

## Pronunciation and definition of terms.

**Acid rain** - are deposits of chemical particles in rain. It comes from various sources may include hydrogen sulphide from volcanoes, carbon dioxide from pollution, nitric acid from lightening. A chemical reaction forms with the rain to cause environmental damage.

**Agar** - is made from a gelatinous substance made within the cell walls of algae. Agar can be used in jellies, desserts or for growing bacteria in a laboratory.

**Air-bladders** - are found within some species of macroalgae. It helps the macroalgae to rise to the surface of the water. Air-bladders are filled with gas.

**Algae** - (singular Al ga, plural Al -gee) are organisms who can use sunlight to make their own energy. Algae are divided into unicellular organism called microalgae (phytoplankton) or multicellular organisms called macroalgae (seaweed).

**Algal Bloom** - (Al -gal bloom) is due to an increase of microalgae. Algal blooms can appear brown, green or orange depending on the species involved. They can be found in freshwater or marine environments.

**Alginate** - (Al-gin-ate) is found within the cell walls of brown algae and forms a gel. It absorbs water and can be sold commercially as powder.

**Anaerobes** - (An -a -robes) are micro-organisms that do not require oxygen for growth.

**Anaerobic Digestion** - (An- a -robic digestion) is the process in which micro-organisms break down biodegradable materials in the absence of oxygen.

**Ascophyllum nodosum** (As-co- file -um no-do-sid-um) are a large brown macroalgae. It is also known as a wrack.

**At-point** (water pollution) - is the point at which water pollution occurs or happens when the pollution meets the water.

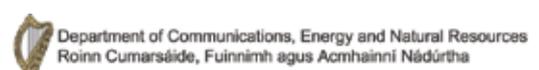
**Autotrophs**- (aw-to-trofs) are organisms that produce energy from sunlight by photosynthesis.

**Barnacles** - lives in shallow tidal waters. They are filter-feeders and they use microalgae as their food.

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**Biodegradable** - is any living matter such as plants or animals that can be broken down by micro-organisms.

**Bioethanol** - is ethanol made from plant sources such as algae. Ethanol is made by fermenting the sugars in algae.

**Biofilter** - is used for pollution control. It uses living material to capture the pollutants.

**Biogas** - is when methane is produced by anaerobic digestion. It is caused by the decomposition of biodegradable material.

**Biomass** - is a natural source of material. These may include plants, wood, algae or grass. Biomass is used for renewable energy.

**Blade** - is a structure on a multicellular macroalgae. Blades look like leaves of and are used for photosynthesis. They may come in a variety of shapes and sizes.

**Carbon Dioxide** - is a sometimes referred to  $CO_2$ . It is a naturally occurring chemical compound. Carbon dioxide contributes to pollution.

**Carnivores** - (Karn-i-vors) are organisms that eat meat.

**Chondrus crispus**- (Con -dris crisp- us) is a small red macroalgae which is used in food. The common name for *Chondrus crispus* is carrageenan moss.

**Chlorophyll**- (Clor -o -phil) is a green colour found in algae and plants that helps the organisms make energy during photosynthesis. All algae and plants contain a certain amount of chlorophyll even though they may appear a different colour.

**Crabs**- are found in the world's oceans, on land and in freshwater environments. They have ten legs and are often referred to as "Decapods".

**Decomposer** - (De-com-po-zer) are organisms that break down dead or decaying matter. These are usually worms, fungi or micro-organisms.

**Diatoms** - (Di-at-oms) are a type of algae which are unicellular. They are often called microalgae or phytoplankton.

**Dinoflagellates** - (Dino-flag-e-lates) are a type of algae which are unicellular. They contain flagella to help them swim. They are often called microalgae or phytoplankton.

**Ecosystem** - consists of all organisms living in a particular environment. It includes non-living components such as the weather and rocks and also living organisms such as algae, plants and animals.

**Ulva intestinalis** - (Ul-va intestine- a- lis) is a green macroalgae. The common name from this macroalgae is gutweed.

**Eutrophication** - (Eu-tro-fa-cation) is when there is an increase of nutrients available for growth of algae on water. Eutrophication can occur in a freshwater or a marine environment.

**Fermentation**- (Ferm- en-tation) - is the conversion of sugars to ethanol/alcohol and carbon dioxide.

**Filter Feeders** - are animals who catch their food by filtering the water that passes over them. The food is dissolved in very small particles in the water before the animals separate it from the water.

**Flagella** - is a tail like structure that aids movement of some organisms. Dinoflagellates have flagella.

**Food Chain**- is a transfer of energy from one organism to another. It starts with the producer/autotrophs such as algae or grass and ends with the last organism in the food chain.

**Food Web** - is a system which can be described as a more complex version of a food chain. It has a series of different food connections which are interrelated.

