22 May 2006

Committee Secretary
Standing Committee on Environment and Heritage
House of Representatives
PO Box 6021, Parliament House
Canberra ACT 2600

Proposed Sustainability Charter for Australia

Dear Committee Members,

The Committee is to be commended for initiating this Inquiry, with the purpose of creating a Sustainability Charter for Australia. Critically, the Charter will involve determining measurable outcomes and setting targets to assess progress towards reinventing Australia's cities as sustainable cities. The following is offered as input to what it would be valuable to encourage and measure with respect to the **built environment** and **ecological footprint**, as identified in a list of issues earmarked for particular attention in the Terms of Reference.

SUMMARY OF MAIN POINTS

- The language we use shapes our thinking – what do we really mean by 'sustainable development' and 'sustainability'?;
- Cities and urban environments are now the common human habitat, and are also the primary resource manipulators on the planet;
- Urban dwellers are psychologically 'disconnected' from their dependence on natural ecosystems, and are largely unaware of the environmental impact cities have beyond their physical location;
- Sustainability has a specific meaning, avoiding ecological overshoot - to do this we need a set of biophysical accounts that can track our demand on nature;
- One way of measuring and communicating ecological demands and sustainability is by determining the 'ecological footprint';
- Ecological Footprint is not just another term for 'environmental impact' – it has a specific meaning, which is that is measures how much human demand there is on the regenerative capacity of the earth, and whether this demand is within the limits of what can be supplied by one planet;
- Ecological Footprint requires as much care in its communication as its calculation – the Global Footprint Network is developing Standards and Guidelines which will be used to assess both Application and Communication of Footprint studies;
- Food systems are an often overlooked, but crucial aspect, of the sustainable cities debate

OPENING THOUGHTS

If only sustainability was as widely comprehended, passionately debated and able to capture people's imagination in the same way as Aussie Rules (insert preferred code here)...

Why Sustainability is Like Football

- Good leadership is important, but the commitment and contribution of everyone is vital
- Playing the ball and not the man (sic) is critical to its success

- Media coverage is critical to disseminating its meaning into popular consciousness
- The statistics don't necessarily show how well the game is being played
- Individual goals are necessary but not sufficient for success
- Its essential nature may be in danger of being lost if disconnected from the grassroots
- A level playing field is a prerequisite

BEYOND SUSTAINABLE DEVELOPMENT

The notion of 'sustainable development', which was derived from Agenda 21, the document resulting from the Rio Earth Summit in 1992 and adopted in Australia as 'ecologically sustainable development' or ESD, has many different interpretations. There is no real consensus as to what it means or how it should be applied. The definition most often cited is from the 1987 Bruntland Commission report 'Our Common Future':

> Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

This definition is problematic - how do we know what the needs of future generations will be? Many societies today are not just meeting needs, but also wants - shouldn't future generations be allowed to fulfil their wants as well as their needs?

Although in 1992 Australia adopted the term 'Ecologically Sustainable Development', the language in both terms implies that ecological systems should sustain development. If we are to make it unequivocal what we are trying to achieve, we need to start using terms that go beyond 'sustainable development'.

'Ecologically sustain**ing** development', or 'ecological development' brings the focus back to ecological systems (including human ecology), on which all life depends. 'Ecologically sustaining' means that **'development' should sustain 'ecology'** eg. development should not just try to minimise damage to our environment, but should work like an environmental repair kit. There is no point in 'conserving', 'protecting' or 'preserving' something if it is degraded - it is like mummifying a patient with heart disease without actively trying to heal the cause of the disease. The idea of 'protecting' the environment is a curious one, as in fact it is our environment that protects us.

Ecological development incorporates not only concepts of 'natural' ecosystems ('the environment'), but human ecology as well. Ecological development cannot occur without socially and economically vital human communities (witness the liquidation of natural assets all over the world to provide people with incomes) - the social, economic and environmental all comes under the definition of 'ecological'.

