

# Sowing and Growing

## Resources



### Notes

These resources should be added to those local resources already collected.

Resources can assist teachers to

- help students use content knowledge to complete tasks,
- use pedagogy and teaching strategies to assist students to undertake tasks well
- plan and organise activities
- help students use thinking strategies to achieve higher order outcomes
- access further resources on Nauru and online, including people who can help students

### Reading the tasks

Each task helps students address some of the goals in the Nauruan Curriculum Footpath. Interpret the task through the list of goals for this task.

This task is part of TVET program, thus teachers need to talk about preparing for work, having a work ethic, and contributing to community work.

This task is a response to community research which emphasised that young people of Nauru need to develop appreciation for Nauruan culture and “bring back” Nauruan cultural skills and knowledge. This means teachers have two responsibilities:

- 1) To assist children to learn from community members and archives and keep that knowledge (perhaps digitising it before it is lost) and
- 2) To show the community that the students are developing the skills (use the community as an audience for student work).

### Existing resources

Use the Teachers Diary to include thinking skills in lessons and to assist students to engage in deep thinking when doing activities in this task. Explicit training in using thinking strategies is required throughout schooling and especially during tasks. The “Included Skills” list contains thinking strategies embedded in tasks. The diary describes the strategy and gives examples.

Use local people and existing publications. Collect information and where practical, digitise it so it can be reproduced and used over and over. Develop a Teachers’ Library for each task in the school to preserve resources for next year.

Use resource lists from other tasks. There is some overlap in the subject matter, skills and cultural knowledge, so resource lists from other tasks will support this task.

### Nauru Curriculum Footpath

Personal Pathways

Communication Pathways

Community Pathways

Environments and Technology Pathways



## Thinking skills

Aim at using the higher levels of Anderson's Taxonomy of Thinking as much as possible in classroom questions and in helping students' record information. Have a Thinking Levels chart on the wall and constantly encourage children to ask good questions. Use your Teachers Diary to find out more about Anderson's Taxonomy (Remember, Understand, Apply, Analyse, Evaluate, Design) and the question starters for each level of thinking. Remembering and Understanding are low levels of thinking. Note the tasks are specifically designed to help students demonstrate high levels of thinking. This is clearly evident in the Grading Masters, especially for A and B standards.



Online Resource

### Thinking Framework

[http://www.itcpublications.com/free\\_resources](http://www.itcpublications.com/free_resources)

Free PDF version plus information about the poster to help teacher use it. Includes a discussion of Gardiners Multiple Intelligences.

### Example: Same and Different

In this task students need to research and summarise the main similarities and differences of pre-colonial and modern lifestyles, particularly in their use of plants, and what they ate. This could extend to how things were grown, stored etc, be creative and expansive so students learn a great deal about old ways of doing things.

Students can research one thing in depth and then share their knowledge. The following teaching strategy allows this and encourages students to think deeply and carefully about their ideas. They will use this research method over and over, and use the sharing experience to gather ideas for their home project.

Build a large list of things that were done in pre-colonial days with plants. If you can, find pictures or tell a story (or have someone else tell a story) about what was eaten and how it was obtained/prepared etc.

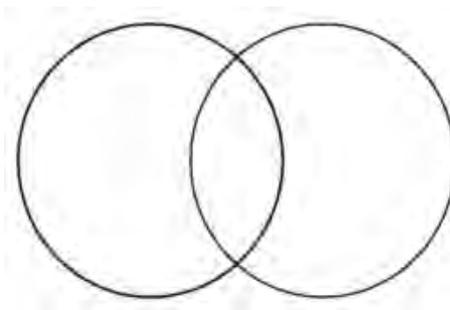
1. Divide class into A's and B's. That is, point to each student and label them as an A person or a B person. Or use fun terms like Cookies and Cream. – so say “cookie, cream, cookie, cream” until all students have a label for the activity
2. Give each A (or Cookie) person a different plant or example to research about how it was used in pre-colonial times. They need to get ready to share their story with one other person. Give a B (or Cream) person the same plant or use and ask them to describe/draw how it is used in modern times. You need to have all the stimulus material ready in the classroom so the activity does not take too long.

