

Environmental Sustainability

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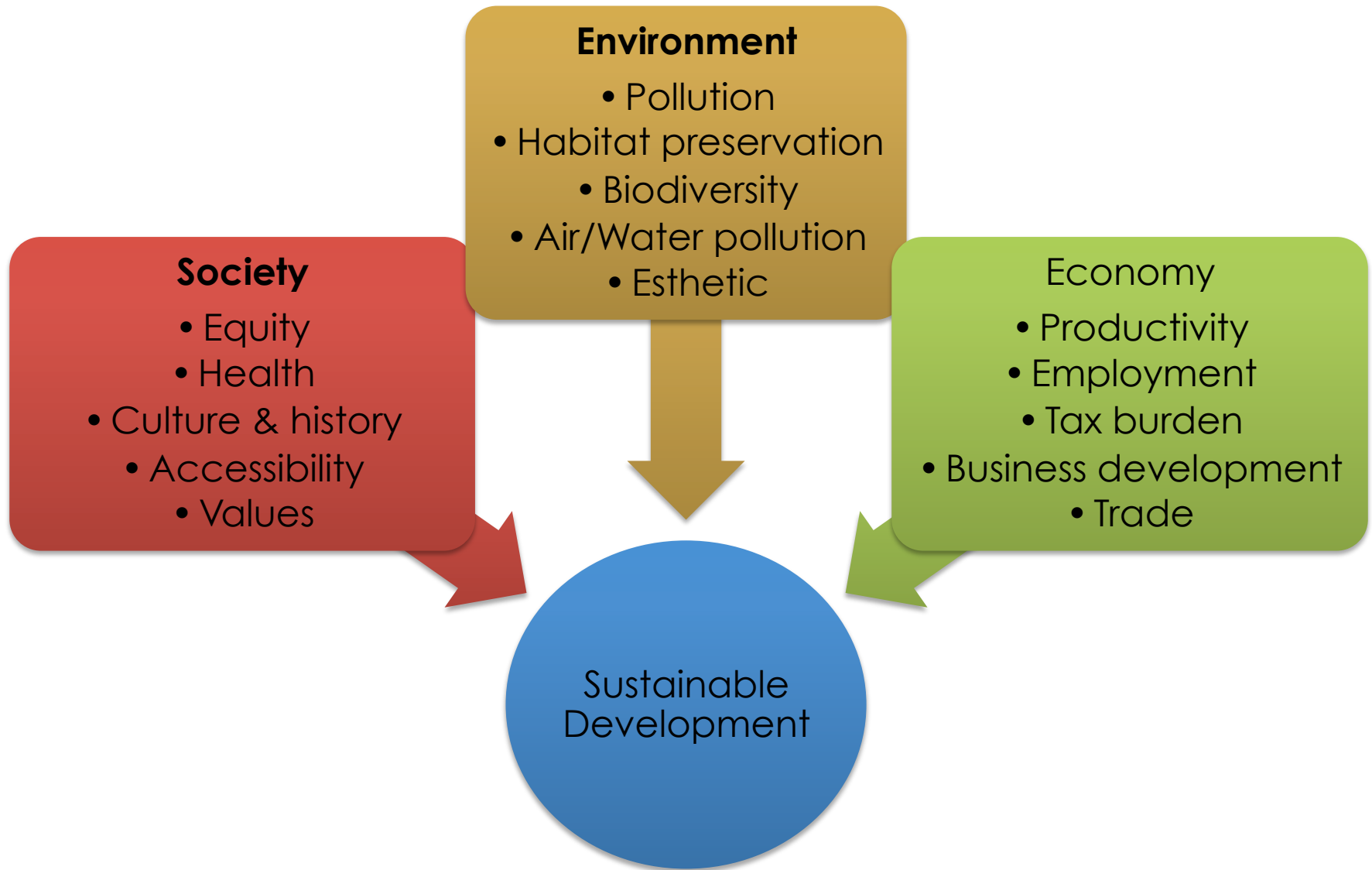
Introduction

- Environmental considerations are not always fully integrated into development planning or implementation.
- A better understanding of the need to take **environmental considerations** into account in proper **planning, design and implementation** will assist in reducing the risks of development problems and associated costs.

