

Ecological Footprint for the ACT: Our Challenge

Key findings of the ACT 2008-09 ecological footprint

- 9.2 global hectares was the size of the average ACT resident's ecological footprint in 2008-09. The footprint has increased by 8% in 5 years and nearly 25% in 10 years.
- Our recent ecological footprint was 13% above the Australian average and nearly 3.5 times the global average.
- We used 14 times the land area of the ACT to support our lifestyles.
- If everyone in the world lived in the same way as the average person in the ACT, we would need 5 Earths to give us enough land (and surface water) to provide our resources and absorb our wastes. Yet, we only have one earth!

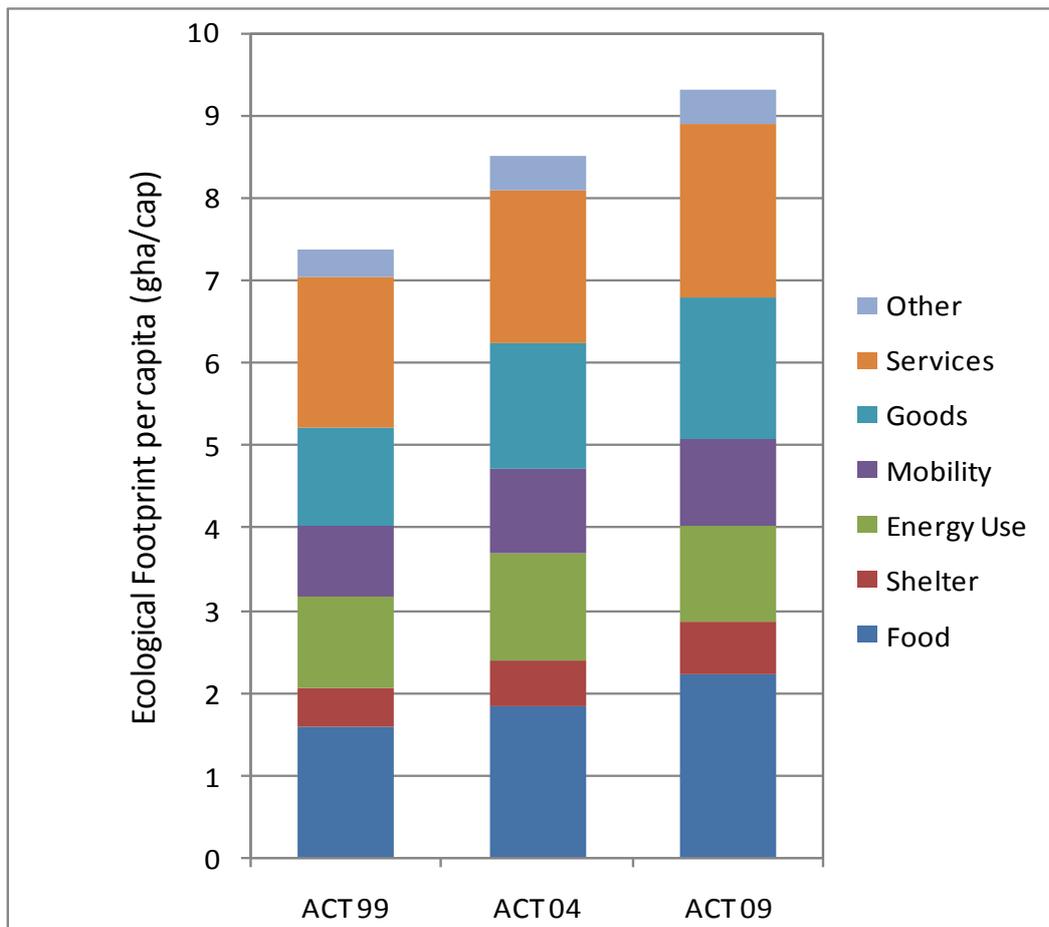


Fig 1. Per capita ACT footprint for 1998-99, 2003-04 and 2008-09

What is an ecological footprint?

An ecological footprint is a calculation of the amount of land and water required to support our use of resources and disposal of our wastes. It provides a calculated measure of the extent of human impact on the earth, helping us understand the link between our lifestyles and the environment. It provides us with a means by which to determine our relative consumption of global resources and thereby assist us in assessing the sustainability – or not - of our lifestyle.

The ecological footprint is expressed in 'global hectares'. The average world ecological footprint in 2007 was 2.7 global hectares per person, which is the equivalent of needing 1.5 Earths to support the global population's current consumption. Put another way, it took the Earth approximately a year and a half to regenerate the resources used by humanity in 2007¹. This figure includes only the land needed to support the human population; it does not ensure sufficient natural resource to support other species.

Why is our ecological footprint so high?