Example research topics: coconut milk or Plants were used for flavouring fish

If students need some ideas on what to share – brainstorm a list of questions to answer and share For example: Where is the plant found? Who gathers or harvest it? Do people share the workload?

Do what you can to help students compare old ways and modern ways.

3. An A and a B person on the same topic tell their story and both write a list of what is the same and what is different about the same task or plant use in modern and old times – a Venn diagram is a good way of talking though and thinking about things that are the same and things that are different Is anything in the intersection of the two circles of the venn diagram?



4. Each pair of students can share their venn diagrams with the class and discuss them. The teacher should identify the common differences between the groups and help children think about the sustainability of modern practices.

### Information: Fact sheets

Fact sheets from gardening shows on TV are terrific resources. They are short, to the point and easy to find.

Gardening Australia and Burkes Back Yard are good for information on composting, gardening and soil care.

Do a search for Fact Sheets and the topic but be careful you find information relevant to Nauru. Searching for “composting for children” “gardening for children” etc, will provide you with resources of an appropriate reading age and with ideas that are clear and simple to do.

The South Pacific Regional Environmental Program (SPREP) have a series of fact sheets of interest to Nauruan children <http://www.sprep.org/factsheets/index.htm> The SPREP site has considerable general information on climate change and contemporary environmental issues for the Pacific.

Some fact sheets have been reproduced here.



## Managing Compost – ABC Fact Sheet



**Presenter: Jane Edmanson, 12/09/2009 SERIES 20 Episode 33**

Compost is the cornerstone of all healthy soils but making it is not always as easy as it should be.

Compost is simply rotting vegetation and includes anything organic; animal, vegetable or mineral - anything that can be consumed by worms, bacteria or fungi. In order for the organisms to do their work, the correct environment is essential. Gardeners often have rotten, smelly composts and this is usually because they've deposited a whole lot of kitchen scraps and left it.

Perfect compost depends on maintaining a good balance of carbon-containing ingredients and nitrogen-containing ingredients. An easy way of remembering which products contain carbon and which contain nitrogen is to simply think that 'brown' ingredients are carbons and 'green' ingredients are nitrogen.

- **Carbons:** Autumn leaves are brown and they are one of the carbon ingredients, as are pea-straw, lucerne hay, sugar-cane mulch and moistened cardboard. Egg cartons and pizza bases are other examples and these can be collected, moistened and put into the compost. Shredded newspaper is also fantastic but glossy magazines should not be put in the compost.

- **Nitrogen:** Lawn clippings are a perfect example of greens and will rot down beautifully, bringing nitrogen into your compost. Garden prunings, leaves, kitchen scraps, citrus peelings, egg shells, tea bags, coffee grindings are other great examples of compost greens.

You may have read it's best to use a carbon, nitrogen ratio of 30:1. Jane says it's not imperative stick to that. "If I look in my compost and it's too wet or dry, I fix it."

- **Wet compost:** Compost needs to be moist but not wet. If it is too wet it becomes sludgy and won't break down. To fix this simply add some dry ingredients such as cardboard, shredded paper or pea straw. Try to mix this through.
- **Dry compost:** On the other hand, if your compost is too dry it can be solved by adding more green ingredients such as lawn clippings or kitchen scraps. A small amount of water can also be added to your compost for moisture. Ideally, you want to achieve fine compost that's light and frothy but not too moist.

### Problems:

A common problem when composting is that there's not enough oxygen getting into the middle. Air is important because the worms and other little creatures need oxygen to survive. Three or four times a week you need to aerate the compost by simply turning it over with a fork. Alternatively, PVC piping can be used, as can rolled-up chicken wire by inserting them into the compost at the start and piling the ingredients around them. Another way to get air to the middle is to push a crowbar into it.

