PROJECT DESCRIPTION

Our design for Mannheim project is inspired by several coherent subjects and related to the social, cultural, environmental, and climatic conditions of the region. The design is an attempt to make the most of space while minimizing the probable damage to the environment and use the project condition to gain the maximum benefit. It seeks to recognize the prestige and dignity of Germany as an industrial country and the global pioneer in applying renewable energy. The main question was how one could think up a different, multi-purpose, and exciting idea and combine the historical, industrial, climatic, and economic conditions, the multiple goals of the United Nations, zero carbon strategy, and sustainable architecture into a single concept and giant artwork on a global scale while respecting nature.**We used the natural elements like the trees, their stems, the shape of flowers especially water lily, the spherical form of the Earth, and circular shape of the orbits to show that the fates of humans are intertwined wherever they live, and they are all responsible for climate change.** The traditional architecture of Germany, architectural forms, and pitched roof were also parts of the design. Efforts were made to design the project using light and symbolic structures with components inspired by nature. The design consists of two parts: underground and light structures located on the ground. Meanwhile, the whole electricity needed to power the park is supplied by the designed components inside the park, and the rest of it is stored in safe equipment in the underground for urban consumption. Renewable energy will be provided by three methods in this project: Method one: using solar panels / Method two: using concentrator photovoltaics / Method three: generating energy by walking on energy-harvesting tiles

1. Structure and light structure of the park surface according to site plan:

In this part, which covers almost the entire site, the whole structure with its stem-like columns (natural elements such as numerous tree stems and their leaves) is placed on a heightened ground level to provide more area and apace for greenhouses, tree-planting, green architecture (i.e. sustainable architecture), and human-centered civil space.The whole structure and columns are designed in such a way that the wind flow enters the city freely, and the air conditioning is optimal. In this project, the whole traffic is carried out on circular pedestrian overcrossings and routes marked on the floor; therefore, all the roofs of the bridges and structures are covered with solar panels in the form of gable roofs whose forms are inspired by the aesthetic elements found in nature. Concentrated solar panels are also used to generate electricity. Thus, we can make the most of renewable solar energy in this design. **We also, made my best to use components made from recycled and/or recyclable materials such as recycled and/or recyclable plastic to attain the least possible carbon emission. Vast spaces are devoted to floriculture and exhibitions, and general spaces are designed in the park to introduce the project as a unique global project (large-scale artwork) and the symbol of Zero Carbon Park. The feasibility of the project was one of my deepest concerns. I expect it to move from a simple concept to a successful and feasible project in different scales. The park is equipped with special charging stations for small-scale electronic vehicles so that clean and non-fossil energy can be used throughout the area in various festivals and events.**

2. Underground part of the park:

Covering a small area of the park, the underground is devoted to museum and HVAC structures. It also provides space for underground turbines which generate electricity through centralized solar panels installed at the highest level of the park and store energy. I used an ancient method employed in the Plateaus of Asia to ventilate the underground and the park in a smart manner without the need for electricity. The said method is called “Shovadan”. You will learn about it in the next section.

UNITED NATIONS
Sustainable Development Goals

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries— developed and developing—in a global partnership. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth—all while tackling climate change and working to preserve our oceans and forests.

Goal 1. End poverty in all its forms everywhere

Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture

√**Goal 3. Ensure healthy lives and promote well-being for all at all ages**

√**Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all**

Goal 5. Achieve gender equality and empower all women and girls

Goal 6. Ensure availability and sustainable management of water and sanitation for all

√**Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all**

Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Goal 10. Reduce inequality within and among countries

√**Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable**

√**Goal 12. Ensure sustainable consumption and production patterns**

√**Goal 13. Take urgent action to combat climate change and its impacts**

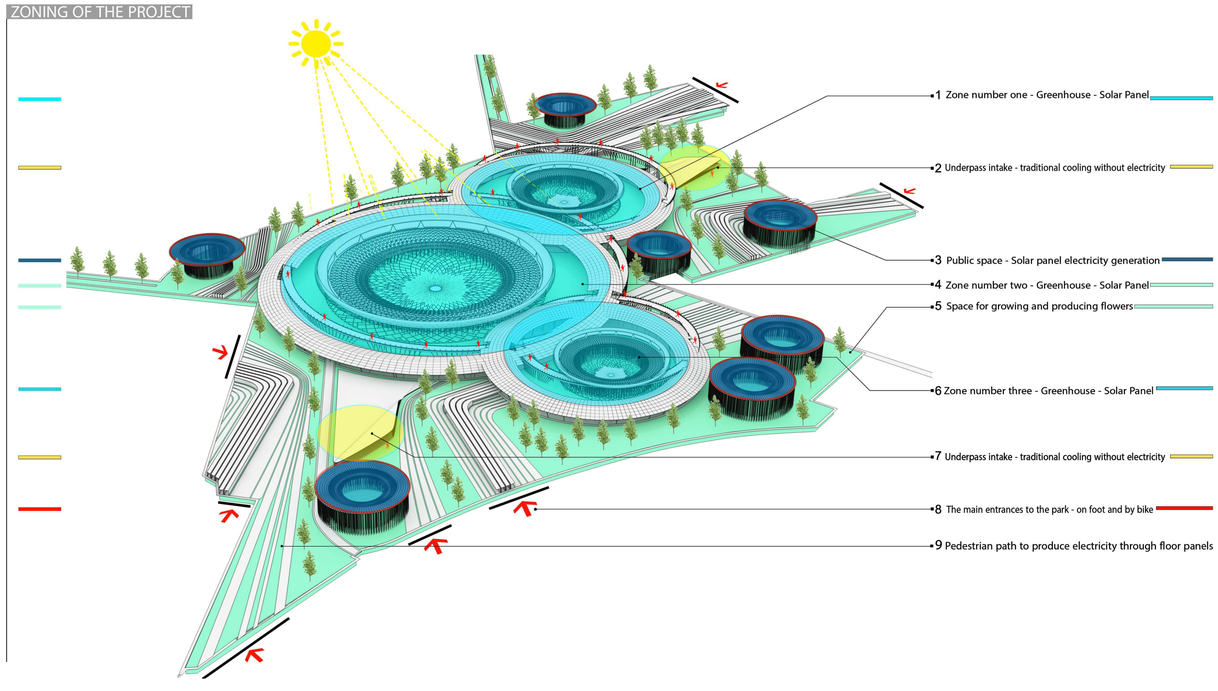
Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development

√Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

√Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

ZONING OF THE PROJECT



DETAILS OF THE PROJECT