BUILT ENVIRONMENT

> I can't see how it's having an impact on the environment at all. Apart from trees and things like that that you have to get rid of to build the big houses...
>
> Developer, 'The Castle' 60 Minutes 26 Feb 2006
> http://sixtyminutes.ninemsn.com.au/sixtyminutes/stories/2006_02_26/story_1583.asp

There is no evolutionary precedent for the rapid urbanisation the planet has experienced in the last 200 years, and the way we currently build and live in cities is at the core of environmental impacts everywhere. Cities are not merely buildings and physical matter, they siphon nutrients and energy from both their hinterland and many more distant regions, and disgorge waste and pollution.

Cities have enormous potential as leverage points for change - not only is over half of humanity now living in urban areas worldwide, but development and the making of cities is the single most powerful source of impacts on the planet, and cities are the drivers of behaviours and processes which have the capacity to alter biophysical ecosystems on a global scale. It is imperative that we understand the city (not just buildings) as an ecosystem, acknowledging and addressing the behaviour of these mega-organisms, and how the influence of human settlements extends well beyond their geographical borders.

Creating and maintaining the built environment generates massive amounts of resource extraction and use.

> ...as much as a tenth of the global economy is dedicated to constructing and operating homes and offices. And dollar for dollar, this activity uses several times as much wood, minerals, water, and energy as the rest of the economy: buildings consume one sixth to one half of the world's physical resources...buildings account for roughly 40 per cent of the materials entering the global economy each year: some 3 billion tons of raw materials are turned into foundations and walls, pipes and panels...

> Lenssen & Roodman, 1995

Humanity needs to understand how and where our cities are appropriating and altering other areas of earth to service their needs:

> Estimates at the time of the Earth Summit (Rio) in 1992 found that 75 percent of the natural resources that we harvest and mine from the Earth are shipped, trucked, railroaded and flown to 2.5 percent of the Earth's surface, which is metropolitan. At that destination, 80 percent of those resources are converted into 'waste'.

> www.ruaf.org/files/UA%20and%20biodiversity.pdf
> Jac Smit, 'Urban Agriculture & Biodiversity'

Cities and urban areas, with their immense economic and political power, are central to global and local ecological problems, and they must become central to solutions.

One of the key changes which needs to occur is to psychologically connect urban dwellers with the impact of their lifestyles beyond their immediate environment. People generally do not link the seemingly inconsequential day-to-day decisions and aspects of their lives with broader environmental trends.

Currently, water is probably the main environmental issue people are aware of where they connect their actions to, for example, the health of rivers; climate change is only just starting to move into the consciousness of the mainstream community, almost 10 years after the Kyoto Protocol, and almost 15 years after the Rio Earth Summit.

People live, work and play in cities, they can see cities manifested around them, and - perhaps most significantly if they are to be the arena for addressing sustainability - cities exist at a scale which people can comprehend. Most people are able to grasp the notion of cities more readily than the often nebulous concepts of nations or states.

As one of the most urbanised countries on earth, Australia has a duty to promote understanding of the crucial role urban lifestyles have in relation to sustainability, and to provide leadership in harnessing the urban dynamic as a force for positive change (see Appendix 1). But to do this, we need to understand and accept that sustainability requires human demand on nature to remain within the biophysical limits of the planet.

Ecological Limits & Overshoot

All human beings, whatever their lifestyles, generate impacts on nature, but this is not a concern provided our impacts are within the means of nature, that is within the regenerative capacity of the biosphere.

Until recently, concerns over resource use focused on the depletion of finite non-renewable resources such as fossil fuels and minerals, however it is increasingly recognised that it is renewable resources which are the non-negotiable limiting factors for sustaining life.

Historically, countries have sustained economic growth by appropriating biocapacity (resources, ecological services, waste sinks) from elsewhere through purchasing power, with some waste such as CO_2 and CFCs being 'dumped' into the global commons. However this model of dependence on 'ghost acreage', which has both the developed and developing world alike in its grasp, ignores one simple reality – not everyone can be a net importer of biocapacity.

