

Sustainable Infrastructure

Conference 2008

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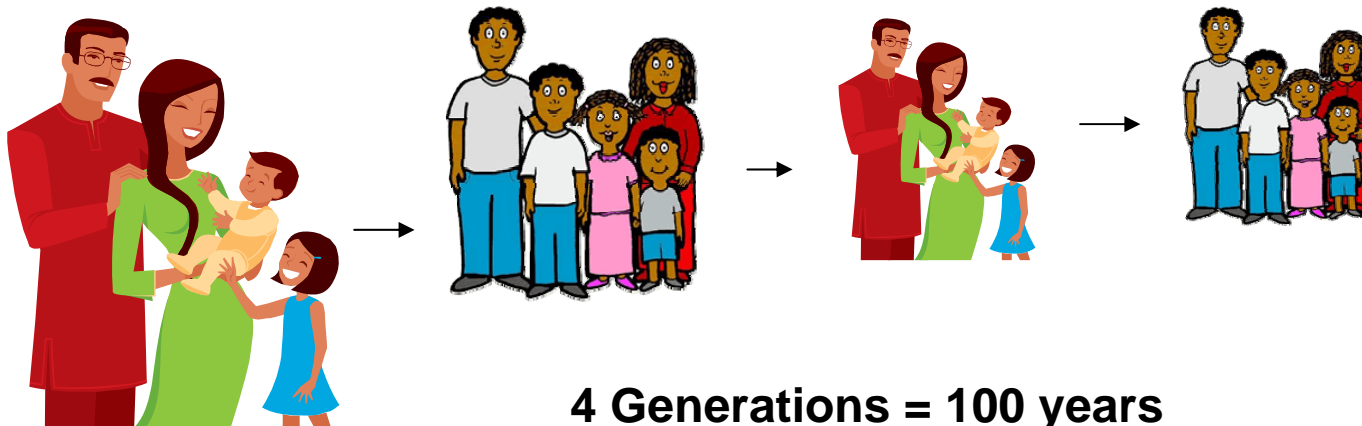
Local Government New Zealand

le pūtahi matakokiri

Sustainability

- Ensuring the needs of the current generation are met without compromising the needs of future generations

(World Commission on Environment and Development, 1987)