The ACT's ecological footprint means that 9.2 global hectares per person of land (and surface ocean) is needed to support each person in the ACT; this includes the raw material for food, building, energy, etc. as well as the area needed to absorb our waste including the carbon dioxide emitted due to ACT residents' consumption. This includes land inside the ACT such as offices and homes, as well as land outside such as that used to grow food consumed in the ACT.

In our case, the calculation draws attention to the unsustainability of the current quantity and nature of our consumption.

The nature of and increase in our consumption per person is driving the increase in our footprint. Our consumption of food and demand for services (including financial, telecommunications, medical, entertainment and government services) has a significant effect on our footprint (see Fig 2). The contribution from our consumption of goods (other than food) is growing, while the contribution from services (albeit high overall) has also declined slightly (less than 5%).

¹ <http://www.footprintnetwork.org/images/uploads/Ecological%20Footprint%20Atlas%202010.pdf>
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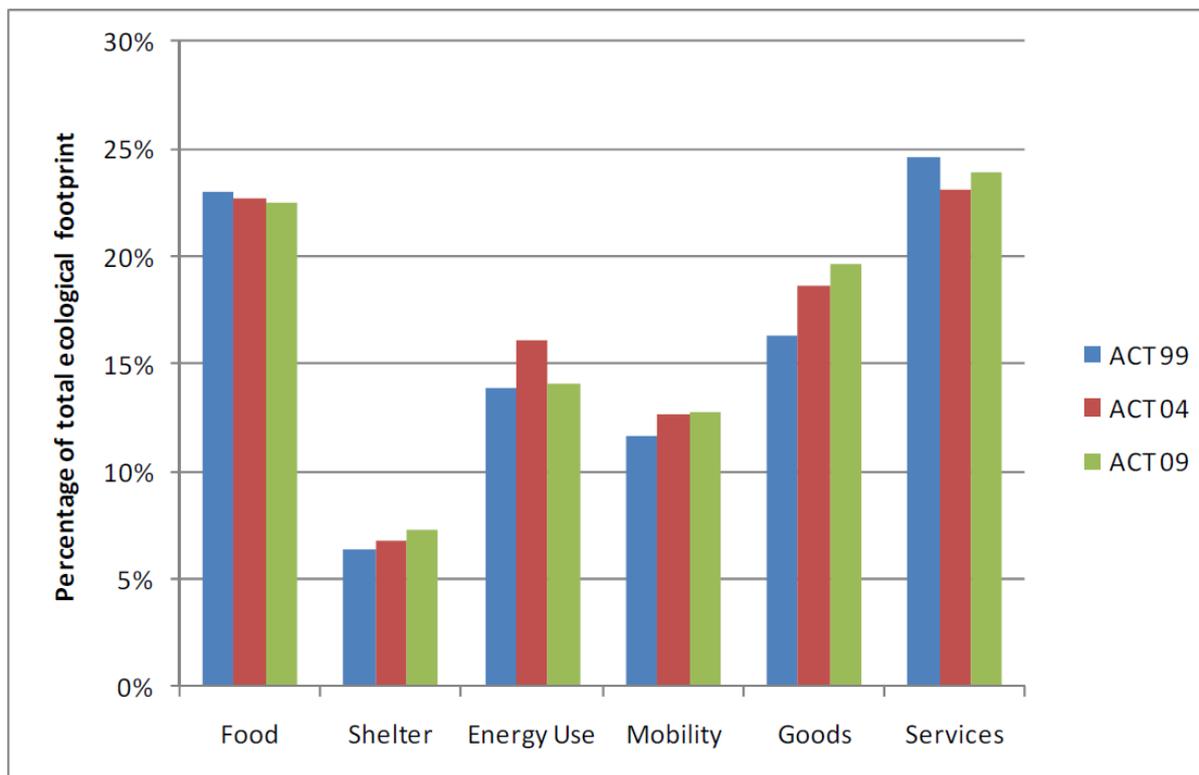


Fig 2. Comparison of ecological footprint consumption categories for the ACT for the three years.

We have seen a very small decrease (less than 5%) in the direct energy (primarily electricity and gas use) used per person between 2003-04 and 2007-08. Some of this may be explained by an increase in the volume of GreenPower sold in the ACT, (rising from 28.7 GWh in 2003-04 to 103.6 GWh in 2007-08²) and a small decrease in residential annual electricity consumption per customer (from 8.8 MWh in 2003-04 to 8.3 MWh in 2007-08³). Despite this, electricity remains the largest single factor affecting our footprint making up 12% (1.07 global hectares) of each person's footprint. It is significant that energy use has a considerable impact on our footprint yet we spend a relatively small proportion of our income on energy use (see Fig 5).

The second biggest contributor is new (and renovated) houses, flats and other residential buildings; making up 6% (0.56 global hectares) of each person's footprint.