Once the biological carrying capacity of the planet is exceeded, 'development' occurs through the liquidation of the planet's natural capital stock, switching from the reproductive use of the resource base, which leaves it intact, to an extractive use, which reduces the total store. Instead of living off the Earth's 'interest', humanity begins draining the Earth's 'capital', and we move into what is termed 'ecological overshoot'.

Overshoot is the situation when human demand exceeds nature's supply at the local, national, or global scale. The level of overshoot is the amount by which nature's biological capacity is being used beyond its regeneration rate.

Therefore, despite the myriad of terms, definitions and meanings attributed to sustainability and its variants (including 'sustainable development' and its omnipresent Brundtland definition), **sustainability has a specific meaning - avoiding ecological overshoot.** Although avoiding overshoot is a minimum condition for sustainability in that it will not determine how well we all live once the minimum condition is met, sustainability is impossible without avoiding overshoot.

Without appropriate biophysical accounts, we cannot know whether we are moving into or avoiding overshoot. It would be **unthinkable to run a business without keeping the books** - a business which does not track its activities and keep accurate financial records runs the risk of bankruptcy - yet this is precisely the approach we take with the only planet within our reach capable of supporting life.

Underpinning humanity's current ecological crises is the lack of awareness of (or willingness to accept) this concept of biophysical limits. However it seems absurd to even contemplate limits, given the seemingly inexhaustible abundance of material and consumer goods within physical (if not economic) reach.

Ecological limits are typically not connected to an individual's personal experience - people in urban environments, often caught up in a consumer culture which promotes abundance and has not yet encountered ecological limits, are rendered **psychologically as well as spatially divorced** from their dependence on nature.

It is being increasingly recognized by all levels of government around the world that the Ecological Footprint is a tool that can both measure human demand on the biosphere, and help people to incorporate ecological limits in their perception of the world by linking the cumulative impacts of consumption to finite global carrying capacity.

ECOLOGICAL FOOTPRINT

The conceptual simplicity of the Ecological Footprint is very effective in communicating to a range of audiences with varying degrees of 'sustainability awareness', and can help to re-establish humanity's psychological connection to nature by measuring and making visible impacts which have largely been rendered 'unseen'.

> ...better than other methods, eco-footprinting seems to successfully communicate critical dimensions of human ecology to other disciplines and non-scientists alike. The eco-footprint personalises sustainability by focusing on consumption – we are all consumers. It then consolidates the data...into a single concrete variable, land area. Land itself is a powerful indicator because it is understood by everyone and popular understanding of the ecological crisis is prerequisite to any politically viable solutions.
>
> Rees, 2000

Dr Mathis Wackernagel, co-creator along with William Rees of the Ecological Footprint concept, now heads up the Global Footprint Network, which was formed to:

> ...promote a sustainable economy by advancing the Ecological Footprint, a tool that makes sustainability measurable; coordinating research, developing methodological standards, and providing decision makers with robust resource accounts to help the human economy operate within the Earth's ecological limits.
>
> www.footprintnetwork.org

City and regional Footprints can be calculated by creating a national 'consumption-land use matrix', and then producing a corresponding consumption land-use matrix for a city or region using local statistics to adjust each category ie. comparing local average consumption with national average consumption, and adjusting the national calculation accordingly.

It is indeed true that a 'reduction in the ecological footprint of Australia's major cities could be one of the major, overarching and measurable objectives of the charter'. It is an inescapable fact that reduction of urban footprints, particularly in OECD nations, will be essential to realising sustainable cities.

Even so, the message of limits, and of overshoot, is one which many people find confronting and uncomfortable.

