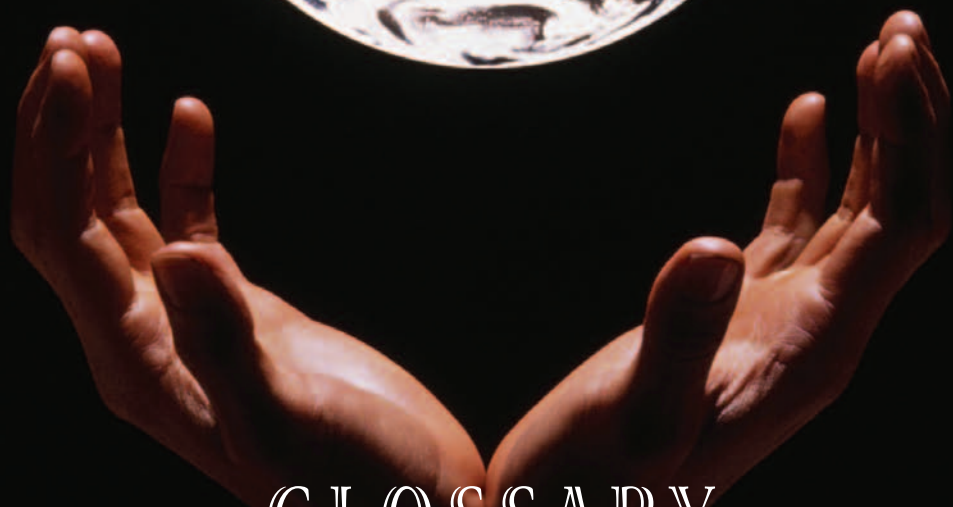
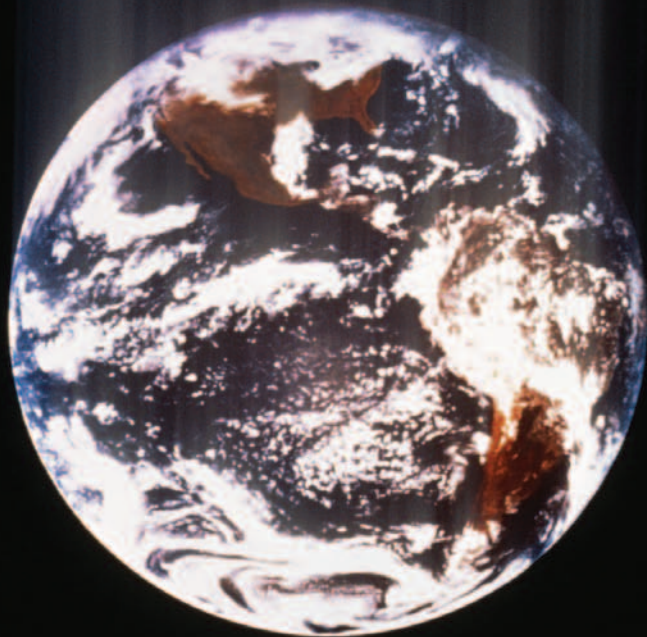


Irish Spiritans:
Integrity of Creation Series



GLOSSARY



Sustainable Living begins with me

Pope John Paul 11 repeatedly made connections between rampant consumerism and environmental destruction. In 1990 he wrote: 'Modern society will find no solution to the ecological problem unless it **takes a serious look at its lifestyle**. In many parts of the world society is given to instant gratification and consumerism while remaining indifferent to the damage which these cause. The seriousness of the ecological issue lays bare the depth of man's moral crisis. If an appreciation of the value of the human person and of human life is lacking, we will lose interest in others and in the earth itself. Simplicity, moderation and discipline as well as a spirit of sacrifice must become part of everyday life, lest all suffer the negative consequences of the careless habits of a few.'

(Message of Pope John Paul 11
for the celebration of the
World Day of peace, 1st January 1990)





Acid Rain: This is caused when gasses produced by coal-burning power stations, metal working industries and vehicles react with water vapour and sunlight to produce rain that is corrosive.