Definition of Sustainability

Sustainability has many definitions but the basic principles and concepts remain constant:

balancing a growing **economy**, protection for the **environment**, and **social responsibility**, so they together lead to an improved quality of life for future generations and ourselves.



Principles of Sustainability

- Stimulate technological innovation
- Stimulate advance competitiveness
 - Improve societies' quality of life

In Other Words.....

Sustainability is the ability to achieve continuing **economic prosperity** while **protecting the natural systems** of the planet and providing a **high quality of life** for its people

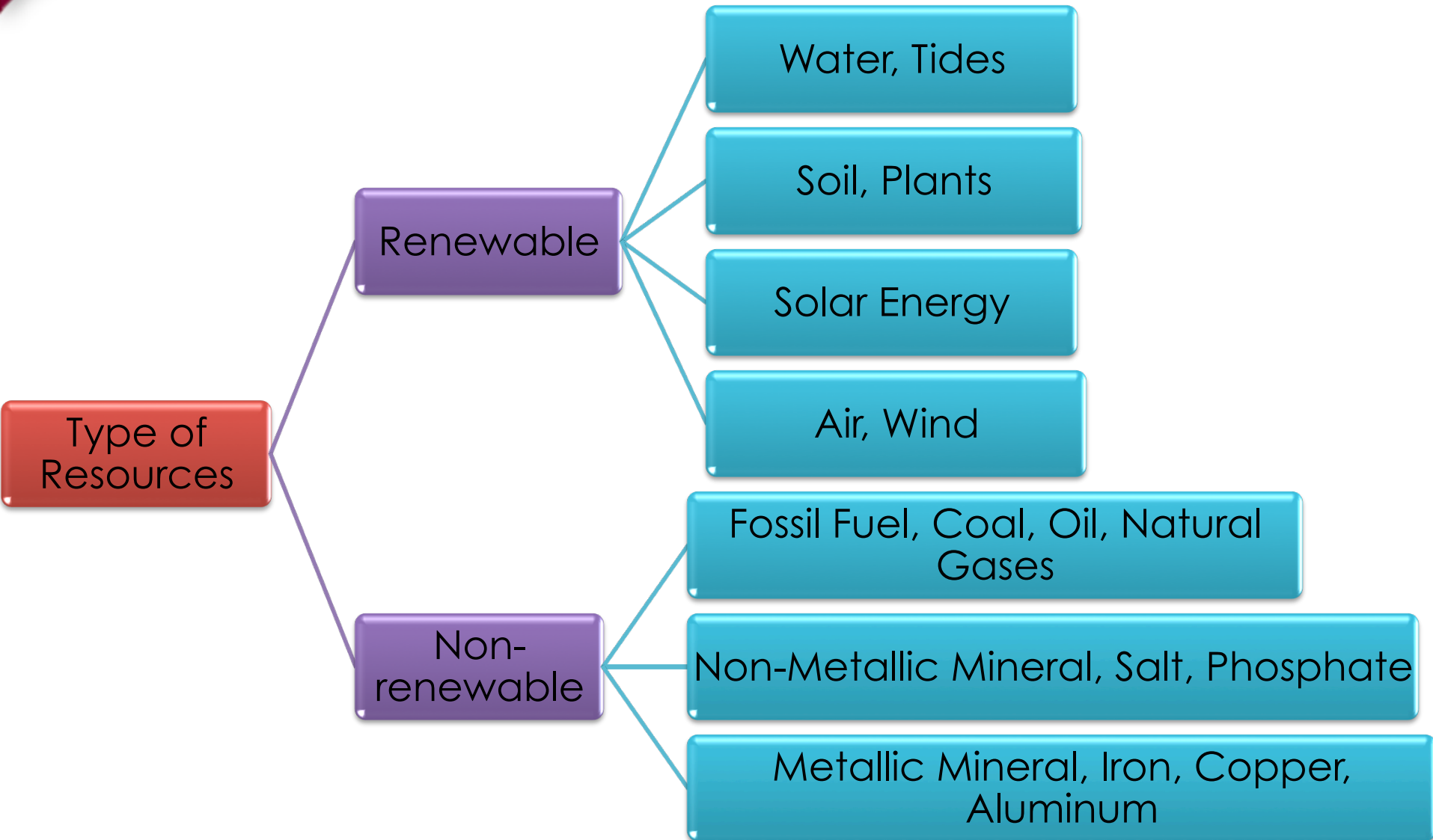
Sustainable Development

- Sustainable development is development that meets the needs of the present **without compromising the ability of future generations to meet their own needs.**