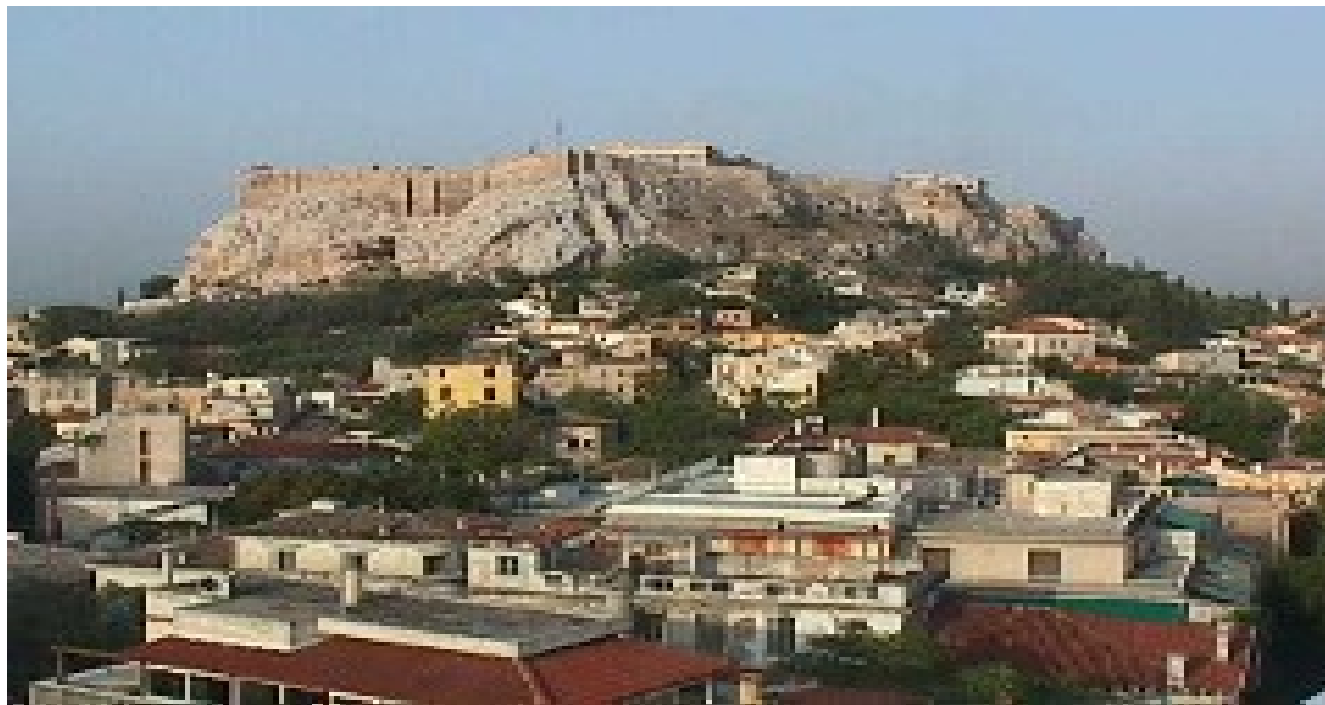


Sustainability

Implies taking a longer term view

How long is long enough?

Sustainability



Athens – 7000 yrs old

Not Sustainable



New Orleans



Machu Picchu

Future Issues

- Predicting or Defining the future is impossible.
- The interactions of systems (physical, chemical, environmental, social) is complex. This results in complex and variable outcomes.
- However we can determine some goals and make some assumptions.

Possible Goals/Assumptions

- **Goals**

People will be here

- **Assumptions**

Materials and energy will still be required

Human basic needs will not have changed

- **Community Decision**

Current cities/communities will continue to exist



Sustainability

- Ensuring the needs of the current generation are met without compromising the needs of future generations

