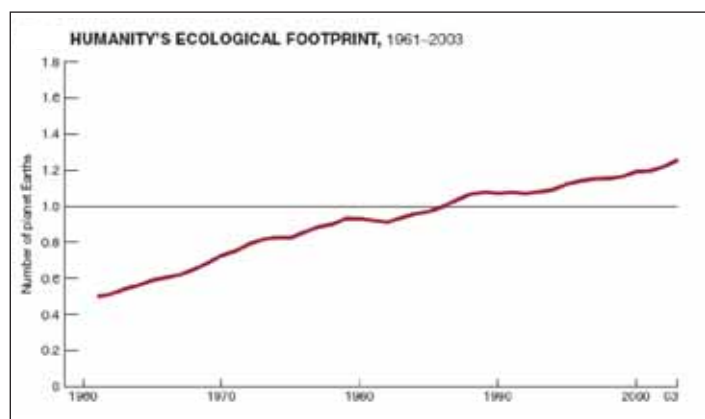


# Introduction

## The real story: a step forward?

In the last four years, all the political parties have made advances in what they say they will do to combat the threat of climate change and to care for our environment. In this election, their promises on the environment are much stronger than in previous campaigns, but we want to know whether their commitments will actually deliver on their ambitions. All the parties want the electorate to believe that they are serious about the environment and have set out their stalls in detail in manifestos, but does it all add up?

To find out, WWF has examined key commitments to see whether the rhetoric matches the reality. We commissioned technical consultants from the Stockholm Environment Institute based in the University of York, to calculate how key policies from the main parties on energy, food, travel and waste would affect Scotland's Ecological Footprint. Using new software<sup>1</sup> that calculates the effects of proposed policies on Scotland's global impact, they were able to generate predictions that illustrate whether the footprint in these areas would be increased or reduced in 2012, 2020 and 2050.



Source: Living Planet Report 2006

## Why use Ecological Footprint as a measure?

The amount of resources we use to support our lifestyles can be measured, and is known as our Ecological Footprint.<sup>2</sup> In Scotland, our footprint measures up at an average of 5.37 global ha per person illustrating that we are using and polluting far more than our fair share of the world's resources, jeopardising the ability of others in the world to meet their needs, now and in the future.<sup>3</sup> If everyone in the world had this sort of lifestyle, we would need three planets to survive.

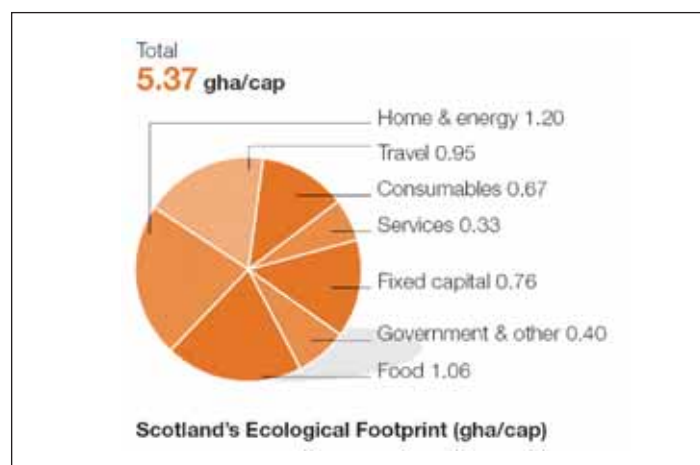
We are already seeing the consequences of our over-consumption on natural systems that we depend upon with collapsing fisheries, carbon-induced climate change, species extinction, deforestation and the loss of groundwater in much of the world. The only solution to address this challenge is to reduce our footprint and change our lifestyles

to move towards One Planet Living. This means supporting a good quality of life which uses much less non-renewable resources, and produces much less waste and pollution.

The government running Scotland after the elections on 3 May will make many choices which will either increase Scotland's footprint or decrease it. Some of the implications of the biggest decisions it will make and policies it may implement are assessed here.

## Why focus on energy, transport, food and waste?

As the pie chart of our Ecological Footprint shows, the most significant elements of our footprint are made up from our food, transport and energy choices. The choices we make about what we buy and how we deal with our waste are also an important component of our footprint. The decisions that government makes can make better choices easier for every one of us.