Another problem can be the size of the compost materials. People often don't chop things up small enough. Eggshells are great in compost, but you need to make sure they are crushed up as fine as possible as they may not rot down.

Many people question the use of citrus peelings. It is best not to use too many due to their acidity but if you crush or cut them up, they really make quite good compost and the worms don't mind them. If you have vinegar flies hanging around there may be too much citrus. To get rid of vinegar flies add some dry material on top.

Unless you have an enclosed compost bin, it's best not to use meat scraps or cheese as they attract vermin. If you're the kind of composter that only has kitchen scraps, keep some sugar cane mulch or a bale of pea straw by the compost bin. Every time you go down, empty the kitchen scraps in and then put two handfuls of sugar cane mulch or the pea straw in too.

Jane says, "If you follow all my instructions, you'll end up with compost good enough to eat".



## ABC Fact Sheet: An Easy Compost Bin

Presenter: Sophie Thomson, 06/06/2009



### Episode 19 Queen's Birthday 'Best Of' Special

After a day with pruners or secateurs rejuvenating the garden, removing old woody growth, deadheading spent flowers, tip pruning and shaping plants; you're left with a tidier, healthier and more productive garden. Of course you're also left with a big pile of green waste. Many gardeners send this off to the tip, but Sophie says, "There is a more sustainable option, because if dealt with properly, this waste can become a valuable source of compost."

#### Instructions for building the simple compost bin:

- 4 star pickets, or metal stakes
- 6 metres of chicken wire

- Plastic cable ties
- Old tennis balls
- Cardboard
- Carpet underlay
- Sledge hammer
- Wire cutters

It's important to build the compost bin directly onto the ground, rather than on concrete or paving, as this allows worms, bacteria, fungi and other beneficial organisms can get to the compost. In summer, place it in the shade so it doesn't dry out.

- Hammer the star pickets into the ground to create the four corners of a square.
- Wrap the chicken wire around the posts and fasten with cable ties.
- If you're concerned with the sharp edges on top of the star pickets, slit some old tennis balls and push them on.
- Line the insides with cardboard to stop compost material from falling out. Eventually the cardboard will also break down and become part of the compost.
- To get as much air into the compost as possible, roll-up some leftover wire into two tubes and insert them into the middle of the bin. The compost can then be stacked around them.
- When the compost is ready you can access it by cutting the last set of cable ties and opening the wire like a gate.
- Because the wire is secured with cable ties on the other posts, the tension remains.

#### **Making compost:**

- Woody material can be put through a mulcher first, or broken into small pieces.
- Make alternate layers of green (grass clippings, leafy prunings) and brown waste (dead material, cardboard), interspersing thin layers of green material with about three times as much brown or dry material like dry leaves, twigs and straw.
- The time the compost takes to break down will vary depending on how woody and thick the materials are.

#### **Maintenance:**

- Turn the compost regularly if you can to let the air in to help decomposition.
- One of the biggest challenges with a compost pile in summer is that it can dry out, so cover it up with cardboard, hessian or even some old horsehair carpet underlay to reduce the evaporation.
- Water it if it does get dry.

## **Fact Sheet: Working Chooks**



### **Presenter: Josh Byrne, 26/09/2009: SERIES 20 Episode 35**



At the Environmental Technology Centre at Murdoch Uni in Perth they have built a chicken / vegetable rotation system as an example of how the two can be integrated.

#### **Protection from Predators**

- Chicken wire fences have been sunk 40 centimetres into the ground and the trench backfilled with rubble to stop dogs digging their way in.
- A concrete strip under the gate is for the same reason.
- Netting across the top of the pen prevents wild birds from raiding the feed.

#### **Shelter from Weather**

- The hen shed needs to keep the rain out and have good air ventilation.
- Build a perch for the birds to roost on at night and a cosy nesting box for egg laying.
- Lay down straw as deep litter to soak up manure which can be taken out every four to six weeks and composted.

