

Save the Biodiversity – Part II

Hello Everyone!

Congratulations for having successfully completed Level 1 of the capstone project with much aplomb. Do you think you are now ready to take on the next challenge? The goal here is once again similar to that of Level 1 i.e. to save the biodiversity. But in this level we will be using different means to accomplish it. We know that life on land is precious to all of us. The forests give shelter to over 80% of all land-based species and the ecosystem gives us food to eat, clean air to breathe, and wood to light our fire and make our houses with. It is time we start protecting our natural world and its biodiversity from the many threats that abound. Today we will focus on one of the biggest threats that afflict biodiversity and that is climate change.

Before we proceed any further, let's understand what climate change is all about. It is the shift or abnormal change in the climate patterns. Did you know that climate change and loss of biodiversity are interconnected? Yes, on one hand climate change is said to be the primary cause of biodiversity loss, while on the other loss of biodiversity is said to contribute to climate change. For instance, when forests are cleared or burnt, carbon dioxide gets released in the atmosphere and the Earth's temperature rises. As a result, climate patterns around the world fluctuate and the population of many species get affected.

Due to the climate change, many species are unable to adapt quickly to the new conditions, and either move to regions more suited to their survival or die. Keeping the gravity of the situation in mind, the next task for you is to develop a game to protect our wildlife by addressing the issue of climate change to the extent possible.

The pointers to develop an adventurous game are -

- The game should have provision for three forest reserves, each with its own diverse flora, fauna and climate. Allow the player an aerial view of all the three forests simultaneously.
- The game should be built such that the user playing is able to navigate between the three forests using the top view.

- Out of the three forest reserves, two forest reserves should have average to hot climate and the third one should have a cold climate.
- Introduce challenging situations to your game. Due to climate change, the existence of the animals in one of the forest reserves is found to be in grave danger
- Introduce animals that are well-adapted to live in hot climatic habitats. In addition, also include animals that are on the verge of extinction, like, giraffes, snow leopard, tiger, gorillas etc. in the forest reserves that suit them best climate wise.
- In order to save them from dying and becoming extinct, you will have to transport these animals to the forest whose climate is ideal for its survival.
- For e.g. if snow leopards venture into the hot forest, you will have to transport them back to the cold forest. On the other hand, if giraffes make their way into a cold forest you will have to transport them back to the hot forest reserve.
- While developing the game, the following points must be kept in mind:
 - The animals survive in the reserve forest with suitable climate
 - The reserve forests do not become abundant with one species leading to extinction of other species – therefore it will be important to maintain diversity of animals in the forests
- The player of the game will be given a maximum of 5 turns to shift 50 animals and he/ she will be able to transport only 10 animals in each turn.
- The game will end in any of the three eventualities –
 - If the endangered species die because of its inadaptability to the environment
 - If the reserve experiences an imbalance of animal population
 - If the animals are not transported successfully within the given time

Apply all your learnings to protect our country's rich biodiversity from destruction. So put your thinking caps on and start developing the game. Enjoy yourself and keep getting better at game development. All the best!

Bye Bye!