Source: Towards a Low Footprint Scotland 2007

<sup>1</sup> The Resource Energy Analysis Programme (REAP) [www.sei.se/reap](http://www.sei.se/reap)

<sup>2</sup> The Ecological Footprint measures how much land and water area a human population uses to produce the resources it consumes and to absorb its wastes, including carbon dioxide emissions. It includes the impact of our consumption in Scotland on the rest of the globe.

<sup>3</sup> A global hectare per person is the unit of the Ecological Footprint; it is an area of global average bioproductive land or sea needed to support a person. In Scotland, the average person needs 5.37gha each; people in the US require an average of 9.6gha; people in Malawi only 0.6gha; the world average is around 2.2gha, and a fair share is about 1.8gha.

# Climate Change

## The issue

Climate change is the biggest environmental challenge facing the planet. Humanity's use of fossil fuels in power stations, cars, planes, homes, offices and factories is creating disaster around the world for people and nature. Most climate scientists agree that 2°C above pre-industrial global temperatures is a threshold we do not want to cross, as it will trigger the collapse of major systems that support life. Yet we are already at 0.7°C and could be heading for 6°C by 2100 if we do not change our ways.

Even approaching the 2°C threshold, some of Africa's poorest people, living in the arid countries of the Sahel, will face impossible pressures on their insecure livelihoods. Water will become scarcer and the desert will take more of their land. Beyond 2°C, the Himalayan glaciers, the vital source of fresh water for over a billion people in South Asia, will disappear. The melting of the Greenland ice-sheet will become irreversible, accelerating sea level rises that will affect hundreds of millions of people in low-lying countries. The Amazonian rainforest will be permanently damaged and the rate of species' extinctions will increase dramatically.

Climate change will also be disastrous for the economy. Last year's Stern Review found that "business as usual" could cause economic impacts greater in scale than the two world wars and the Great Depression put together. Also, that acting now to reduce emissions would be much cheaper than acting later to cope with the consequences of those emissions.

Scotland is already seeing climate change. The four warmest years on record were the last four, with 2006 being the warmest. 2007 is already predicted to be the hottest year ever around the planet. We are already seeing major floods, landslides and changes to the seasons. We are at a crucial point in history and have about 10 years left to really make a difference.

Scotland faces two futures. In one, we have inefficient housing, congested streets and poverty amplified by climate change's impact on local and global economies. In the other, we can have low carbon homes, better services which reduce the need to travel, public transport, cycling and walking ahead of the car in people's choices, and a renewed emphasis on local production boosting local employment, as well as Scottish renewable energy products producing clean energy around the world. We all have a duty to help reduce emissions but climate change is such a big challenge that we also require exceptionally strong political leadership.

## What the Parties say

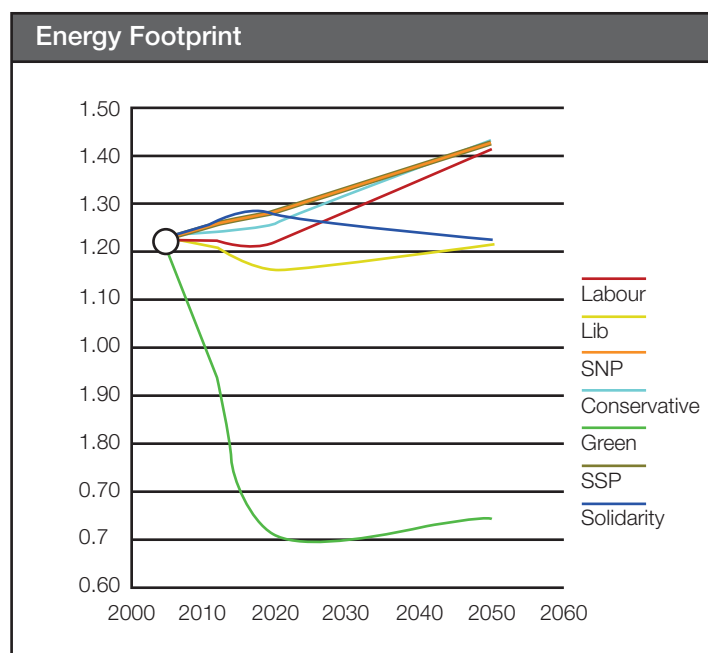
All the parties tell you that climate change is the big issue and that they take it very seriously. The Greens, Labour, SNP and the SSP all promise to introduce a Scottish Climate Change Bill, incorporating legally-binding targets for emission reduction. This will be a huge step forward as it will set a statutory framework for emission reduction.