### The Purpose of the Design

The system is designed with a central henhouse that backs onto four, equally sized ranging yards for the purpose of crop rotation. The reason there are four bays is so the system can tie in with a traditional vegetable rotational plan, where vegetables that like a lot of nitrogen such as leafy greens, follow in the wake of the poultry. Following the leafy green crops are the fruiting crops like tomatoes, eggplant or capsicum, and finally, the root crops.

At the end of the season when the crops have finished, the chooks clean up the leftovers before being allocated a new bay when it's time to plant out again. This way their scratching habits are put to use without trashing the garden.

### Planting Time

Josh plants corn and cucurbits. There's plenty of organic matter in the soil because the chooks have been scratching in the weeds and green feed so there's no need for additional compost.

- The drip line is reinstalled. This irrigation zone is turned off when the poultry are ranging but, prior to planting, it's laid out and pinned in place again.
- Finally the seeds are planted right along the dripper. Corn should always be planted in rows at least three wide to insure good pollination. Around the outside of this bed, Josh plants cucurbits like cucumbers, squash and melons.

### Chook Care

The chooks will need additional feed to scraps and weeds, including a mixture of grains and shell grit.

- They'll also need plenty of fresh water, especially during hot weather.
- Check chooks regularly for mites and fleas around the face and the legs.
- Give them plenty of love and you'll soon find them an indispensable part of your garden.

### A Word of Caution

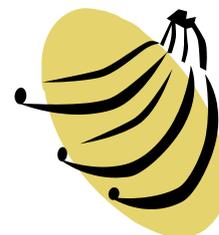
Be aware that chickens can accumulate soil-based residual pesticides in their bodies and pass these on to you through their eggs. To be safe, get the eggs or soil tested at an analysis laboratory which can be located through your local health department.

Josh says, "This is a simple and clever system. Planting after the chooks have been in the garden makes the most of the valuable natural fertiliser they leave behind. This also means nutrients are taken up by the crops rather than being washed through the soil and lost. The concept can be applied to existing chook runs, simply by partitioning off an area, or even by using a mobile pen which you can move it back and forth over a vegie bed."



### Information: Bananas

There are numerous members of the banana family which vary in size, growth rates, leaf color and so on but all are unmistakably bananas all the same. The banana variety from which we actually derive the classic banana fruit is the Cavendish variety which is sterile and therefore is grown from taking small cuttings from adult plants. The Dwarf Cavendish retains the same appearance (without the fruit) but grows to a far more reasonably size in the home.



But there are also a variety of more unusual bananas which can be grown from seed and which make striking, sometimes worrying fast growing, plants. Bananas like warm, damp, bright conditions with rich soil if they are to do best so plants are generally best kept on a south facing windowsill or in a sunny glasshouse. Some can be difficult to germinate so it is worthwhile to go through a three step process to maximize your chances.

Firstly soak the seeds in water for 24-48 hours to let them absorb as much water as possible. Then remove them and "chit" half of them. Some banana species need this minor damage before they will germinate but some seeds will germinate without it and whenever you are deliberately damaging a seed there is a risk you will go too far. Basically all you need to do is to take a very sharp knife and cut a small notch in the seed.

Finally the seeds are ready for planting in moist, rich compost. Cover the pots to keep in the moisture and ensure you check on them daily so that you can be sure they are staying warm and moist at all times.

Germination times vary and it may take from a few weeks to several months before you actually see any life so don't give up hope too soon.

Bananas are best suited to a warm, frost-free, coastal climate and usually grow well as far south as Perth and Sydney. They need all day sunshine and moisture. Before planting, thoroughly loosen the soil. For each plant I've added three buckets of compost, plus a bucket of blended organic manure and mixed a handful of lime thoroughly into the soil surface. This creates a slightly raised planting mound to improve drainage around the roots.

