

## EMB Caraga Region embraces Green Building Concept

The cost of energy is at record levels and likely to remain high for the anticipated future. Add to that, the threats to the environment resulting from the profligate use of natural resources and fossil fuels, then the need to design and manage buildings to be energy-efficient as possible becomes more urgent. Green building is the design and construction practice of increasing the efficiency of buildings and their use of energy, water, and materials, and reducing building impacts on human health and the environment.

The **Environmental Management Bureau (EMB) Caraga Region** adopted these green plants on building which serves as an implementing energy and resource efficiency following the unique 3R methodology of the project, **Reduce Replace and Redesign** and a continuing effort to contribute towards achieving the goal of lowering carbon footprint of the government sector.



Interior plants have a number of roles to play within a green building. In this system, the interior climate is regulated with the plants. When plants transpire water vapor from their leaves, they pull air down around their roots. This supplies their root microbes with oxygen. The root microbes also convert other substances in the air, such as toxic chemicals, into a source of food and energy. As a result, they become more effective at converting toxic chemicals into food the longer they are exposed to the chemicals. It is also important to remember that the efficiency of plants as a filtering device increases as the concentration of chemicals in the air increases. It also guarantee good air quality and humidity regulation as the plants insulate and cool the building, not to mention the aesthetic stimulation it provides to the building occupants and visitors.

As EMB Caraga Region adopted this system, its energy consumption decreased by 12% based from the 2014-2015 electricity consumption in kW/h. This is also supplemented by turning on the air conditioning system beyond 9 in the morning and turning it off at 4 in the afternoon. EMB Caraga Region has touched an example on lowering carbon footprint and will be continually adding to the collection of verified advantages to green building. (DMCR)