The Greens promise cuts in emissions of 4.5% a year, aiming for a 90% reduction by 2050; the SNP commit to 3% a year cuts in emissions to end up at an 80% reduction by 2050 and promise a Climate Change Minister; the SSP promise to aim for at least 3% a year cuts; the Liberal Democrats do not promise a bill but they propose a 12.5% cut in emissions by 2010, targets set every four years and annual reports to Parliament. Labour commits to 60% reduction in emissions by 2050 but is vaguer about the milestones on the way. Surprisingly, the Conservatives do not mention either a bill or any kind of targets, despite David Cameron's commendable efforts on both of these.

Alongside the climate legislation proposed, Labour would establish carbon budgets to ensure year-on-year reductions are being achieved and establish a Ministerial Committee on Carbon Reduction. Carbon committees would be established in local authority and public sector organisations, while Ministers would be expected to reduce their own carbon emissions in daily work and get government carbon neutral; carbon calculators would be provided to enable individuals to reduce their carbon emissions. The SSP and Greens put forward plans for carbon rationing and carbon quotas respectively, and an independent commission to oversee reductions in emissions would be set up the SSP. The SNP would establish a Ministerial post on climate change. The Lib Dems commit to setting up a carbon challenge demonstration fund, establishing an overseas climate change team and supporting the development of energy service companies. The SNP hope to set up an EU wide Green Energy Centre. Only the Greens factor in the need to address the release of carbon from peat.

Naturally, WWF very much welcomes any commitment to doing more on the urgent issue of climate change. Some of these proposals are excellent. This analysis does not assess the impact of these targets should they be achieved, but it does test whether the policies stated in the manifestos will deliver on these targets and reduce Scotland's environmental burden on the world.

# Predicting Scotland's Energy Footprint



## The issue

Excluding transport fuels, our energy consumption makes up 22% of our footprint. To reduce it and our carbon emissions, we need to reduce drastically our use of fossil fuels. This section concentrates on how we generate our electricity, fossil fuel use for heating and our energy efficiency. The first step we need to take is to stop wasting energy. With a more efficient approach to new and existing buildings, we could save money, reduce fuel poverty, reduce climate changing emissions and rule out a dirty, dangerous nuclear future completely.

## What the Parties say

All the parties want more renewable energy and there has been stiff competition on who will promise the most. By 2020, the Greens want to see 70% of our electricity from renewables, the Lib Dems have 60%, but Labour are not far behind with a promise of 50%, up from the current Scottish Executive target of 40%. Both the Lib Dems and the Greens pledge 100% of electricity from renewables by 2050, Solidarity propose a transition to a renewables economy within a generation. Disappointingly, the SNP manifesto doesn't mention a new target, although the party committed itself to 50% by 2020 several years ago.

The Conservatives criticise wind farms and suggest more emphasis on wave power and biomass, but do not mention a target. The SSP would renationalise the energy industry and Solidarity propose a bill to create a renewable energy corporation for Scotland. Only the Lib Dems name a target for reducing overall electricity use and both the Greens and the Lib Dems set a target for heat energy from renewables. Many parties are keen on developing carbon storage from

power stations, the SNP particularly so. Labour and the Conservatives leave the door open to new nuclear reactors in Scotland, while the Greens, Lib Dems, SNP, Solidarity and the SSP are all implacably opposed to more nuclear power.