> Many people experience a 'fear of footprint' when they think about their impact on the Earth. Other common responses are sadness, powerlessness, apathy, avoidance, anxiety, shock, anger, and guilt.
>
> Hancock, 2002
>
> We always think sustainability is so complicated, but actually it's a very simple concept. How can we all live well within this one planet that we have? That's all there is. What's hard about sustainability is the emotional drama around it.
>
> Mathis Wackernagel, San Francisco Examiner, 18 June 2001

It is imperative that the need to be aware of and mitigate our impacts on the environment is not imposed as a task on people – simply **telling people they must reduce their Footprint is unlikely to be effective,** not only because guilt or gloom and doom rarely motivates people, but because the words 'reduce', 'less', 'smaller' tend to have negative associations in a culture obsessed with 'more', 'bigger' and 'faster'. The capacity of individuals to change their footprint also depends on the 'infrastructure' available to them, not only in terms of whether public transport is available to them, but how easy it is to identify and access locally produced goods and services.

Therefore, individuals who want to make changes to their personal lives may experience powerlessness and/or apathy due to factors beyond their immediate control.

The approach of the Global Footprint Network is to communicate sustainability as a positive challenge: how can we all live the best quality of life within the limits of one planet? Eschewing 'solution salesmanship', this approach **invites people to the table around a common concern,** and taps people's creativity. The message must be carefully communicated, in conjunction with examples of where people are living a high quality of life on a smaller Footprint.

To this end, the Global Footprint Network have issued a draft set of Standards and Guidelines relating to both the Application and Communication of Footprint applications which seek to be accredited by the GFN (see Appendix 3). The Footprint is a useful indicator of sustainability but cannot in itself provide answers, just as standing on the bathroom scales will not tell you how to lose weight, hence the Communication Standard specifically requires the separation of fact from analysis, the numbers from policy prescriptions.

The Ecological Footprint can help communities to define their sustainability goals in specific and measurable terms, assess progress towards these goals by creating a benchmark for ecological performance, create strategies for accelerating progress and developing activities that maintain community interest in approaches which support sustainability.

Most significantly, the Footprint assists people to translate global ecological issues - which remain abstract and remote for many - into understanding and action at the local level by personalising sustainability.

FOOD SYSTEMS

Urban food security now increasingly depends on expanding supply lines operating on fossil fuels and the linear rather than cyclic flow of nutrients.

One key concern for urban dwellers, which rarely makes it onto the 'radar screen' in sustainability discussion, is the quality and security of the food supply. If the saying is true that any society is three meals away from anarchy, how secure are those supply lines? Food is as essential as energy and water (and relies on input of both), yet although the latter are both seen as 'essential services', it appears that the supply of daily sustenance requirements for millions is largely an issue for the market, and is often absent from the planning process of the urban form:

> Planning lays claim to being comprehensive, future-oriented, public-interest driven, and desirous of enhancing the livability of communities, and is concerned with community systems such as land use, housing, transportation, the environment, and the economy and their interconnections. The food system, however, is notable by its absence from most planning practice, research, and education.
>
> Pothukuchi & Kaufman, 2000

Yet along with energy*, food sits at the nexus of the built environment and ecological footprint.

* draw on water can be measured and compared with locally available supply, however water is not included in National Ecological Footprint accounts maintained by the Global Footprint Network, as currently there is no data available to enable water to be calculate and expressed in terms of **demand** on biocapacity – 1,000 cubic metres of water removed from an arid environment would have a different impact than removing that amount of water from an environment abundant in freshwater – therefore, freshwater is only included in that overuse or lack of water will affect the **supply** of biocapacity.

Ecological Load of Urban Food Systems

Human settlements have always depended upon agriculture for survival, however few city dwellers are ever faced with the effects their lives make on areas beyond the city limits, such as the consequences of large scale agriculture required to feed urban dwellers, the impacts generated by growing, amassing and transporting resources required for consumption in the city.