Bacteria: Tiny organisms consisting of only one cell, 1-2 microns in size. Some bacteria are harmful and cause diseases such as tetanus, others are useful, for example, as sources of medicine.

Big Bang: A theory which proposes that the universe began with a massive explosion in the void of space. It is the generally accepted theory that accounts for the origin of the universe 13.7 billion years ago. The universe came about as a result of an explosive burst of energy from a particle smaller than an atom.

Bio-diversity: Refers to the variety of different species of organisms in a specific area of the world.

Black Hole: A region of space, at the centre of which is a singularity so dense that nothing that has passed a border called the event horizon can escape, not even light.

Carbon monoxide: A gas that is a major component of vehicle exhaust emissions and which can be fatal in large amounts.

Causative Formation: Rupert Sheldrake's theory of morphogenetic fields, postulates that morphogenetic fields are unseen forces that preserve the form of self-organising systems.

CFC: CFC's or Chlorofluorocarbons are gasses that damage the ozone layer. They are found in aerosols, refrigerators, air-conditioners and polystyrene.

Cosmic Microwave Background

Radiation (CMBR): Discovered in 1964, radiation at the microwave range that is evidence of the Big Bang.

Cosmology: The study that flows out of the study of the origin and development of the universe, including purpose and meaning.

Cosmos: The entire universe.

Cross-pollinate: The Transfer of pollen, the reproductive spores of flowering plants, between two different plants. This can happen by insect or wind.

Cyclone: A violent storm with high winds and heavy rainfall, often resulting in property damage and flooding. Similar to a hurricane.

Dark Energy: The anti-gravitational force that causes the rate of expansion of the universe to accelerate. Seventy percent of the universe is dark energy.

Dark Matter: The gravitational force that hold galaxies together. Dark matter cannot be seen but its effects can be measured. Twenty-five percent of the universe is dark matter.

Deforestation: The permanent destruction of indigenous forests or woodlands.

Dongas: Large ditches of bare infertile sand caused when topsoil is eroded by water.

Emergence: The process of becoming more conscious and more complex in the course of evolution. All holons emerge.



Erosion: The removal of rock and mineral fragments by wind, water or ice.

Escape Speed: The velocity that is required for an object to escape gravitational pull and continue into space forever. Earth's escape speed is about seven miles per second.

Estuaries: These are places where rivers meet the sea, and are characterised by mixing and interaction of the two water bodies.

Eutrophication: Over-fertilization of water which causes excessive growth of algae called algal blooms. These blooms can discolour the water, clog fish gills, or even be toxic, e.g. red tides. When the algae dies and decomposes, oxygen levels in the water may drop causing the death of animals which live in the water such as fish.

Event Horizon: In the region around a black hole, the point past which escape is impossible.

Evolution: The process of development into different and generally more complex and fit forms.

Exotic: From a region other than the local region. E.g. Blue Gum trees used in Commercial forestry are an exotic species because they originally come from Australia, i.e. they are indigenous to Australia.

Gaia Hypothesis: Postulated by James Lovelock and Lynn Margulis in the 1960's, this hypothesis asserts that Earth is a single, living system or biosphere.

Genes: These are found in the cells of every living thing, and they provide the code that determines what the organism is, and what distinguishes it from other organisms. Genes are inherited. Every human being has a different set of genes, which is why we are all different.

Global Warming: An increase in the average global temperature caused by an increase in the greenhouse effect.

Greenhouse Effect: The earth receives heat radiation from the sun. Some of the heat radiation is re-emitted by the earth and then reflected back to earth by the atmosphere. This reflection is called the greenhouse effect.

Hawking Radiation: The theoretical possibility of escape from a black hole as a pair of particles split, one entering the black hole and the other splitting off, the action of the particles in this way may cause the black hole to lose mass and eventually collapse.

Holon: A whole part. All beings are holons, distinct modes of being (wholes) that are Part of a more complex mode of being. The four characteristics of holons are self preservation, self-adaptation, self-transcendence, and self-dissolution.

Indigenous: Something which originated in a specific region. e.g. The king protea is a flower indigenous to South Africa.

Mammals: Animals that have three factors in common, they have body hair, they feed their young on milk produced by the mother, and they have a constant body temperature.