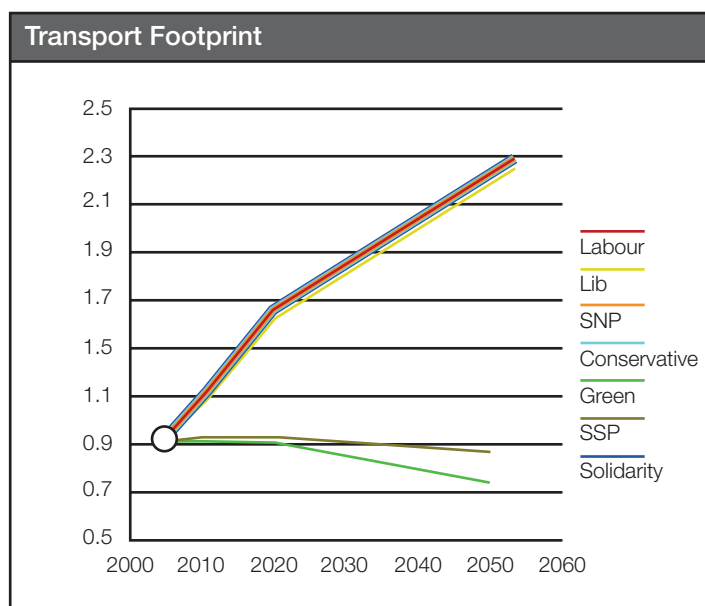
Most of the parties propose some kind of scheme to help householders and, in some cases, businesses, to install insulation and small-scale renewables. The Conservatives call this their Eco-Bonus scheme. The Greens go further and set a target for 65,000 homes a year to become zero carbon and Labour set out an aspiration for new homes to be zero carbon by 2016. The SSP call for carbon neutral homes by 2011, but it is not clear exactly what this means. The Lib Dems and the SSP set new targets for micro-renewables in new developments, and the SNP propose local energy networks for heat and electricity. Most parties want better standards for new buildings but only a few say much about improving existing buildings, which make up 99% of all buildings.

## Results

The calculations reveal the surprising fact that most parties will not actually reduce Scotland's energy footprint, despite some excellent commitments on renewable electricity and micro-renewables. This is because they also need to improve energy efficiency and conservation to stop energy use growing and to deal with the four fifths of energy we use that isn't electricity. Only the Greens, Labour and the Lib Dems set Scotland on a course to reduce the Ecological Footprint of energy use; the other parties would see it rising if they did not take further action. Only the Greens, Lib Dems and Solidarity make commitments which would lead to a reduction in the long term.



# Predicting Scotland's Transport Footprint



## The issue

Our transport consumption makes up 18% of our footprint and here we find the greatest challenge for many of the parties to live up to promises on climate change. Road transport emissions have risen by more than 8% since 1990 and the government forecasts that traffic levels are set to increase by 27% by 2021; this area requires urgent action. While emissions from aviation are currently lower than those for road transport in Scotland, the rate of growth is alarming, with passenger numbers forecast to increase from 17 million passengers per year (2001) to 50 million in 2031. Coupled to the greater impact that greenhouse gas emissions have at altitude, this unconstrained growth is set to result in aviation becoming one of the biggest sources of emissions in Scotland. Without bold political leadership, emissions from the transport sector are set to wipe out progress made in other sectors in tackling climate change.

## What the Parties say

All the main parties claim they will do more on public transport. The SNP and Lib Dems have some very practical plans on improving train services, with the Lib Dems setting a rail passenger increase target. Solidarity would renationalise the railways and the SSP have a bold plan to make all public transport free. The Lib Dems set a specific target to increase cycling rates.

However, the four big parties say that they will also build more roads, generating more traffic and more carbon dioxide. The Lib Dems and SNP dismiss road user charging and the Conservatives lament the fact that Labour scrapped the previous Conservative government's ambitious road building programme. Only the Greens commit to stabilising road traffic levels. The SNP set out proposals for 100% use of alternative fuels in public sector vehicles by 2020 and 30% for other road users.

While many of the parties highlight the challenge posed by aviation in terms of tackling climate change and talk of the need for viable alternatives, the Greens and the SSP commit to halting airport expansion and the Greens would also end government subsidies through the Route Development Fund. Labour and Lib Dems specifically talk up how important this fund is and Labour even talk about making Scotland one of the world's foremost tourist destinations. Unfortunately, you cannot have it all and none of the main parties will be able to deliver on their climate targets if they let car traffic and air miles grow as they are currently forecast to do.