> Every day, an armada of petroleum-fuelled trucks, trains, ships, and planes hauls perhaps 20,000 tons of food into New York City - a mobilisation comparable in scale to that of a military invasion. In the course of the day, a large part of that cargo is converted into human energy, flesh, sweat, carbon dioxide, and heat. Most of the rest - including some 10,000 tons of organic garbage and sewage - is hauled back out of the city by a second, different, armada. The organic waste does not end up anywhere near the fields, orchards, or fisheries that produced the food and is not recycled back into the land. A large amount of it is exiled to landfills, permanently sealed off from the Earth's ongoing life.
>
> 'Closing the Nutrient Loop', Toni Nelson, Worldwatch Institute

Environmental impacts resulting from food production - such as dryland salinity, demand for water, runoff of pesticides and fertilisers made necessary by centralised production/monocultural agribusiness – are predominantly generated by the demands of urban markets.

Food production systems which are dependent on extensive external supply lines are also a large contributor to 'food miles', greenhouse emissions resulting from fossil fuel consumption required for transport & refrigeration.

> A few years ago, frugal Germans were taken aback when Wuppertal Institute researcher Stephanie Böge* revealed that producing a cup of strawberry yogurt - a popular snack of which Germans eat 3 billion cups each year - typically entailed about 5,650 miles of transportation. The manufacturing process involved trucks crisscrossing all over the country to deliver the ingredients, glass cup, and finished product to, say, Stuttgart. Shipments from suppliers to processors to suppliers added a further 7,250 miles of transport - enough in all to bring the yogurt to Germany from New Zealand. There's nothing exotic about strawberry yogurt; it can be made in any kitchen from milk, strawberries, sugar, and a few other common ingredients. It's not obvious what advantage is gained by such extreme specialization and dispersion, which might not exist if transportation were unsubsidized.
>
> * in Gibbs, W. W., 1997: "Transportation's Perennial Problems," Sci. Amer. 277(4):54_57 (Oct.).
>
> Hawken, Lovins & Lovins, 2000
> www.natcap.org/images/other/NCchapter10.pdf

Transporting food into the city from often distant locations has greenhouse implications – the further we have to transport it in (or out), the higher the embodied energy of our food. This is a **significant issue in relation to the cost of fuel and its effect on availability and affordability of food**.

Urban Agriculture

> ...agriculture and food consumption is the largest contributor to humanity's ecological load, appropriating over 60 percent of the planet's regenerative capacity...
>
> Wackernagel & Deumling, 2001

There is growing recognition that urban agriculture can meet a percentage of urban dwellers' food needs within urban areas. Urban food production (including permaculture, roof & community

gardens) may be the most powerful tool we have to close open nutrient, carbon and pollution loops while contributing positively to local and regional economic activity. Urban agriculture could also assist in arresting and reversing biodiversity loss:

> One acre of urban agriculture, using urban waste as an input, can save five acres, or more, of rural marginal agricultural land or rain forest...Urban agriculture is an effective tool to slow down the loss of biodiversity.
>
> www.ruaf.org/files/UA%20and%20biodiversity.pdf
> Jac Smit, 'Urban Agriculture & Biodiversity'

Development often neglects the potential for utilising its fifth facade - roofs are 'the last urban frontier', and are largely wasted urban space. Roof gardens have been established in many cities – their benefits include improved energy efficiency & reduced greenhouse emissions, stormwater attenuation, improved air quality & reduced urban 'heat island' effect, habitat to support biodiversity, economic benefits and educational & employment opportunities.

Incorporating urban food production into food systems has many potential benefits – reduction of greenhouse gas emissions and a range of other environmental impacts, protection of biodiversity, local economic stimulation, nutritional & other health benefits, reduction of urban heat islands, and via community gardens, community-building through people working together, and neighbourhood security as a result of passive surveillance.

Exploring the concept of edible urban landscapes will be a big part of evolving green cities. Increasing urban capacity for food production contributes to the ethos of sustainable cities, where cities are developed in such a way so that they are not only as ecologically benign as possible, but also productive (or 'biogenic') rather than 'biocidic' (or destructive).

Appendix 2 provides some resources and further information on all the issues mentioned in this submission.

