ABSTRACT

The balance between living things—including people, plants, and animals—and their environment is referred to as ecological balance. In ecosystems, photosynthesis helps to create a healthy environment that stabilises the coexistence of all organisms. Relationships that are harmonious represent a desirable and healthy ecological equilibrium. Since humans have the highest capacity for thought among all living things, they are crucial to maintaining ecological equilibrium. All living things having access to enough food and remaining stable do so because there is ecological balance. Because it maintains the life, existence, and stability of the environment, this equilibrium is crucial.

Ecological equilibrium ensures that all organisms can survive. Because beneficial environments were developed, many species are still here today. Every organism will thrive and reproduce as expected if the ecology is favourable. They receive enough food to sustain their lives. Because it ensures the creatures' ongoing survival, ecological balance is equally crucial. It makes sure that no one species is abused or exploited. To avoid excessive forest damage, for instance, human activities like farming and resource extraction are restricted. Drought is a result of deforestation. Insufficient food is produced as a result of drought. Lack of food causes famine and later death, which decreases the number of some animals.

Ecological balance also ensures the stability of the environment and the organisms. It fosters an environment that is favourable for organism growth and proliferation. It improves an environment that is stable and free from ecological imbalances like flood, hunger brought on by a drought, windstorm that might wipe out everything, and predator overhunting. To assure the creation of a stable environment, this calls for group activities. The stability of the environment is impacted by human activity. Unwanted climate change is prevented by increasing tree cover and reducing deforestation rates. Maintaining desired population growth requires controlling the population of wild animals. Thus, a human can actively contribute to the development and maintenance of ecological equilibrium.

The planet exists because of the ecological equilibrium. The occupants of Earth, including humans, plants, animals, and other microscopic living things, are still here and thriving. These species are given the right conditions for growth and reproduction. The earth eventually

manages to create enough food for every species. Hunger brought on the drought is no longer an issue. This is due to the fact that there will never be a drought. Additionally, the environment is kept green. This indicates that the world has reached the equilibrium that will benefit and safeguard all living things.

The primary goals of this research are to improve agricultural productivity and make the eco-system sparkle. The remote sensing-based approach is used to improve the quick feedback system for decision support. Different Machine Learning and Deep Learning techniques can be used to provide subsequent executions enough time. Due to the fact that climate variables vary from region to region on earth, care should be made to avoid generalising the established model to the entire globe. In order for everyone to use the system, the cost is also considered.

With various prediction approaches, it should be possible to monitor various agricultural diseases at an early stage and treat them as needed to save the crop. The many phases of crop development have been recognised, and it should be possible to inject more neutrinos during specific times to boost production. In order to avoid crops from being destroyed by a lack of moisture in the farm, the damaging effects of drought will be eliminated by ongoing soil moisture monitoring. Additionally, it is feasible to conserve water and improve the health of the environment.