## Results<sup>4</sup>

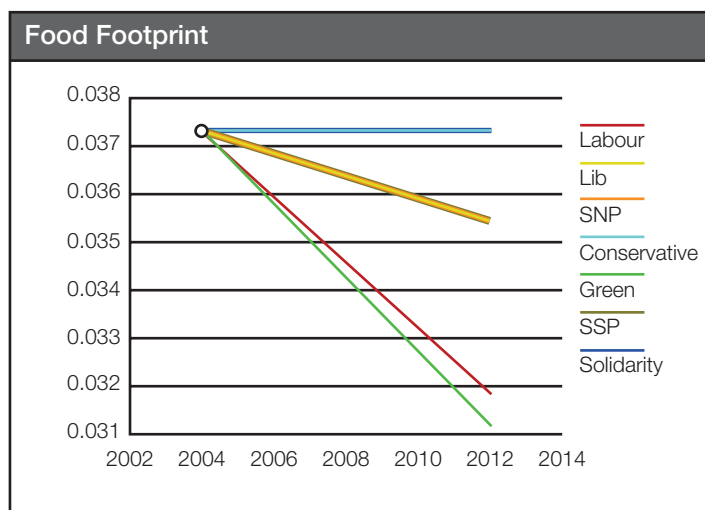
The predicted results show the startling difference between those who would take radical action on car and air traffic and those who would simply tinker at the edges. The Greens and the SSP have the kind of policies which would actually reduce Scotland's transport footprint. Although the Lib Dems policies would be better than the other major parties, the difference is only small and they would still allow the transport footprint to increase massively. Aviation emissions are around 30% as big as those from road transport today but under the main parties would reach 75% by 2020, highlighting the massive threat to achieving climate targets posed by the current rapid growth of air travel.



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<sup>4</sup> These figures include an allowance for the impact of the non-CO2 greenhouse gases from aeroplanes, often excluded from Footprint and greenhouse gas calculations.

# Predicting Scotland's Food Footprint



## The issue

Our food consumption makes up 20% of our footprint. Our food footprint could be reduced significantly (by up to 40%) and our health improved if more of our food was local, seasonal, fresh and organic. The majority of Scottish farming still produces a short list of basic commodities in an attempt to compete with global markets – milk, meat and potatoes. The Scottish food industry relies on processing and the export of these cheap basic commodities to turn a profit. Yet we know that the healthy and sustainable diet that Scotland desperately needs is based on fresh, unprocessed food with much more fruit and vegetables than we commonly eat.

Government strategies need to reflect the reality of how our diet needs to change. It should not only focus on processing, value adding and exports as ways to raise income but encompass a healthy and sustainable diet that meets the needs of Scotland. It should include more support for local processing, the whole organic food chain and more diverse ways of marketing such as farm shops, local box schemes and community supported agriculture. An area of particular focus should be investments that support the development of more sustainable food economies where they will reduce food miles and improve access to healthy diets for otherwise excluded communities. Public authorities spend £85m a year on food for schools, hospitals and social services. Public procurement can act as an example to others for how they should change what they do but it should also help make more sustainable food more easily available by stimulating markets.

## What the Parties say

Most of the political parties acknowledge the opportunity to improve access to food that is better for our health and the environment through public procurement. As all the parties

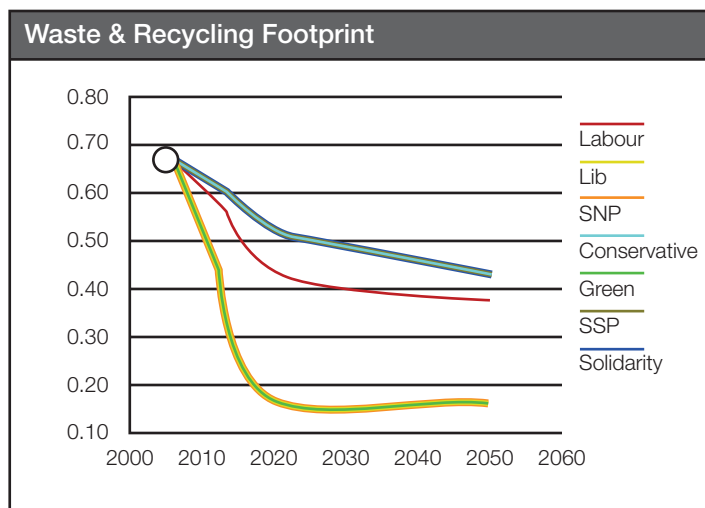
take this first step to tackling access to better and lower footprint food, we have focused calculations on the impact of this approach within public procurement which is the logical first move. The SNP commit to using procurement as a tool more widely, while Labour commit to ethical procurement and provision of better food across schools and hospitals, the Greens make wider commitments while the SSP are specific about making changes to school meals. The benefit of these proposals is that public spend should not only improve access but also strengthen local food networks, production, processing and markets to enhance availability. The Greens, Lib Dems and Labour commit to improving local food networks, supporting farmers markets and organics, the Conservatives propose support for the interpretation of procurement rules to support local buying.