- This concept of sustainability encompasses ideas, aspirations and values that continue **to inspire public and private organizations to become better stewards** of the environment and promote **positive economic growth and social objectives.**

Sustainable Resource Management

It involves:

- **Rate at which we use** mineral resources (depletion rates)
- Care with which we put them to use (**energy efficiency and sustainability**)
- Care with which we **treat other biophysical assets** (environmental management)



Renewable resources

Definition: Resource that can be generated continuously without decay of source

Can be used more than once

Unlimited amounts

Lower carbon emissions; emits only 3-4% of CO₂

More expensive to create

Not a reason behind "Global Warming"

Less environmental impact

Nonrenewable resources

Definition: Resource that cannot be generated continuously without decay of source

Can be used only once

Limited supply

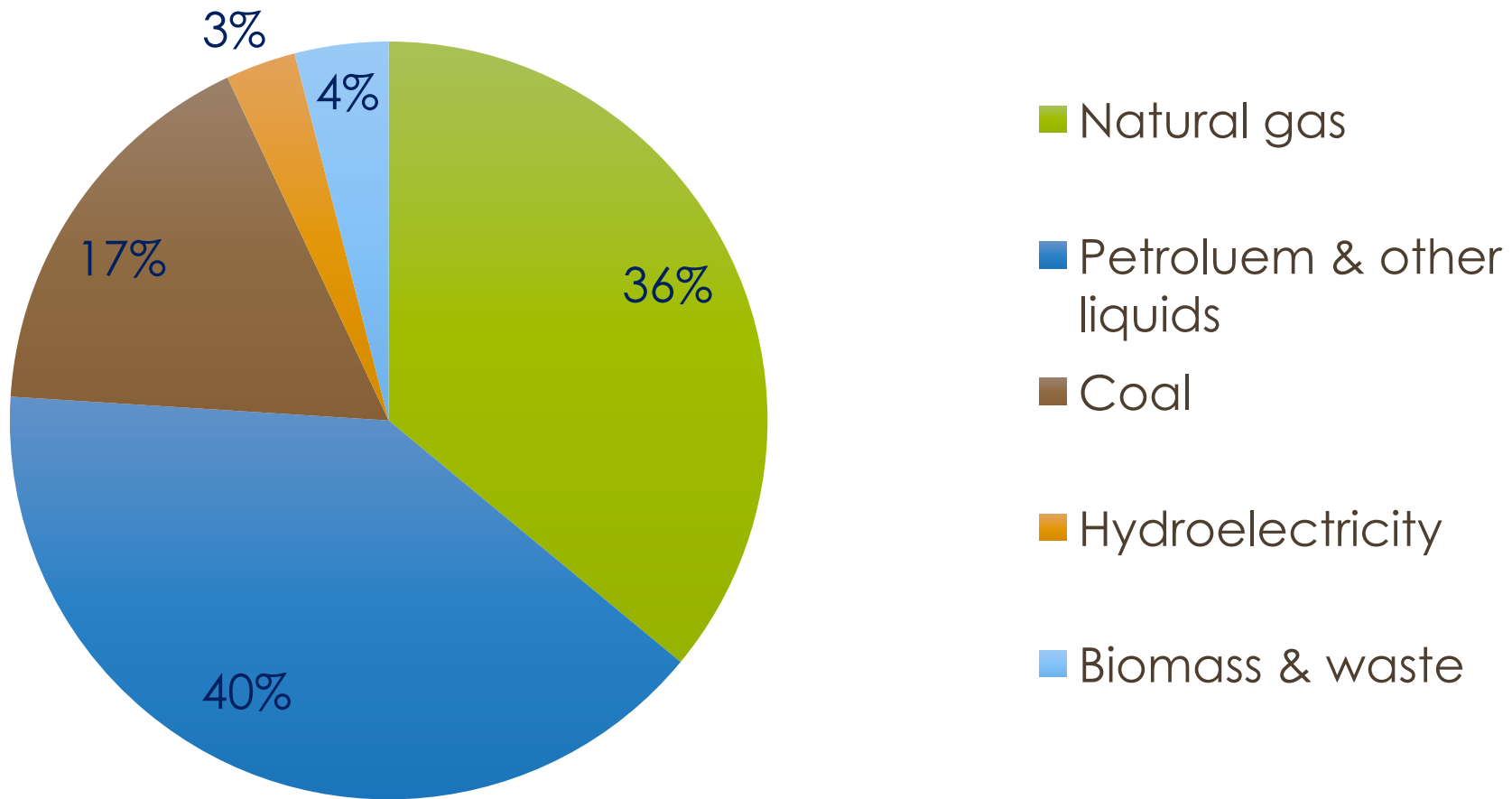
Higher carbon emissions; emits about 91-94% of CO₂

