Role of Engineer in “Eco System Restoration”

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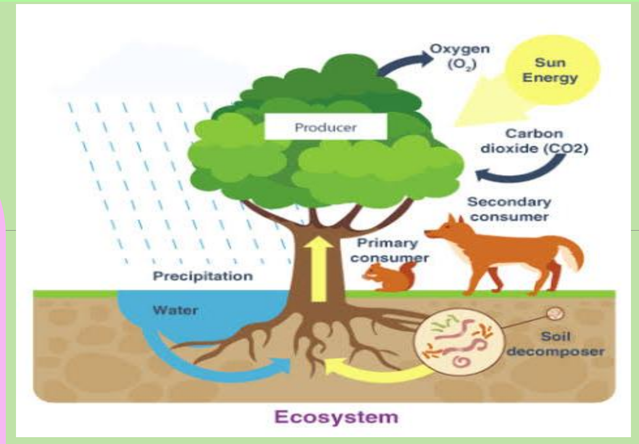
Abstract

On the increase of the human population and human needs our ecosystems are destroying. To ensure the live of human being, restoration of ecosystem becomes most important now. Engineers can improve and modify their designing and innovative ideas to restore the eco systems as all the biotic and abiotic components of the World depend on the ecosystem.

Introduction:

An ecosystem refers to a geographical area in which plants, animal, other micro and macro organisms, weather and landscape work together to form a bubble of life. It contains both biotic and abiotic factors. But in the recent year, due to various human activity and natural disaster eco-systems are destroying and disturbed rapidly.

Ecological restoration is defined as the process of assisting the recovery of an ecosystem that has been degraded, damaged or destroyed. Engineer should work for natural goods and services. They should work for flood control, providing clean water, remediation of contaminants, erosion control and environmental pollution control



Ecosystem



Importance of Eco-System Restoration:

- Healthy soil sustain life on earth
- Our relationship with nature is failing
- Indigenous culture and knowledge are being lost
- Human health is dependent on ecosystem health

Job of an Ecological Engineer:

The engineers who uses ecology and engineering to predict, design, construct or restore and manage ecosystem that integrate human society with its natural environment for the benefit of both are known as Ecological engineers. The main jobs of them are-

- Design of ecological systems as an alternative to man-made/ energy intensive systems to meet various human needs.
- Management, utilization and conservation of natural resources
- Restoration of damaged ecosystems and the mitigation of development activities.
- Management, utilization and conservation of natural resources

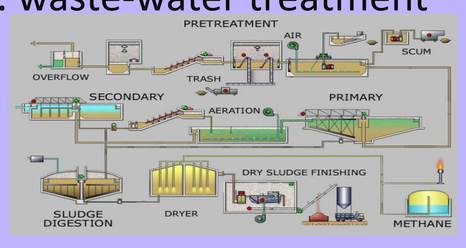
Eco-system Restoration Initiatives:-

As crisis is the mother of invention, Engineers have design various machines and technique to restored various eco systems-

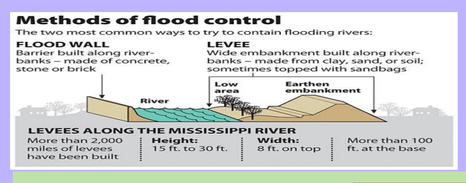
1. Organic farming



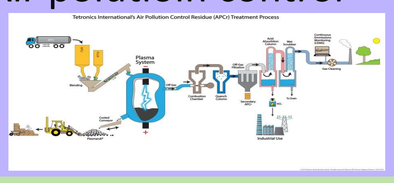
2. waste-water treatment



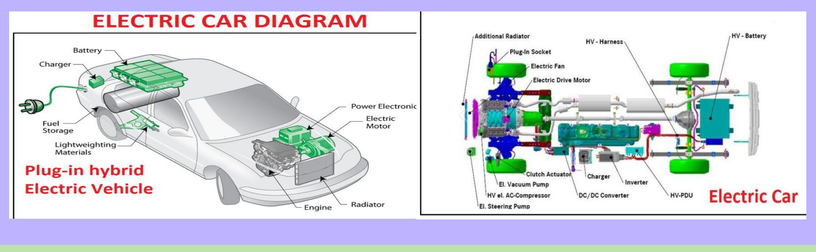
3.Flood control



4. Air polutioin control



4. Electric vehicles:



Conclusion:

Engineers should work for sustainable development. The design of various machines and vehicles, running of an industry, construction of buildings and roads etc. should be eco-friendly and those should be benefited for both biotic and abiotic components of ecosystem.

Future Works:

1.Flood control of Assam and Kerala.
2.Invention of vehicles run by renewable energy sources.
3. Prevention of deforestation.

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References:

1.J Aronson, A Clewell, D M Mateos, “Ecological Engineering”, Vol-91, 392-395, 2016
2.S D Bergen, S Bolton, J L Fridley, “Ecological Engineering”, Vol-18, 201-210, 2001
3.P K Sahoo, L M Das, M K G Babu, P Arora, V P singh, N R Kumar, T S Varyani, “Fuel”, Vol-88, 1698-1707, 2009
4.G D Gann, D Lamb, “Ecological Restoration: A Mean of Conserving Biodiversity and Sustaining Livelihood”, Vol-1.1, 1-6, 2006

“One of the first condition of happiness is that the link between man and nature shall not be broken” ----Leo Tolstoy