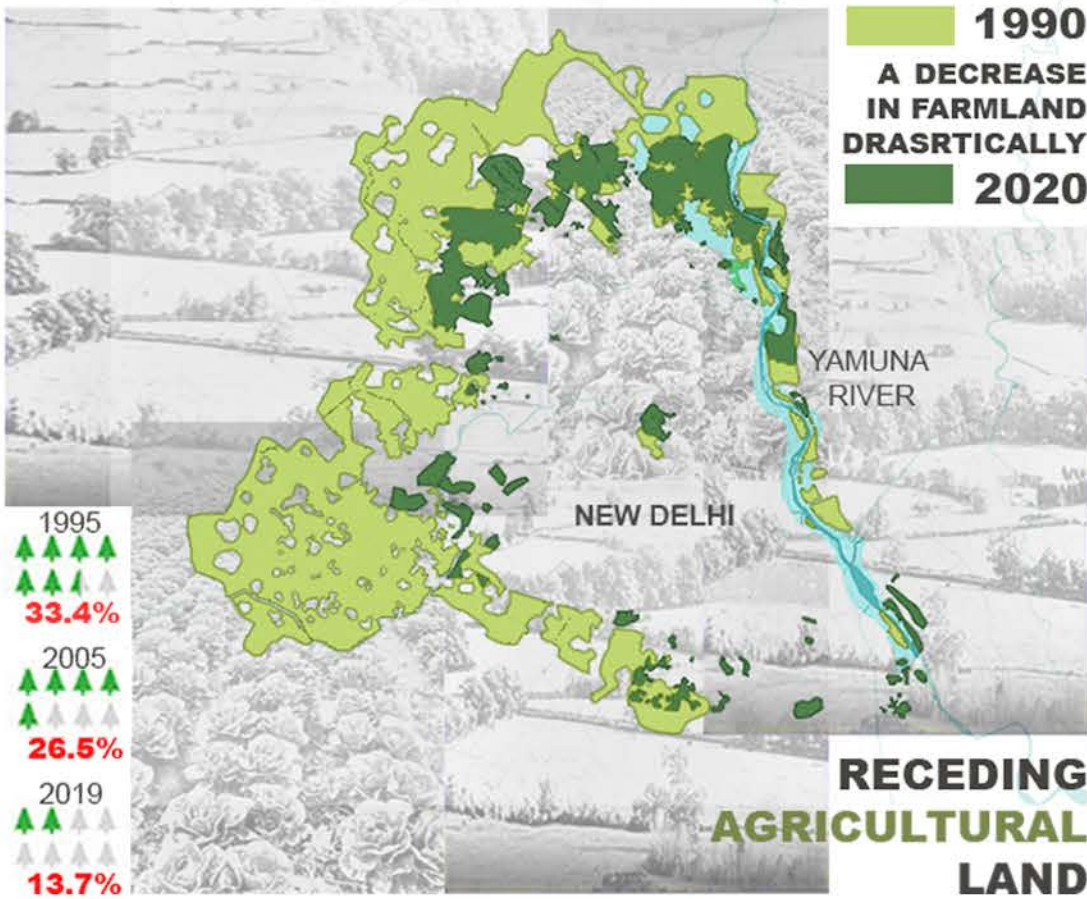


RE-PLUGGED



CONTEXT

DELHI, the capital city of India is going through a rapid growth of urbanization and industrialization. It experiences a huge spike in the air quality index due to mix weather conditions and urban emissions. As the region is shrouded with a haze of carbon, the residents and the farming community suffers. The farmlands yield black and rotten crops due to foul air. Farms are also susceptible to flooding and attacks by wild animals hence turning the community helpless. They suffer irreparable losses and are forced to divert their sources of income, the farming community is at threat of extinction.

