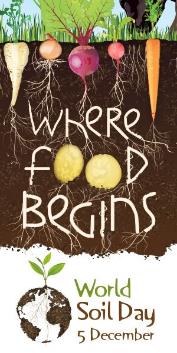
**JAEI ENVIRONMENTAL CORNER**

“**Soils - a solid ground for life**”

***5th December - World Soil Day***

Soils have been neglected for too long! We fail to connect soil with our food, water, climate, biodiversity and life. We must invert this tendency and take up some preserving and restoring actions. The **World Soil Day campaign** aims to connect people with soils and raise awareness on their critical importance in our lives.

Soil is the basis for food, feed, fuel and fibre production and for services to ecosystems and human well-being. It is the reservoir for at least a quarter of global biodiversity, and therefore requires the same attention as above-ground biodiversity. Soils play a key role in the supply of clean water and resilience to floods and droughts. The maintenance or enhancement of global soil resources is essential if humanity’s need for food, water, and energy security is to be met.

Soils are so essential to ecosystems, playing a key role in the carbon cycle, storing and filtering water, and improving resilience to floods and droughts, and yet we are not paying enough attention to this important “silent ally.”

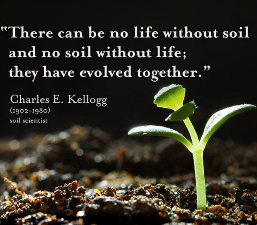
Healthy soils play an important role in climate change mitigation by storing carbon (carbon sequestration) and decreasing global greenhouse gas emissions in the atmosphere.  Soil is the largest store of terrestrial organic carbon, which is essential for mitigating and adapting to climate change. In an era of water scarcity, soils are fundamental for its appropriate storage and distribution.

Climate change represents a major threat to global food security. The agricultural sectors are particularly exposed to the impacts of climate change and climate variability; therefore soils are essential in the debate on how we tackle climate change.

At the same time, agriculture contributes significantly to climate change through greenhouse gas emissions (GHGs). If soils are managed poorly or cultivated through unsustainable agricultural practices, soil carbon can be released into the atmosphere in the form of carbon dioxide which can contribute to climate change. As crop production has intensified, our soils have suffered the consequences.  The steady conversion of grassland and forestland to cropland and grazing land has resulted in historic losses of soil carbon worldwide. In fact, land-use conversions and drainage of organic soils for cultivation are responsible for about 10% of all greenhouse gas emissions.

By restoring degraded soils and adopting sustainable management practices such as crop rotation, zero tillage, conservation agriculture, agroforestry and agroecology, there is the potential to decrease the emission of greenhouse gases from agriculture, enhance carbon sequestration and build resilience to climate change. If sustainably managed, soils can be part of the solution when it comes to climate change mitigation.

Today, more than a billion people are facing hunger and malnutrition and population growth will require an approximately increase of 60 per cent in food production. 33 per cent of global soil resources are under degradation and human pressures on soils are reaching critical limits, reducing and sometimes eliminating essential soil functions.

FAO (Food and Agriculture Organisation of the UN) estimates that a third of all soils are degraded, due to erosion, compaction, soil sealing, salinization, soil organic matter and nutrient depletion, acidification, pollution and other processes caused by unsustainable land management practices. Unless new approaches are adopted, the global amount of arable and productive land per person will in 2050 be only one-fourth of the level in 1960.

It can take up to 1,000 years to form one centimetre of soil, and with 33 per cent of all global soil resources degraded and human pressures increasing, critical limits are being reached that make stewardship an urgent matter. Soils seem to be a “nearly forgotten resource” and investment in sustainable soil management would be cheaper than restoration. This is needed for the achievement of food security and nutrition, climate change adaptation and mitigation and overall sustainable development.

Ban Ki-moon of the UN has said that without healthy soils, “life on Earth would be unsustainable.” Indeed, soils are the foundation of agriculture. They provide vital ecosystem services and the basis for food, feed, fuel, fibre and medical products important for human well-being.

**Our Response as the Body of Christ**

The best way to celebrate Soil Day is to do exactly what scientists the world over so badly need us to: educate ourselves! An enormous amount of damage is done to the planet every year due not to ill will, but to ignorance - many of us simply do not know enough about the earth to know when we are damaging it, sometimes irreparably.

As it turns out, there are a number of things we regular people can do that can greatly help the soil we live off of remain in good condition – and in many instances, save water too! For example:

* “Plant” a “rain garden”! - a shallow depression in the yard or garden where rain water can easily flow into, which helps reduce soil erosion.
* Reduce the amount of surfaces such as driveways and patios to a minimum, as water flowing over them gains momentum and causes more erosion than it normally would once it reaches the soil. If you absolutely must have that patio, you could consider having it built with paving stones so rainwater can flow directly downward into the soil instead.
* Consider installing a rainwater harvesting system to collect rainwater flowing off your roof, which you can then use to water your lawn.
* Use only natural compost to fertilise the soil in gardens and vegetable patches.
* Outlaw all chemical pesticides – use natural allies such as companionship planting, and leave the creepy-crawly critters to other critters and birds to lunch on! Learn to live with a few weeds!

***Whatever you decide to do, remember that even the smallest gestures can make a big difference to Mother Nature – God’s gift of Creation!***

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| **Litany of Thanks for the Gift of Soil**  Let us remember that is it the rough the gift of soil that we have life on earth.  **Thank you, Lord, for the gift of soil.**  We thank you for the creation of rocks, topsoil, clay, silt, sand, peat, chalk and loamy soil. We thank you for the wind and the rain to transform rocks into soil for our use and nourishment.  **Thank you, Lord, for the gift of soil.**  We thank you for valleys and mountains, for deserts and forests, We thank you for veld and vleis, open grasslands and coastlines, mountains and riverbeds.  **Thank you, Lord, for the gift of soil.**  We thank you for the soil that nourishes our crops, soil that filters our groundwater, and soil that holds water for our future use in wetlands, river and dams.  **Thank you, Lord, for the gift of soil.**  We thank you for soil that allows us to grow our food and upon which we build our homes.  **Thank you, Lord, for the gift of soil.**  Help us, Lord, to make wise use of the gift of soil.  **Thank you, Lord, for the gift of soil.**  Be with those who work the land, cultivate it, and who grow food for themselves and for us.  **Thank you, Lord, for the gift of soil.**  Help us, O Lord, to receive the gifts of the Holy Spirit, just as soil receives the free gifts of water and wind.  **Thank you, Lord, for the gift of soil.**  Help us O Lord, like the soil, to weather the storms that change us, that turn us into something different that may even displace us.  **Thank you, Lord, for the gift of soil.**  Help us, O Lord, to always stay firmly rooted in You, our foundation and our source. In Christ’s name,  **Amen** |