PROBLEM STATEMENTS
(GO GREEN)

1.Effect of polluted water

An opencast lignite mine spreads over 15 km^2 area. The overburden is mostly clayey formation. One village is 100m away from mine boundary. One nallah passes along the mine. Water of nallah is used for irrigation. The villagers are complaining about polluted water in nallah specially white encrustations after the water dried up in agricultural field.
Problem statement: Probe out causes and suggest remedial measures for the same. Assume your own condition wherever required.

2.Waste water increment

We see many instances where water goes waste from public taps, overhead tanks etc. They are unattended for a long time. So design a energy efficient apparatus to control water from too much wastage. Device may be electronic or mechanical or any kind.

3. Identify the species of plants

Use digital image processing and neural networks to identify the species of plants by analysing the digital images of the leaves or any part of trees.

4.Local flora and fauna

Usage of data mining techniques to study the data depicting the count of various species of the local flora and fauna and classify them as endangered, extinct etc.

5.Decreasing the death of animals on railway tracks:

Every year thousands of animals die after being hit by trains. Animals on train tracks are dangerous for both animals and train as well. Besides animals, if the tracks are not cleared i.e. boulders on tracks, accidents tend to occur.

Problem Statement: What can be done to prevent death of animals on tracks?

6.Using hydro energy along with solar energy:

Renewable energy is always given the highest priority when it comes to the protection of environment. Efficiency of a solar charging system depends on the weather conditions. If the weather is cloudy or rainy, then it affects the charging process.

Problem Statement: How to use both solar and hydro energies to bring out the best result?

7.Solid waste management of the city:

Design a system for municipal solid waste management for raipur city taking care of population density, topography, economy. Get the suitable data for accurate solution.

8.Water purification system:

To create an affordable water purification system to be used in remote areas without use of chemicals being self-sustained and run by renewable energy sources.