Morphogenic Field: In the human species, morphogenic fields set up habits of thought, activity, and speech. Morphogenic fields (from the Greek, "morphic," "form") are not energy fields, but help manage the energy of a system by carrying information that maintains its wholeness.

Nutrients: Substances necessary for the growth and life of organisms.

Organisms: A thing that is living, this includes bacteria, plants and animals.

Ozone layer: A band of concentrated ozone gas found 10-50km above the earth's surface which shields life on earth from the sun's harmful ultraviolet radiation.

Permaculture: A method of farming that makes sustainable use of natural resources, without harming the environment.

Photon: A particle of light.

Prokaryotes: Primitive unicellular organisms, the evolutionary ancestors of complex organisms.

Quanta: A discreet packet of energy, a photon.

Quasars: Acronym for "quasi-stellar radiators" which carry the energy of millions of stars, associated with black holes.

Redshift: While light moving towards us shifts to the blue end of the visible spectrum, light moving away shifts to the red end of the visible spectrum. By measuring redshift, physicians can determine the age of the universe itself from within.

Self-organising System: A form or structure that maintains itself from within.

Singularity: The super-dense particle at the core of the black hole.

Species: A term used to classify different kinds of living organisms. A species is any group of organisms that share the same general physical characteristics and can mate and produce fertile offspring.

Special Relativity: Einstein's theory that revolutionized the scientific understanding of space, time and energy.

Supernova: The death explosion of a star.

Topsoil: Fertile soil rich in mineral and organic nutrients whilst retaining water well. It can also be called loam soil.

Universe: All existing matter, energy and space.

Wetlands: Areas of water-logged soils, or soils covered with a shallow layer of water, with distinctive plants adapted to live in water-saturated soils. e.g. marshes, bogs, and swamps.



Resources – useful websites

- www.foe.ie** (environmental justice and sustainability)
- www.sustainable.ie** (sustainability, renewable energy and more)
- www.wdm.org.uk** (causes of poverty, campaigns – climate change, water etc.)
- www.noticenature.ie** (biodiversity, nature competitions etc.)
- www.cafod.org.uk/get-involved/livesimply** (for schools, youth leaders, worship)
- www.christian-ecology.org.uk** (multi-denominational UK Christian organisation)
- www.reep.org** (Religious Education and Environment Programme)
- www.cat.org.uk** (renewable energy, environmental building organic growing etc)
- www.feasta.org** (characteristics of a truly sustainable society.)
- www.greenspirit.org.uk** (wisdom of spiritual traditions)

Further reading – study-reflection

BOOKS

- Out of Wonder:** Nellie McLoughlin (Veritas).
- Roots and Wings:** The human journey from a speck of Stardust to a Spark: Margart Silf.
- The Dream of the Earth** by Thomas Berry and any other book by him and by Brian Swimme.
- Cry of the Earth, Cry of the Poor:** Leonardo Boff.
- Gods Earth:** Paul Collins.
- The Minding of Planet Earth:** Cardinal Cathal Daly.
- A Living Island:** Ireland's Responsibility to Nature by Michael Viney.

PERIODICALS

- Voices for Justice:** Columbans, Dalgan Park.
- The Local Planet:** Ireland's Journal for Sustainable Living: available in newsagents.
- DVDS**
- An Inconvenient Truth – a Global Warning** – Al Gore.
- Celebrate What's Right with the World** – Dewitt Jones.

CDS

- Melodies of the Universe:** Jan Novotka.
- Touch the Earth:** Kathy Sherman.



Preamble to the Earth Charter

“We stand at a critical moment in Earth’s history, a time when humanity must choose its future. As the world becomes increasingly interdependent and fragile, the future at once holds great peril and great promise.

To move forward we must recognise that in the midst of a magnificent diversity cultures and life forms, we are one human family and one Earth Community with a common destiny.

We must join together to bring forth a sustainable global society founded on respect for nature, universal human rights, economic justice and a culture of peace.

Towards this end, it is imperative that we, the peoples of Earth, declare our responsibility to one another, to the greater community of life and to future generations.”

(www.earthcharter.org)