² Independent Competition and Regulatory Commission, *ACT Licensed utilities compliance and performance report 2007-08*

http://www.icrc.act.gov.au/_data/assets/pdf_file/0019/156016/Compliance_and_Performance_Report_2007-08_Web.pdf

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Rank	Commodity	Group	Impact (gha/capita)	% of total
1	Electricity supply	Energy	1.07	12
2	Residential building construction	Shelter	0.56	6
3	Retail trade	Services	0.51	6
4	Hotels, clubs, restaurants and cafes	Services	0.44	5
5	Air and space transport.	Energy	0.35	4
6	Petrol	Energy	0.32	4
7	Other food products	Food	0.29	3
8	Wooden furniture	Goods	0.25	3
9	Ownership of dwellings	Shelter	0.24	3
10	Clothing	Goods	0.21	2

Fig 3. Top10 commodities in terms of per-capital ecological footprint in the ACT in 2008-09

The rises in consumption are driven by our rising income. The ACT has the highest mean household disposable income in the country (\$1,026/week), significantly higher than the national average (\$811/ week) (see Fig 4)⁴. Higher incomes generally result in higher spending, resulting in a larger footprint. However, this link can be changed. Countries such as Switzerland and France have managed to continue or improve their development while reducing their ecological footprint.

⁴ ABS (2009) Household Income and Income Distribution, Australia 2008-07 (ABS 6523.0)
[http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/32F9145C3C78ABD3CA257617001939E1/\\$File/65230_2007-08.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/32F9145C3C78ABD3CA257617001939E1/$File/65230_2007-08.pdf)

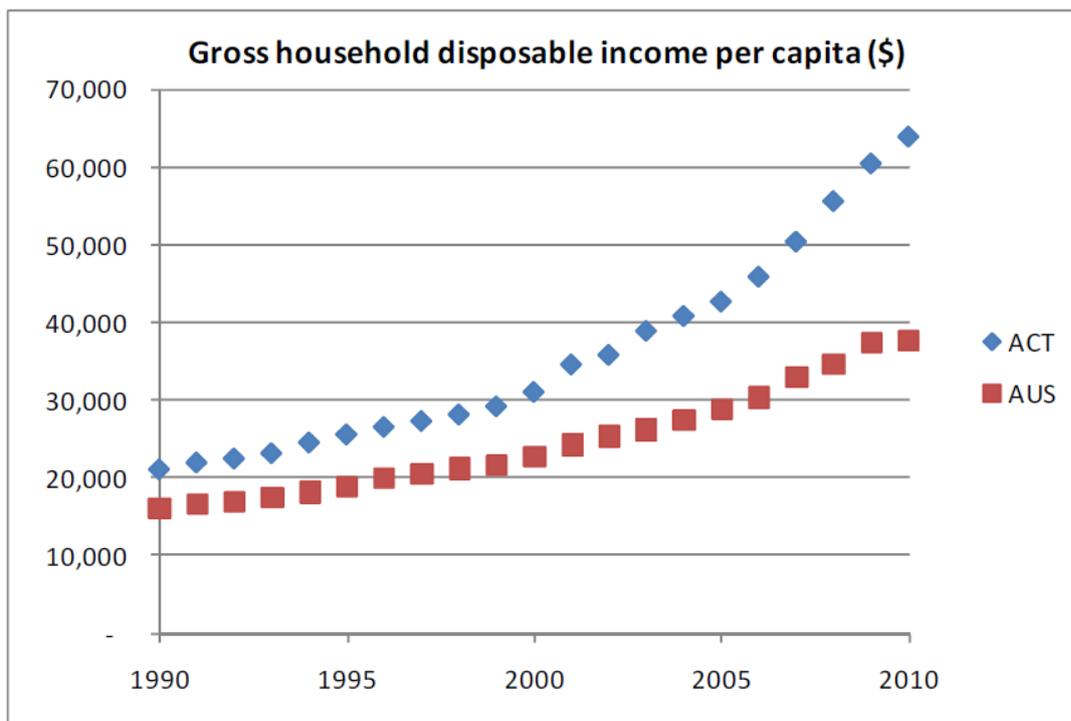


Fig 4. ACT and Australian gross household disposable income per capita

What are the consequences of an increasing footprint?

The ACT is not self-contained, the resources that we use come from across the world.

We only have one Earth. Using our natural capital faster than it can be replenished is like maintaining spending that continually exceeds income. This results in shrinking forests, loss of biodiversity, freshwater stress and climate change.

There are also social and economic costs. In a world with limited resources, excess consumption by some, requires that others live without sufficient resources to sustain life and health. If we in the rich countries maintain our current consumption patterns, we put pressure on others to live in poverty without sufficient resources to sustain life and health. Our ecological footprint is a social and economic issue as much as an environmental one.