Less expensive to create

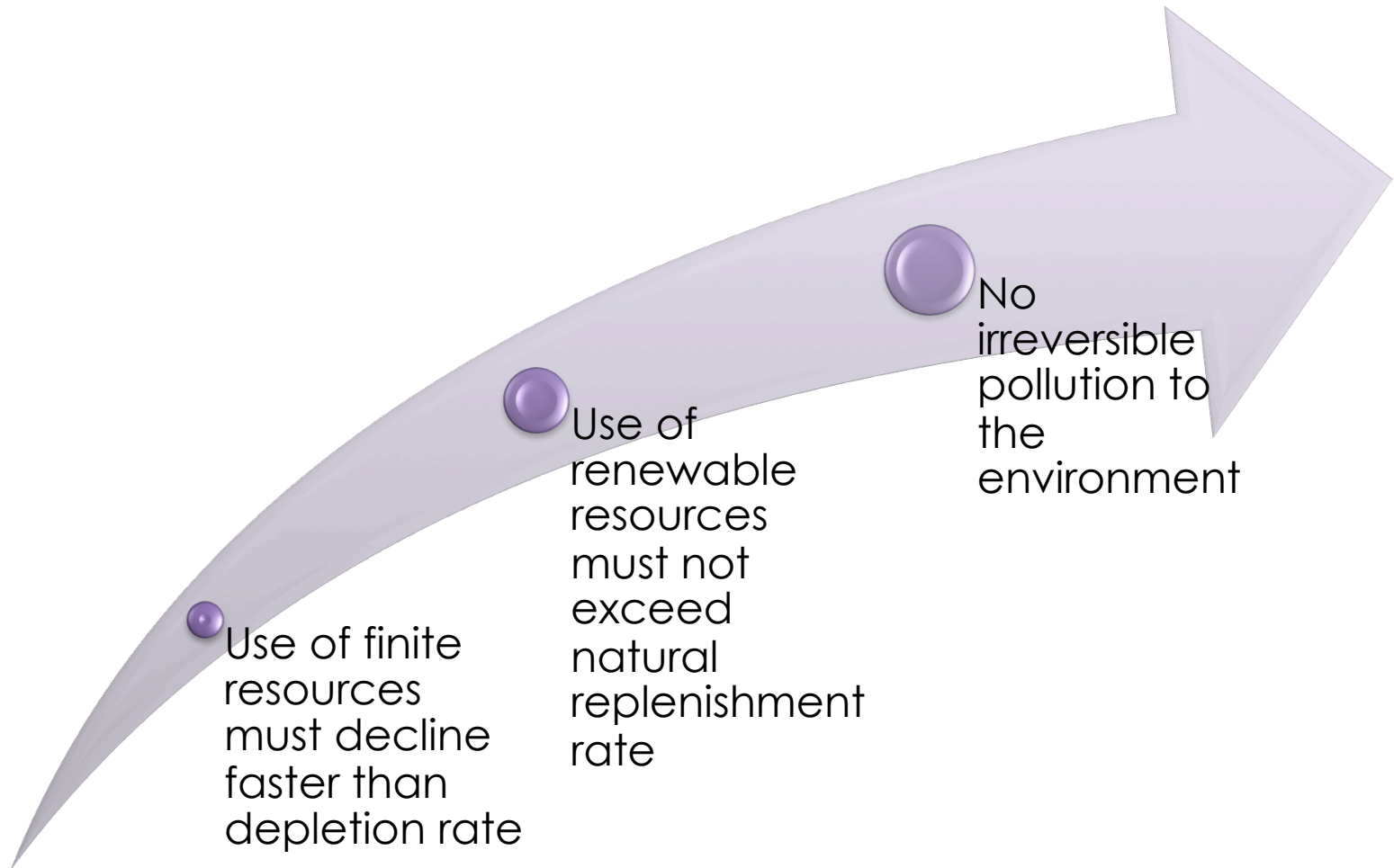
Main reason behind "Global Warming"