APPROACH

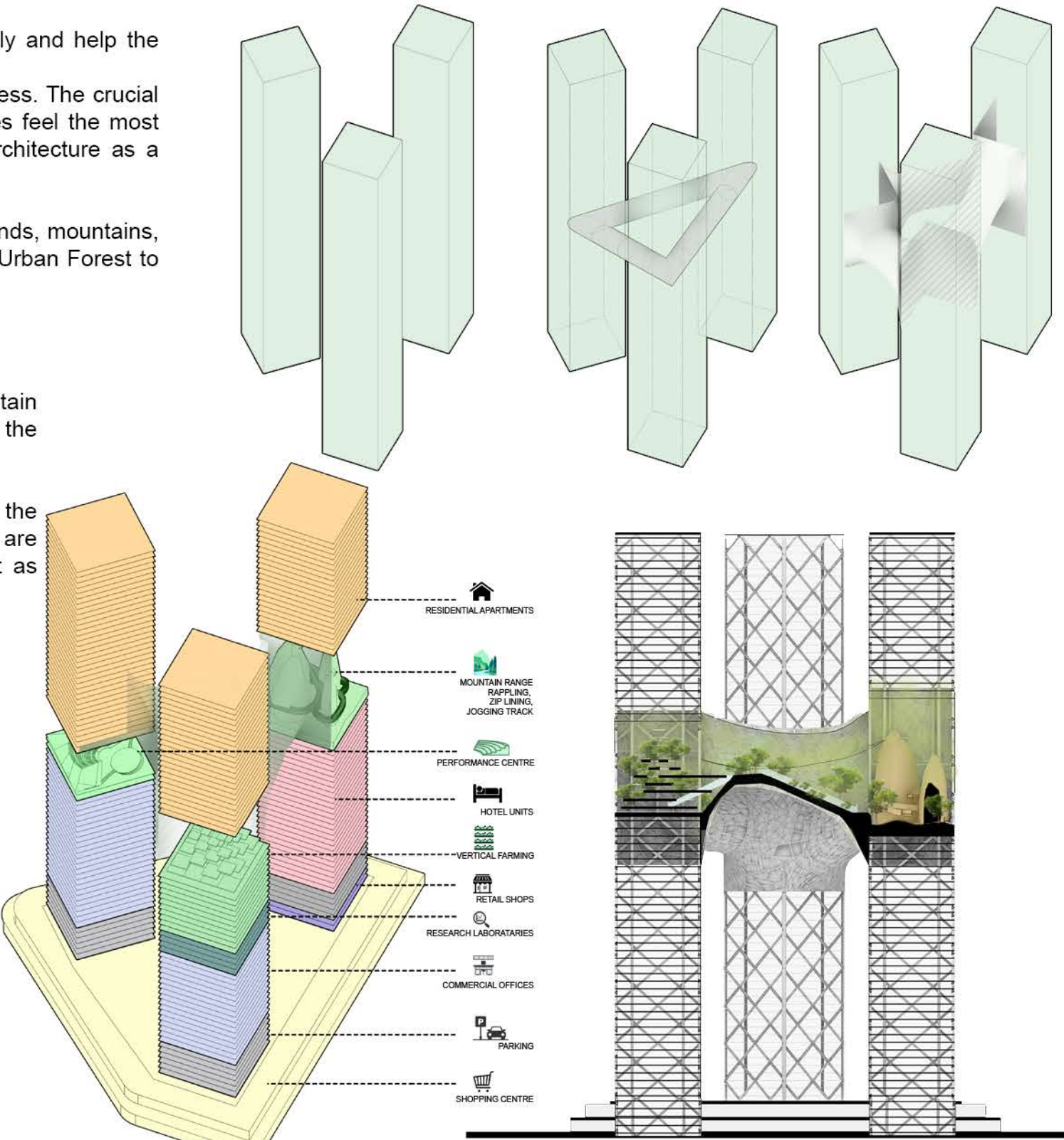
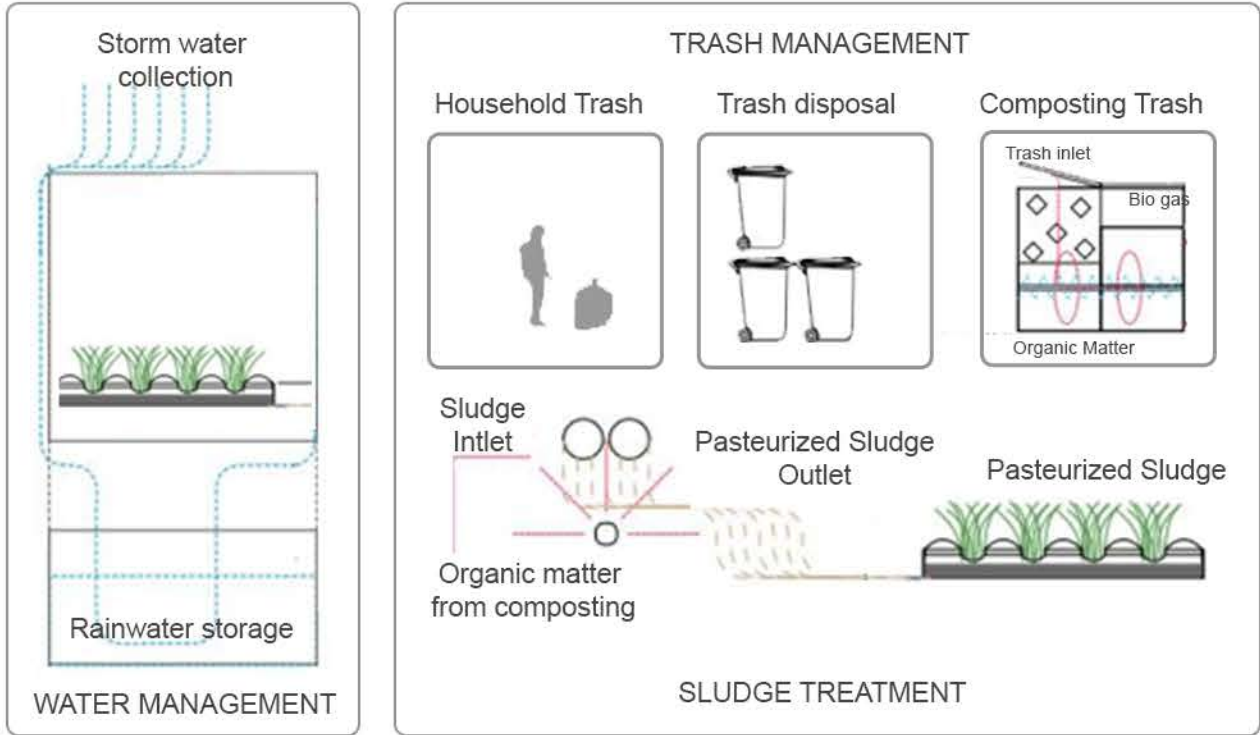
RE-PLUGGED intends to rethink this urbanization as an opportunity to grow sustainably and help the residents and farming community of Delhi. House confinements and lack of any physical movement have increased trauma and stress. The crucial times make us realize what we essentially need and miss out on. People living in cities feel the most isolated and have lost connection with nature. RE-PLUGGED is an attempt to use architecture as a medium to fill these void. It is an approach to bring to life the forgotten nature. The design imagines a vertical approach to the otherwise horizontally spread out farm lands, mountains, lakes and lush forest. The three towers are connected from the central core to form an Urban Forest to reconnect people with nature.