The upcoming ACT 2011 State of the Environment Report will consider the consequences of our increasing footprint in the ACT, including what we have done that is making a difference and where we need to focus our efforts in the future.

What can Canberrans do to reduce our footprint?

1. Be smarter in our consumption and
2. Protect and enhance our natural environment so our land and water is biologically more resilient and productive.

1. Being smarter in our consumption

There are some things which have a greater impact on our ecological footprint than others. This is not necessarily linked to how much they cost. For example we can see from Fig 5 that energy is quite a small source of expenditure in regard to our income (red bar) but has much larger effect on our footprint (blue bar). There is great potential for services to play a significant role in the ACT economy, while helping us to reduce our footprint. As Fig. 5 highlights spending on services will have less of an effect on our footprint than spending on energy or food.

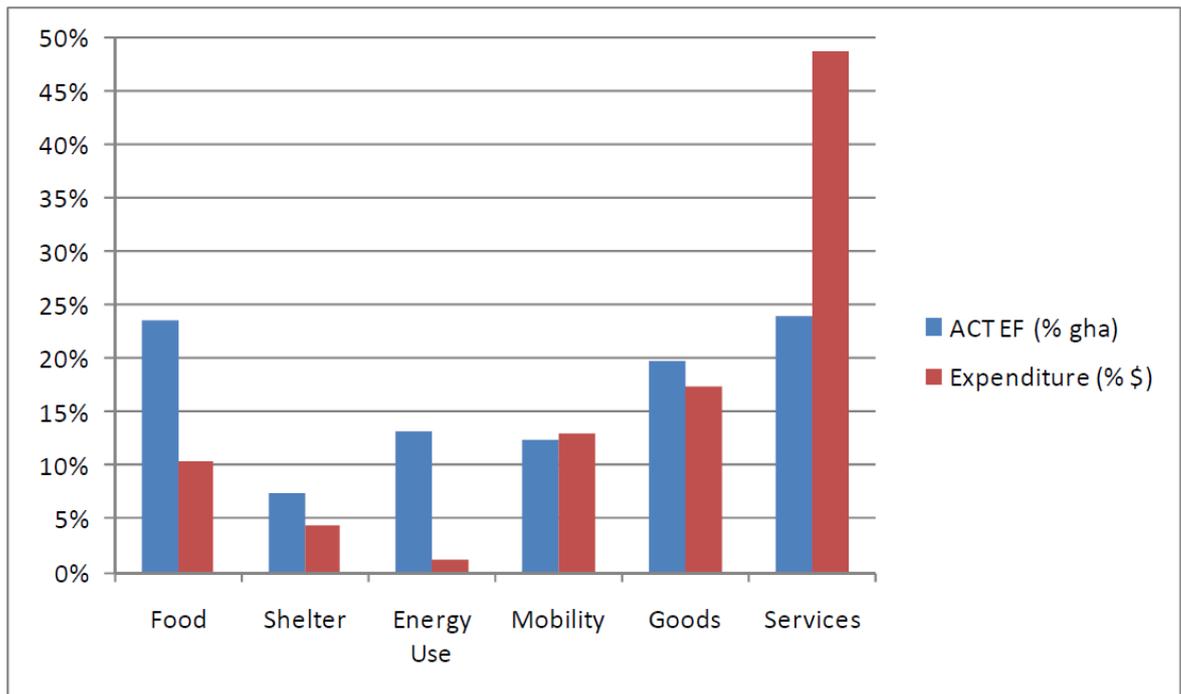


Fig 5. Comparison of consumption categories by Ecological Footprint and Expenditure, ACT 2008-09

Key decisions that Canberrans can make on a daily basis to reduce our footprint include:

- Repair, reuse or borrow where possible instead of buying new things.
- Before tossing something in the bin see if there is another use for it;
- Buy quality goods that are efficient and will last a long time;
- Invest in doing an activity as an alternative to purchasing goods. eg. Concerts, movies, picnics etc.;
- Use renewable energy; and
- Make your home and appliances energy efficient.

Larger changes need to be made with the help of community, business and government. These include:

- Transforming our economies to lower our overall resource use
- Improving the efficiency and source of our energy
- Pursing regional opportunities to promote renewable energy production and develop a green economy

2. Protecting and enhancing our natural environment

We need to invest in the health of our natural environment to improve its resilience. This needs to happen not just in the ACT but across the country and the world where the resources we use come from. In the ACT we have a significant amount of natural resources in our national parks and our nature parks and the supporting corridors.

The Office of the Commissioner for Sustainability and the Environment, will consider the consequences of our increasing footprint in the ACT in the upcoming *ACT 2011 State of the Environment Report*. We welcome suggestions from the community on ways to reduce our footprint. Suggestions can be provided to the Office by email envcomm@act.gov.au