Can be redefined as

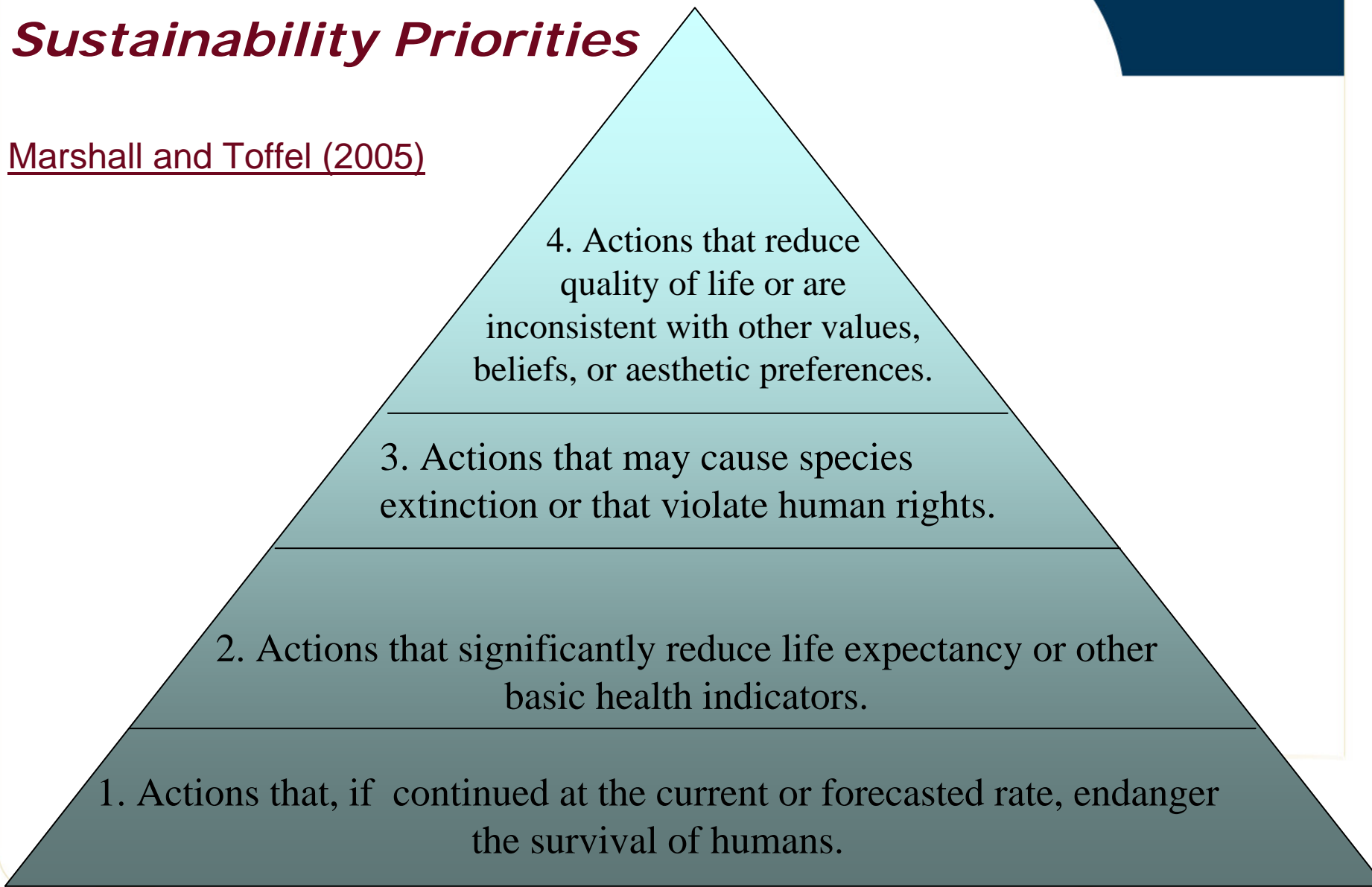
“Sustainability: meeting the needs of humans now and for future generations”

Sustainability Framework

- The **NEEDS** of humans have to be identified
- Sustainability based upon **NEEDS** must first to be considered on a local basis
- Can be measured only through risk
- By setting some constraints on human activities, the future risk can be reduced

Sustainability Priorities

Marshall and Toffel (2005)

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1. Actions that, if continued at the current or forecasted rate, endanger the survival of humans.
 2. Actions that significantly reduce life expectancy or other basic health indicators.
 3. Actions that may cause species extinction or that violate human rights.
 4. Actions that reduce quality of life or are inconsistent with other values, beliefs, or aesthetic preferences.

Infrastructure Challenges

- System based approach
- Longer term thinking.
- Thinking local.
- Energy
- Reuse or recycle
- Climate
- Resource Allocation
- Demand Management

Path to a Sustainable Future

- Planning
- Implementation
- Manage Risk
- Be Adaptable

Government Policy Principles (1-5)

1. Consider the long term implications of decisions.
2. Seeking innovative solutions that are mutually reinforcing, rather than accepting that a gain in one area will necessarily be achieved at the expense of another
3. Using the best information available to support decision-making.
4. Addressing risks and uncertainty when making choices and taking a precautionary approach when making decisions that may cause serious or irreversible damage
5. Working in partnership with local government and other sectors encouraging transparent and participatory processes.

Government Policy Principles (5-10)

6. Considering the implications of decisions from a global as well as a New Zealand perspective.
7. Decoupling economic growth from pressures on the environment.
8. Respecting environmental limit, protecting ecosystems and promoting the integrated management of land, water and living resources.
9. Working in partnership with appropriate Maori authorities to empower Maori in developing decisions that affect them
10. Respecting human rights, the rule of law and cultural diversity.