## Results

Almost all the parties plan to get more local food into school dinners and some commit to deal with other meals paid for by the public purse, leading to a significant reduction in the public sector food footprint. Because the Greens and Labour also want to encourage more organic food, they will produce even greater reductions in the food footprint. The public sector buys a lot of food, so these policies are important, but the next government should also look at how it can help make the same kind of improvements in the food that the rest of society is eating: even partial success at building on these policies could reduce Scotland's total food footprint by more than 10% in the future.



# Predicting Scotland's Waste Footprint



## The issue

The impact of everyday consumables make up 12% of our footprint. Every year we produce more and more waste. Even with tremendous strides made in increasing Scotland's recycling and composting levels to 25% over the last four years we are still sending most of our waste to landfill sites and there is renewed pressure to build new incinerators, two of which were quietly approved just before Parliament broke up.

Our choices can have unexpected consequences around the world, from rainforests cleared for palm oil plantations so that we can have cheaper margarine to gorillas killed to feed miners looking for rare minerals to use in mobile phones. The 'stuff' we buy and then throw away, from TVs to sofas, can create 10 times its own weight in waste while being made. The best way to reduce our footprint is to buy less stuff, buy things that last longer, get things repaired instead of throwing them away and to make sure we re-use and recycle.

## What the Parties say

Both Labour and the Lib Dems commit to increase recycling rates of household waste to at least 70% by 2020, up from the current Scottish Executive target of 55%, and both talk about the need to minimise the amount of waste we produce in the first place. The Greens commit to a zero waste strategy focusing on waste minimisation with a zero waste target by 2020. Similarly the SNP suggest that we should aspire to a zero waste Scotland with waste minimisation as the key and the Lib Dems say that they want to put Scotland on a path to zero-waste. Labour will reward households that reduce waste. The Conservatives want to leave all this up to local authorities, while the Greens, the SNP and the SSP will make sure every home has kerbside recycling collections and the Greens will add a compost bin too if you have a garden. The Lib Dems and the Greens specifically commit to reducing Scotland's

Ecological Footprint, while Labour will help small businesses reduce their footprint.

Most parties focus on household waste and although this is important it only constitutes a small fraction of total waste arising in Scotland. Hence there is a need to tackle commercial and industrial waste too. No parties specifically address this issue, with only the Lib Dems specifically noting the need to increase business waste recycling and establish a target for this.

## Results

Our analysis shows that all the parties will make some good progress on recycling, but the Conservatives, Solidarity and the SSP simply rely on existing commitments. The parties committed to zero waste policies do particularly well, setting Scotland's waste footprint on course for a cut to around a quarter of today's levels by 2020. The difference among the parties highlights how important it is to tackle waste growth, rather than just concentrate on recycling and composting.



# Total Footprint projections

The projected totals of the Ecological Footprint of Scotland in 2012, 2020 and 2050 based on the energy, transport, food and waste policies from each of the parties are set out below. In order to move towards One Planet Living, rather than three, the footprint of Scotland should be reducing over time.

Total Footprint projections				
Scotland's Footprint 2004	2012	2020	2050	
Conservative	5.36	5.49	5.73	6.68
Labour	5.36	5.44	5.62	6.59
Solidarity	5.36	5.50	5.75	6.45
SNP	5.36	5.42	5.46	6.41
Lib Dems	5.36	5.35	5.32	6.16
SSP	5.36	5.31	5.25	5.26
Greens	5.36	4.96	4.36	4.19

## Results

The results show that Labour, the Lib Dems, the SNP and the SSP all have a set of policies which would pretty much stabilise Scotland's Footprint over the next four years. The Conservatives and Solidarity would see Footprint rising, and the Greens would see it fall by over 7% by 2012. Stabilising our footprint would be a good start, but by 2020 much more is needed. With their proposed policies the Conservatives and Solidarity would produce major rises in Scotland's Footprint by 2020, Labour a slightly smaller rise and the Lib Dems and SNP would only manage to hold our Footprint steady. The SSP would manage a small reduction by 2020 and Greens an impressive 20% reduction.



# Conclusions

## Results

All the parties acknowledge the need to reduce Scotland's footprint in their manifestos and some commit to use footprint as a measure and tool to help them do that.

The Lib Dems commit to using global footprint tools in government. While Labour acknowledge it may be a useful tool and propose they will seriously consider its use as a concept if elected, the Greens commit to Ecological Footprint plans in local authorities and public bodies to ensure they are on a reducing trend. In terms of measuring our well-being and not just wealth, Labour commit to deliver wider indicators of well-being as do the Greens, with a specific commitment to an index of sustainable economic welfare. Using these tools, all these parties could inform their policies to reduce footprint further and most effectively.

