

KPOV - *The Point*
Gardening, Get Good At It
"The Why of Permaculture"
March 13, 2018

This is the second of a three-part series discussing Permaculture. Last time I told you WHAT Permaculture is, so today I will talk about WHY we must consider Permaculture. To refresh your memory: Permaculture is a conscious design, creation and maintenance of agriculturally productive ecosystems, whether those ecosystems are your small back yard, or many acres of land.

The WHY of Permaculture is because of 6 specific man-made problems in this world. They are:

Drought, Pollution, Deforestation, Soil destruction and erosion, Species extinction, and Loss of biodiversity

As we know, all of Oregon is in a state of **drought**, the first of these problems. Just part of our drought problem is irrigating land that provides no benefits. A 2005 NASA study "conservatively" estimated there was 49,000 square miles or 32,000,000 acres of irrigated lawn in the US alone, three times the area of irrigated corn. This problem could largely be alleviated if we converted the most energy wasteful icon on the planet (the lawn) into food production.

The second issue, Water **pollution** happens when dangerous foreign substances are introduced to our water, including chemicals, sewage, pesticides and fertilizers from agricultural runoff. The EPA states that the most common contaminants in the United States are bacteria, mercury, phosphorus and nitrogen. These come from agricultural runoff, air deposition, and water diversions such as mining.

Deforestation is the third problem. Because of deforestation we have soil erosion, an unstable climate and less wildlife habitat. An estimated 15.5 million acres of forest, which is roughly the size of the state of West Virginia, are lost each year. Less forestland means less vegetation to help scrub CO2 from the environment, compounding climate change.

And another of the primary results of deforestation is the fourth issue.....

Soil destruction and erosion: Soil is the earth's fragile skin that anchors all life on Earth. It is comprised of countless species that create a dynamic and complex ecosystem and is among the most precious resources to humans. Yet last year the world lost 83 billion tons of topsoil by wind and water erosion, taking topsoil into waterways and the ocean. Degraded lands are also often less able to hold onto water, which can worsen flooding. Permaculture practices for sustainable land use can help to reduce the impacts of agriculture and livestock, preventing erosion and the loss of valuable land.

The 5th problem is frightening but true: Our planet is now in the midst of its sixth mass **extinction of plants and animals:** Scientists estimate we are now losing species at 1,000 to 10,000 times the background rate (which is before humans became a primary contributor to extinctions), with literally dozens of species going extinct every day. It could be a scary future indeed, with as many as 30 to 50 percent of all species possibly heading toward extinction by mid-century.

Biodiversity loss is the 6th issue, and has negative effects on several aspects of human well-being - such as food security, vulnerability to natural disasters, energy security, and access to clean water and raw materials. A good example of **Vertical** Biodiversity loss is the loss of sea otters - less sea otters means a population explosion of sea urchins, which overgraze kelp, causing the extinction of other species living in kelp. Without kelp there is increased wave action, coastal erosion and storm damage. Again, a problem for us humans.

The practice of Permaculture takes all of these "Why's" into account and by using permaculture principles you will be doing your part to correct the 6 man-made problems I have just discussed. Next time I will go into HOW you, too, can use Permaculture practices in your project - whether it be a postage-stamp back yard, a quarter acre yard, or many acres just waiting for those Permaculture practices.

For more information on this or any other gardening topic, call the Master Gardener Plant Clinic at 541-548-6088 or go to our website: gocomga.com and click on the KPOV tab on the orange bar. This has been **Gardening: Get Good At It** on KPOV – the Point.

Resources:

<http://www.worldwildlife.org/threats/soil-erosion-and-degradation>

<http://www.livescience.com/22728-pollution-facts.html>

Permaculture, A Designers' Manual: Bill Mollison Tabari Publications

Introduction to Permaculture Bill Mollison with Reny Mia Slay Talari Publications