If you're planting several bananas, keep them four to five metres apart. Mulch and water them well. Bananas are hungry plants. Each one will need a bucket of blended organic fertiliser, applied four times a year, and water them regularly, particularly in dry weather.

They're suckering plants. But producing too many suckers will reduce yields. Just go for a leader and two followers – or two strong suckers - and remove the rest. Performance with bananas is connected to food and maintenance. Remove any dead material and when a stem has finished fruiting it will die. Cut it out and remove the dead leaves regularly – compost them for the garden.



### Information: Container gardening

Container gardening is a practice that has become more popular for growing vegetables because thanks to its easy process. Here is a look at how to grow vegetables in a container.

First you will need to gather the right containers for the practice. It is generally best to use larger containers that are wide and can drain water with ease. Having your kids help you with choosing some of the best looking containers for a garden can be great.

Next for how to grow vegetables in a container you should check on the aeration of the containers. You can have your kids work to help with creating small holes that can be used to help with getting water to be properly drained out of a container. This can work to help with preventing soil diseases.

You can also ask your kids if they are of middle ages to help you with weeding. This will be easier for them to handle weeds in containers because it will be easier to handle weeds that come out of individual plants. Also, the weed problems will be centralized.

After you gather the vegetables and containers you will need the right type of soil. In this part of how to grow vegetables in a container it will help to find soil that is capable of handling water with ease and is fresh





### Can I grow a complete diet?

Growing a variety of foods and what they contribute to a diet. Useful 3 groups classification system students will be able to use in this task as an analysis tool. Contains a fair bit of details technical information. It may be useful to show students how to read scientific tabular data and how table design aids readability.

[http://www.agroforestry.net/pubs/Can\\_I\\_Grow\\_a\\_Complete\\_Diet.pdf](http://www.agroforestry.net/pubs/Can_I_Grow_a_Complete_Diet.pdf)



### Using sea weeds as a sea vegetable

Good article with a range of information sections, but is still very readable. Includes recipes. A general search for “sea vegetables” will provide interesting ideas students might consider. Sea vegetables can not be easily cultivated but information on caring for naturally occurring vegetables and impact of an unhealthy environment on growth and quality will be thought provoking.

<http://www.sixwise.com/Newsletters/2009/January/28/Sea-Vegetables-Why-You-Should-Eat-More-of-These.htm>



### Sustainable gardening and what you can do

Good clear fact sheet with ideas people can do at home to be sustainable. The students though, need to work out what can be sustained on Nauru, which things are in short supply and how to find alternatives. Students need to spend quite some energy on understanding what sustainability means in the Nauruan context. This is the key concept in this task. A and

B students need to understand the concept deeply and know how to apply ideas to their projects.

<http://www.abc.net.au/gardening/stories/s2585112.htm>

### Other reference material

Essential resource site about all the trees grown on Nauru

<http://www.traditionaltree.org/>

Quite detailed tree profiles. Teachers should build up a collection of the Profile documents and add them to the Teachers Library for this task. The most comprehensive and reliable information around for this task. Reading the Reviews from the organisation will help teachers understand the issues as climate changes and other forces impact on Nauru.

Nauru’s history in one long story.

<http://www.ucpress.edu/books/pages/8453/8453.ch02.php>

Very readable history of Nauru’s past.



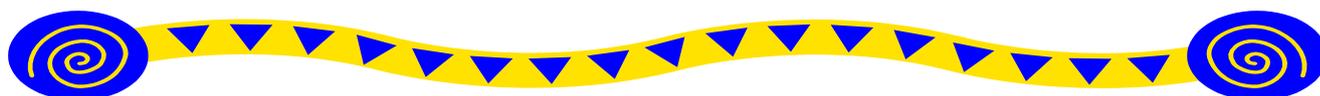
### Information: Wikipedia definitions

It is often very useful to begin finding out about something by reading Wikipedia. Type your search term into

<http://en.wikipedia.org>

Often general search engines can help – type in “What is compost” into a search engine. Often they suggest Wikipedia definitions as well as others. Be creative but straightforward in what you want to define and Wikipedia and others will help.