Thank you for the opportunity to provide input into the process of developing a Sustainability Charter for Australia.

Yours sincerely,

Sharon Ede

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Lenssen, Nicholas & Roodman, David Malin (1995) 'Making Better Buildings' <u>State of the World 1995</u>, Worldwatch Institute www.worldwatch.org

Rees, William (2000) 'Eco-footprint Analysis: Merits and Brickbats' <u>Ecological Economics 32</u> Elsevier Science, New York US.

Wackernagel, Mathis & Deumling, Diana (2001) 'Eating up the Earth: How Sustainable Food Systems Reverse Humanity's Assault on the Biosphere' <u>Draft Briefing Paper Outline</u> for the philanthropic community on the ecological significance of sustainable food systems Redefining Progress, Oakland.

Appendix 1 – Ecological Cities: What Governments Can Do

Developed by Paul F Downton & Sharon Ede, Urban Ecology Australia, October 2001

What Governments Can Do

1. Conversations - Putting Ecological Cities on the Political Agenda

Ecocities and ecological sustainability can be promoted by catalysing discussions about the purpose, form and processes for creating them.

Governments can initiate dialogue and debate in the community about advancing sustainability through changing the processes and methods through which we develop, design, build and live in our cities.

2. Education & Social Marketing

Ecological cities are a key tool for advancing sustainability, and while the ideas of ecocities and sustainability should be embedded across government portfolios, academic disciplines, professions and trades, particular attention should be given to the architectural, design and planning professions, building owners, managers and developers and all levels of the building trades as these sectors have the potential to drive the greatest amount of positive change.

However, education is often a passive tool, and proactive social marketing campaigns are needed to meet the challenge of building support for reorienting our cities and civilisation towards sustainability. Only once it is clear to people that ecological degradation generated by current development processes threatens their long term well being, and that of their children and children's children, will demand for ecological options be given traction.

Governments can play an educational and social marketing role in helping the public recognise that ecological issues are relevant to their lives and creating a demand for ways of living that are ecologically responsible - ways that are integral to the processes and life structures of ecological cities.

3. Market Stimulation

Ecocities can only happen if the products and processes necessary for their creation are available. Emerging industries & markets that support ecological development (eg. alternatives to toxic and unsustainable building materials) can be developed and strengthened.

Government can actively support the green 'sunrise' industries and base its own procurement criteria on sustainable alternatives to set good examples and stimulate new markets.

4. Incentives

Current tax regimes contain environmentally inappropriate signals, eg. they mitigate against energy efficient construction and support high energy use in commercial buildings. The Building Code is also inadequate for the task of ecological rebuilding. energy efficiency in construction. At present in SA, for instance, there are only some fairly innocuous 'Performance Provisions' regarding energy efficiency and they only apply to Class One buildings, ie residential buildings, not apartments, commercial etc.

Governments can introduce taxation and legislative mechanisms that encourage equitable reductions in resource consumption and phase out perverse subsidies that promote resource use and pollution. The Building Code could most rapidly be improved in SA by having the Additions extended to include all non-residential buildings and the existing weak provisions for Class One buildings should be strengthened.

5. Infrastructure

Urban areas need to be decoupled from large scale systems of infrastructure including energy, water and food supply systems (which consume significant amounts of energy and resources, have massive replacement costs, and are vulnerable to accident, breakdown or sabotage) and instead support the establishment of smaller scale, decentralised systems of energy, water and food production such as grid connected photovoltaics, water harvesting & reuse, solar aquatics and community gardens and city farms.

Governments can gradually redirect financial and technical support from large scale to small-scale systems of infrastructure. There is a strong argument for decentralised/distributed systems of power generation, water supply, treatment and filtration, and sewage treatment, as a protection against the extreme vulnerability of centralised systems.

6. Indicators

Beyond State of the Environment Reporting, transparent and publicly available sustainability indicators and accounts that track urban demands on nature and compare it with available biological capacity must be established.