Have more negative impact to the environment

Reality of Energy Consumption by Resources in MALAYSIA



To Attain Sustainable Resource Management.....



Failure of Sustainable Development

Some of the major causes of includes:

- Over population
 - Urban sprawl
- Industrial pollution
 - Waste dumping
- Intensive farming
 - Over fishing
 - Industrialization
- Lack of environmental regulations

Failure of Sustainable Development



Desertification



Deforestation



Animals'
Extinction

How To Promote Environmental Sustainability??

WIND ENERGY

- Wind is a free renewable resource.
- If you live in an area with "good wind", it is possible to supplement or replace grid power at no cost, once investment has been made on windmill.

How To Promote Environmental Sustainability??

SOLAR ENERGY

- Energy from the sun is available in limitless supply in most areas.
- Installing a photovoltaic system allows energy from the sun to be harnessed to replace or supplement grid power without the need to use up non-renewable resources.

How To Promote Environmental Sustainability??

CROP ROTATION

- Rotating crops is a chemical free way to maximize the growth potential of gardening land as well as to diminish the presence of disease in the soil.
- This example of sustainable development can benefit home gardeners as well as commercial farmers.

How To Promote Environmental Sustainability??

SUSTAINABLE CONSTRUCTION

- Building homes, offices and other structures that are energy efficient.
- Incorporate renewable and recycled resources is a way to incorporate sustainable development into residential and commercial construction.

How To Promote Environmental Sustainability??

EFFICIENT WATER FIXTURES

- Installing efficient showers, toilets and other water using appliances in existing structures and new construction is a way of making the most of available resources by conserving water.

How To Promote Environmental Sustainability??

SUSTAINABLE FORESTRY

- Timber companies that practice green logging replace any trees they harvest by planting new trees in their place.
- Limiting the frequency of logging and multiplying the effort of replanting the trees.

Conclusions

- **Energy and resources** - both play a role, along between governments, large corporations and public societies.
- **However**, sustainability **requires substantial effort**.
- So, **effective control and monitoring** are essential, in order to make sure that environmental and social elements are in place as part of the processes of energy resource development.

THE END