The following is a good example. This is an extract from Wikipedia’s definition of



## Sustainable Gardening.

**Sustainable gardening** (which is taken here to include sustainable landscapes, sustainable landscape design, sustainable landscape architecture and sustainable sites) comprises a disparate group of horticultural interests that share, to a greater or lesser extent, the aims and objectives associated with the international post-1980s [sustainable development](#) and [sustainability](#) programs developed to address the fact that humans are now using natural biophysical resources faster than they can be replenished by nature.<sup>[1]</sup> Included within this compass are those home gardeners, and members of the landscape and nursery industries and municipal authorities, that integrate environmental, social and economic factors in an attempt to create a more sustainable future.

[Organic gardening](#) and the use of [native plants](#) are integral to sustainable gardening.<sup>[2]</sup>

### Historical development

Main articles: [Sustainability](#) and [Sustainable development](#)

Many of the eco-friendly principles and ideas espoused by sustainable gardens, landscapes and sites perpetuate sustainable practices established as a reaction to resource-intensive industrial agriculture. These practices were established as movements for self-sufficiency and small-scale farming based on a holistic systems approach and ecological principles. Included here would be: [biodynamic agriculture](#), [no-till farming](#), [agroecology](#), [Fukuoka farming](#), [forest gardening](#), [organic gardening](#) and others. On a larger scale there is the more recent "whole farm planning"<sup>[5][6]</sup> which was established in 1995, and [ecoagriculture](#)<sup>[7][8]</sup> established in 2000, and other variants of sustainable agricultural systems. Perhaps the most influential of these approaches is [permaculture](#), established by Australians [Bill Mollison](#) and [David Holmgren](#) as both a design system and a loosely defined philosophy or lifestyle ethic.<sup>[9]</sup> Permaculture shares many principles and practices of the above but not the broad philosophical base as indicated by the title of the 2002 publication *Permaculture, principles and pathways beyond sustainability*.<sup>[10]</sup> The application of sustainability principles to the horticultural sphere has now becoming broadly accepted in commerce and academia.

### Definition

## Sustainability

*... design, construction, operations and maintenance practices that meet the needs of the present without compromising the ability of future generations to meet their own needs*

by attempting to:

*...protect, restore and enhance the ability of landscapes to provide [ecosystem services](#) that benefit humans and other organisms.* <sup>[12]</sup>

### Principles & concepts

Managing global biophysical cycles and ecosystem services for the benefit of humans, other organisms and future generations has now become a global human responsibility.<sup>[13]</sup> The method of applying sustainability to gardens, landscapes and sites is still under development and varies somewhat according to the context under consideration. However, there are a number of basic and common underlying biological and operational principles and practices in the sustainable sites literature.

### Biological principles

Sustainable management of man-made landscapes emulates the natural processes that sustain the biosphere and its ecosystems. First and foremost is the harnessing the energy of the Sun and the cycling of materials thereby minimising waste and energy use.

Running within, and dependent on, the natural economy there is the production and consumption of goods and services in the “human economy” which has now significantly altered, in a detrimental way, natural biogeochemical cycles (notable here are the [water cycle](#), [carbon cycle](#) and [nitrogen cycle](#) so sustainable practices maximise support for ecosystem services.<sup>[11]</sup>

### Native plants

The use of [native plants](#) in a garden or landscape can both preserve and protect natural ecosystems, and reduce the amount of care and energy required to maintain a healthy garden or landscape. Native plants are adapted to the local climate and geology, and often require less maintenance than exotic species. Native plants also support populations of native birds, insects, and other animals that they [coevolved](#) with, thus promoting a healthy [community](#) of organisms.<sup>[2]</sup>

Plants in a garden or maintained landscape often form a [source population](#) from which plants can colonize new areas. Avoiding the use of [invasive species](#) helps to prevent such plants from establishing new populations. Similarly, the use of native species can provide a valuable source to help these plants colonise new areas.