The Ecological Footprint is a tool which aggregates human demand on nature and reveals cumulative impacts. The average Australian has a 'Footprint' of 8.5 hectares per person, but if a 'biodiversity allowance' of 12% of Australia for other species is incorporated, our Footprint blows out to 9.7 hectares per person - however Australia's available biocapacity is 9.4 hectares.

Governments can institute natural capital accounts and undertake Ecological Footprint analyses to further understanding of how our cities do or do not fit the ecological capacity of their regions.

7. Supporting Communities

Ecological development is about much more than green technologies which improve water conservation and energy efficiency, it is about engaging communities and enabling them to meet their own needs through being active participants in the development processes.

Governments can support communities who are undertaking ecological development projects, and providing opportunities for training communities in a range of skills such as business plans, project management, green building technologies and legal literacy.

8. Urban - Regional Connections

It is imperative that we understand the city as an ecosystem, acknowledging and addressing the behaviour of these mega-organisms, and their impact beyond city limits. Estimates at the time of the Earth Summit (Rio) in 1992 found that 75 percent of the natural resources that we harvest and mine from the Earth are shipped, trucked, railroaded and flown to 2.5 percent of the Earth's surface, which is metropolitan. At that destination, 80 percent of those resources are converted into 'waste'.'

Governments can adopt regional planning processes and methodologies that seek to fit urban systems within the constraints of eco-biophysical, as well political, reality.

9. Championing Ecological Cities

Show that addressing long term ecologically viable development requires cities that are conceived and created with a thorough understanding of bio-physical ecosystem process and human ecology. It must be tested and demonstrated that changing the way we build and live in our cities is desirable. With examples of what ecological development could look like and what economic, social and environmental benefits it brings, people will be more likely to re-examine and alter their familiar and comfortable patterns of living and freely choose the ecocity option.

Governments can identify and promote examples of ecological development such as that initiated by UEA at Christie Walk in the centre of Adelaide.

www.christiewalk.org.au

Ecocity Policy Settings for Government (version 1)
UEA - Ede/Downton 1-10-01

Appendix 2 – Further Information

Ecocities, Ecological Footprint, Food Production & Roof Gardens:

- Ecocities

www.christiewalk.org.au
Christie Walk, a piece of ecocity in Adelaide's CBD

www.urbanecology.org.au
Urban Ecology Australia, an Adelaide-based non profit community group which advocates the rebuilding of human settlements as ecocities by education and example

www.ecocitybuilders.org
Ecocity Builders, Berkeley California

- Ecological Footprint

www.footprintnetwork.org
Global Footprint Network

www.footprintstandards.org
GFN Standards Development

www.epa.vic.gov.au/Eco-footprint
EPA Victoria's Ecological Footprint Program

www.panda.org/livingplanet
World Wide Fund for Nature's Living Planet Reports (including Footprint)

- Food Production

www.communityfoods.com.au
Community Gardens, Farmers' Markets, Community Supported Agriculture

www.cityfarmer.org
Urban Agriculture Network

www.sdrc.auckland.ac.nz/cp/sho003-2Kcp.pdf
Food Production in Cities - Sustainable Design Research Centre, University Of Auckland

www.sustainweb.org/chain_index.asp
Sustainable Food Chains

- Roof Gardens

www.greenroofs.net/index.php
Green Roofs for Healthy Cities

www.greenroofs.com
Green Roofs Industry Portal

www.roofmeadow.com
Roofscapes

Appendix 3 – Global Footprint Network Communication Standards & Guidelines (draft)

Standard 10 Separation of Analytical Footprint Results from Normative or Values-based Interpretations

Intent:

To ensure that the analytical, science-based Footprint results are recognized and accepted as valid, the Footprint report clearly distinguishes between analytical results from the Footprint measurement and any conclusions, interpretations or recommendations relating to policy, planning or practice.