There is some progress in language used in relation to economic development and the environment. Instead of economic growth at any cost, there is generally acknowledgement of the ecological systems that support our society and economy emerging in manifestos.

In practical terms, the SNP propose that sustainability would be one of their key principles in their plans for economic growth and, placed at the heart of government next to finance, Labour would make sustainability a core strand of the spending review; the Greens would ensure sustainability is at the heart of any government they might support and the Lib Dems would ensure sustainable development is integrated across government to ensure it is practised in every department.

In Parliament, the Lib Dems propose a Sustainable Development and Audit Committee that would hold government to account on delivery. Externally, the Greens would establish a National Forum for Sustainable Economic Development while the Lib Dems would establish an independent decision-making body that would determine use or abuse of environmental assets.

The Commonwealth Games bid is a popular flag ship to demonstrate best practice – Labour tell us that they will make it as environmentally friendly as it can be, the Lib Dems propose that it should boast a decentralised energy system while the SNP commit to the athletes' accommodation being in zero carbon homes. An iconic gesture from the Lib Dems is the commitment to an annual Scottish Food event in Parliament.

The challenge that faces us in playing our part in reducing our global impact is clear but to be properly successful, sustainable development needs to be part of our formal education and life-long learning. The Greens are explicit about the need for this, starting with the curriculum while the SNP, Lib Dems and Labour acknowledge a need for citizenship and environmental education.

As long as we consume more than our fair share, someone else, somewhere else pays the price for our wasteful lifestyles. Whether it is African farmers seeing their lands dry up or orang-utans losing their rainforest homes, our over-consumption of resources comes at a high price. These results show the next and future administrations need to take bold steps now to reduce our footprint. To achieve a low footprint Scotland, that would lead us towards One Planet Living, a 75% reduction in footprint is required by 2050. This target takes account of the fact that the area of bioproductive land and sea is due to diminish, based on UN projections for a moderate increase in population, resource use and CO2 emissions.

Stabilising Scotland's footprint is a good first step but whoever wins power on 3 May is going to have to do even more than they promise in their manifesto if they are to set Scotland's footprint on a long-term reducing course and help us move towards One Planet Living.

## Methodology and References

The Stockholm Environment Institute worked with WWF Scotland to interpret the policy commitments made in the seven manifestos and perform Ecological Footprint calculations using the Resource and Energy Analysis Program (REAP) software. REAP is an integrated resource environment modelling tool based on policy scenarios. REAP considers consumption by households and public as well as commercial services, wherever the consumed products may come from and wherever environmental impacts may occur. You can find out more about REAP here: <http://www.sei.se/reap/index.php>

The Ecological Footprint measures the resources we use to support our lifestyles. It is the best available measure for telling us whether or not we are living within the limits of the planet. An International standard was adopted in 2006 and in the UK, devolved administrations and many local authorities have adopted it as a measure towards sustainable development.

The four key policies analysed were energy, transport, food and waste – these were analysed using the detail set out in the manifestos alone in order to ensure a level playing field. Business as usual was from existing or recently agreed government policy and projections. All the parties appeared to offer similar levels of detail apart from Solidarity. Since the Solidarity manifesto offered less detail than others, theirs are the most uncertain results. Calculations were done on the basis of the party implementing the policy in their first year in government if elected, or as soon as practicably possible (e.g. depending on readiness of technology) unless stated otherwise

## Acknowledgements

Special thanks to Dr John Barrett of Stockholm Environment Institute for efforts well beyond the call of duty.

One Planet Living® is a Registered Trade Mark identifying a joint initiative of BioRegional Development Group and WWF based on 10 guiding principles of sustainability. The vision of One Planet Living is a world in which people everywhere can lead happy, healthy lives within their fair share of the Earth's resources.

Disclaimer: WWF Scotland and the Stockholm Environment Institute have made best efforts to fairly translate the commitments in the manifestos into the assumptions used in REAP. Nothing in this report should be considered an endorsement of any particular political party's full set of policies. For more details or information, please contact WWF Scotland on 01350 728200.

The mission of WWF is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by:

- conserving the world's biological diversity
- ensuring that the use of renewable natural resources is sustainable
- reducing pollution and wasteful consumption



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