**Fron**d - is described as the stipe and blade or it is a combination of blades whenever there is no stipe visible.

**Fucus serratus** - (Few-cus cer-a-tus) is a brown macroalgae classified as a Wrack.

**Fucus vesiculosus** - (Few-cus ves-ic -u - low-sis) is a brown macroalgae also classified as a Wrack.

**Gastropods** - (Gas-tro-pods) are commonly known as snails or slugs.

**Greenhouse gases**- are gases in the atmosphere that absorb, reflect and emit radiation.

**Habitat**- is the environment in which a particular species live.

**Herbivores**- are organisms or animals who eat plant based food.

**Heterotrophs** - are organisms or animals that can not use the sun for energy.

**Intertidal zone**- is the area above the water at low tide and under the water at high tide. It is the area between the subtidal zone and the supratidal zone.

**Laminaria digitata**- (Lam-in -ar-eea dig-i-tat-a)- is a brown macroalgae commonly called Oarweed.

**Macroalgae** - is a multicellular algae that is commonly called seaweed.

**Maerl** - (Mer- il) is the common name for the coralline red algae. It grows in the subtidal zone.

**Methane gas** - is formed from anaerobic digestion. It is the main ingredient used in biogas.

**Microalgae** - is unicellular algae commonly known as phytoplankton.

**Micro-organism** - is a unicellular organism. They can be bacteria or fungi. Micro-organisms are involved in decomposing biodegradable materials.

**Microscope**- is an instrument to view and magnify the appearance of micro-organisms.

**Mid-rib**-is a structure that maybe seen in some species of macroalgae. It appears in the middle of the fond and blade and is used for support.

**Multicellular organisms**- are organisms that have more than one cell.

**Mussels**- are filter-feeders. They eat microalgae. They live in freshwater or marine environments.

**Nitrogen**- occurs in all living things. Nitrogen can be changed and become a key ingredient in fertilizer and can cause eutrophication in waters. Nitrogen gas is an important gas in the atmosphere.

**Non-point** (water pollution) - this is run-off from waste entering into a river or lake polluting the water. It can occur when rain water washes the pollution into a lake or river.

**Non-Biodegradable** - are products that are made by people. They include chemicals. It refers to unnatural products. Non-biodegradable is not easily degraded.

**Omega - 3** - (O-meg -a - 3) is an essential fatty acid which is important for good health. Omega-3 can not be made by the body so it is important to get it in the diet.

**Omnivores** - (Om -knee- vores) are species that both use animals and plants as their main food source.

**Palmaria palmata** - (Pal -mar- ea pal-mat-a ) is the scientific name for a red macroalgae. The common name for this particular macroalgae is Dulse or Dillisk.

**Phosphorus** - is a nutrient. It can be commercially used in fertiliser. If there is too much phosphorus used in the environment it may cause eutrophication.

**Photosynthesis** - (foto-sin-thesis) is when plants and algae use sunlight, carbon dioxide, chlorophyll and water to produce their own energy.

**Phytoplankton** - (fight -o- plank-ton) are microscopic organisms that use sunlight to make energy. They are also known as microalgae.

**Pigments** - are coloured parts of plant or animal cells. Algae and plants contain many different pigments. A human contains pigments to differentiate their hair, skin or eyes.

**Polar seaweed** - is macroalgae that grows in the Arctic or Antarctic regions.

**Pollution** - is the introduction of foreign substances into the natural environment.

**Porphyra** - (Por-fi -ra) is the scientific name for a red macroalgae that is edible. It is used in the making of sushi. Nori is the common name for this macroalgae.

**Predators** - (Pred -at-ors) a predator is an organism that hunts and feeds on its prey.

**Saccharina latissima** - (Sac -i-rina lat-is-e-ma) is a brown macroalgae commonly called kelp.

**Splash/Supratidal zone** - is the driest zone on the shore. It has the least amount of life living here as it is the most exposed of all three zones and obtains the least amount of water.

**Stipe** -is the stem like structure of macroalgae. Not all macroalgae contain a stipe.

**Subtidal zone** - is the zone on the shore which is covered in water at all times. In high tide the subtidal zone is covered with water. At low tide the subtidal zone the water is shallow compared to high tide.

**Sushi** - is a Japanese dish using edible macroalgae called Porphyra (Nori).

**Thallus** - (Thal -us) is the body of macroalgae which may include the stipe, blade and frond.

**Tides**- are the rise and fall of sea level caused by the gravitational forces of the sun and the moon.

**Ulva lactuca** - (Ul -va lact-tue-ca) is a green macroalgae. *Ulva lactuca* is the scientific name of this macroalgae. The common name is sea lettuce.

**Unicellular**- is a description of an organism that only contains one cell. An example would be microalgae.

**Zooplankton**- (Zoo-plank-ton) are tiny organisms (animals) swimming in the oceans and freshwater environments. They are so small that a microscope is needed to view them.