Additional Information:

In the financial world there are two separate functions: accounting (documentation of what is), and financial planning (strategies for how to reach a goal). In Footprint assessments too, analysts need to be clear about what part of the study is documentation/analysis, and what part is recommendations for action. Certification only applies to the analytical part of a Footprint analysis. Certification does not assess or validate recommended actions. However, only studies that do not confound accounting and recommendation can be certified.

Descriptive statements such as "we humans are using 1.2 planets" or "The per capita US Footprint is 5 times larger than the capacity that exists per person on this planet" are admissible and encouraged. They are powerful in themselves, and lead people to formulate their own conclusions about the nature of the problem, and ethical or moral implications of resource use. Such practices translate into statements like: "x global hectares exist per person. In contrast, this population uses y global hectares per person." (Yet stating, for example, "the fair share is x hectares per person" would not qualify for certification).

Requirements:
(Each requirement is assessed as Pass, Fail, or Not Applicable)

10.1 The report includes an estimate of the global biocapacity in gha per person.

10.2 The report explains the difference between global biocapacity and regional or local biocapacity. (Note 10A)

10.3 The report explains that the Footprint analysis compares human demand on the earth's biocapacity to the available biocapacity, i.e., an accounting of biocapacity supply vs. demand, given current technology and consumption patterns.

10.4 The Footprint report measures the demand of activities (producing, using, consuming). The Footprint of any entity results from the entity's activities, rather than from the mere existence of the entity.

10.5 The report makes clear that the Footprint is an ecological accounting tool, and as such, may inform choices but does by itself not advocate nor promote any particular strategy, policy, or solution.

10.6 Any discussion that implies rights to, or limits on rights to, a given per capita Footprint (as for example in phrases such as Fair share, Fair Earthshare, equitably allocating, etc.) is kept clearly distinct from the analysis and not presented as a necessary conclusion of the methodology nor attributed to Global Footprint Network. Descriptive statements comparing per capita demand to per capita capacity do not violate this requirement, nor do any statements clearly identified as the

opinion of the report's author. Discussion of rights, or limits on rights, that are codified in law, does not violate this requirement.

Guidelines:

10.7 Best practices include statements comparing actual consumption to global averages and availability. They also report on national or regional biocapacity.

10.8 Best practices include discussion of the ramifications of global and local capacity, as well as discussion related to import/export of demand and biocapacity. (See also notes 13A and 13B in Standard 13 for additional discussion)

10.9 Best practices may outline possibilities and options for action, yet does not endorse. It analyzes the current situation, and compares this with alternative scenarios, or identifies opportunities.

10.10 Best practices use the Footprint to stimulate people's creativity and encourage participation. In many cases where Footprint is being used, it is more effective to focus on the consumption dilemma and range of possible solutions, rather than advocating particular solutions or support for a particular interest (Note 10B). By using the Footprint to provide data, it helps invite people to the table and build consensus around the concern about ecological overshoot. This approach generates questions and asks participants, be they cities, businesses or individuals, for participation and for contributing their solutions.

Notes:

(10A): The report makes Footprint comparisons that are based on global biocapacity, reported in global hectares (gha) or global acre (gac). Global comparisons are necessary, because the Footprint is grounded on global biocapacity and global demand. The report can also use standardized local hectares as long as the conversion into global hectares is provided. Local hectares, such as Dutch hectares, would show the biocapacity per average Dutch hectare. In a given year, each Dutch hectare would be worth a constant, fixed amount of global hectares

(10B): For example, the term 'fair earthshare' raises the following concern: While the Footprint provides a powerful framework for describing social resource (in)equity within the context of global limits, using interpretative words like 'fair earthshare' can muddle description with prescription. Separating analysis from judgment makes the analysis far more powerful. It lets the analysis speak for itself. At the same time it also provides more support for those who want to use Footprint results for their interpretations. Early Footprint (and environmental space) analysis ran into unnecessary barriers and controversies by mixing what the analysts thought is fair with the analysis of what is happening now. This allowed contrarians to attack the analysis, thereby also undermining the arguments of the interpreters.