Some non-native species can form an [ecological trap](#) in which native species are lured into an environment that appears attractive but is poorly suited to them.

### Operational principles

Enhancement of ecosystem services is encouraged throughout the lifecycle of any site by providing clear design, construction, (operations), and management criteria. <sup>[11]</sup> To be sustainable over the long term requires environmental, social and economic demands are integrated to provide intergenerational equity by providing regenerative sustainable systems. Operational guidelines will link to and supplement existing guidelines for the built environment (supplementing existing green building and landscape guidelines)<sup>[11]</sup>, the wider environment, and they will include metrics (benchmarks, audits, criteria, indexes etc.) that give some [measure of sustainability](#) (a rating system) by clarifying what is sustainable or not sustainable or, more likely, what is more or less sustainable.

### Direct and indirect environmental impact

Impacts of a site may be *direct* by having direct measurable impacts on biodiversity and ecology at the site itself or *indirect* when impacts occur away from the site.

### Site principles

- Do no harm
- Use the [Precautionary principle](#)
- Design with nature and culture
- Use a decision-making hierarchy of preservation, conservation, and regeneration
- Provide regenerative systems as [intergenerational equity](#)
- Support a living process
- Use a system thinking approach
- Use a collaborative and ethical approach
- Maintain integrity in leadership and research
- Foster environmental stewardship<sup>[11]</sup>

### Measuring site sustainability

One major feature distinguishing the approach of sustainable gardens, landscapes and sites from other similar enterprises is the quantification of site sustainability by establishing performance benchmarks. Because sustainability is such a broad and inclusive concept the environmental impacts of sites can be categorised in numerous ways depending on the purpose for which the figures are required. The process can include minimising negative environmental impacts and maximising positive impacts. As currently applied the environment is usually given priority over social and economic factors which may be added in or regarded as an inevitable and integral part part of the management process. A home gardener is likely to use simpler metrics than a professional landscaper or ecologist. Factors that are considered include:

**1. Sustainable Sites** Initiative is producing recommendations for the American Landscape Industry. The standards and guidelines finally adopted will lead to a uniform national standard, which does not currently exist; Sustainable Sites will produce a rating system by 2011. The U.S. Green Building Council supports the project and plans to adopt the Sustainable Sites metrics into future versions of its Leadership in Energy and Environmental Design Green Building Rating System. Sites are rated according to their impact on ecosystem services: <sup>[11]</sup> The following ecosystem services have been identified by the study group:

- Local climate regulation
- Air and water cleansing
- Water supply and regulation
- Erosion and sediment control
- Hazard mitigation
- Pollination
- Habitat functions
- Waste decomposition and treatment
- Global climate regulation
- Human health and well-being benefits
- Food and renewable non-food products
- Cultural benefits

INPUTS	OUTPUTS	PROCESSES
<ul style="list-style-type: none"> <li>• Fossil fuels</li> <li>• Embodied energy and water</li> <li>• Compost</li> <li>• Mulch</li> <li>• Ecology &amp; biodiversity</li> <li>• Fertilizer</li> <li>• Hard landscape materials</li> <li>• Equipment</li> <li>• Products</li> </ul>	<ul style="list-style-type: none"> <li>• Energy &amp; water</li> <li>• Food</li> <li>• Green waste</li> <li>• Ecology &amp; biodiversity</li> <li>• Chemicals</li> <li>• Old hard landscape materials</li> <li>• Old equipment</li> <li>• Old products</li> </ul>	

### Constraints

Any kind of auditing or benchmarking will depend on the selection and weighting of the metrics chosen; the depth and detail of analysis required; the purpose for which the figures are required; and the environmental circumstances of the particular site.

From: [http://en.wikipedia.org/wiki/Sustainable\\_gardening](http://en.wikipedia.org/wiki/Sustainable_gardening) 28 Sept 09