FUNCTIONS

The core of the RE-PLUGGED comprises of Vertical Farms with open markets, a Mountain range with running loop, rock climbing activities and zip lining, a green Amphitheatre facing the performance center which floats on the lake and are connected through foot over bridges.

VERTICAL FARMS

Vertical farms provide self-sufficiency and produce cost effective agricultural products in the city centers. This in-turn revives the farming community. Scientific research laboratories are provided to monitor the ecosystem stability in the premises. The laboratories also act as exhibition spaces for tourists to create awareness.

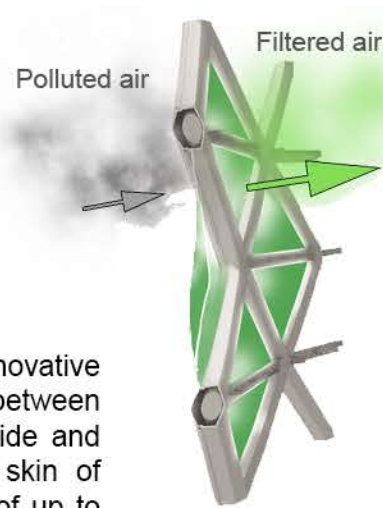


ECOLOGICAL STRATEGIES

RE-PLUGGED is multi programmed to effectively use and restore resources. The rainforest amidst the skyscraper serves as lungs to the urban habitat creating a micro environment of its own.

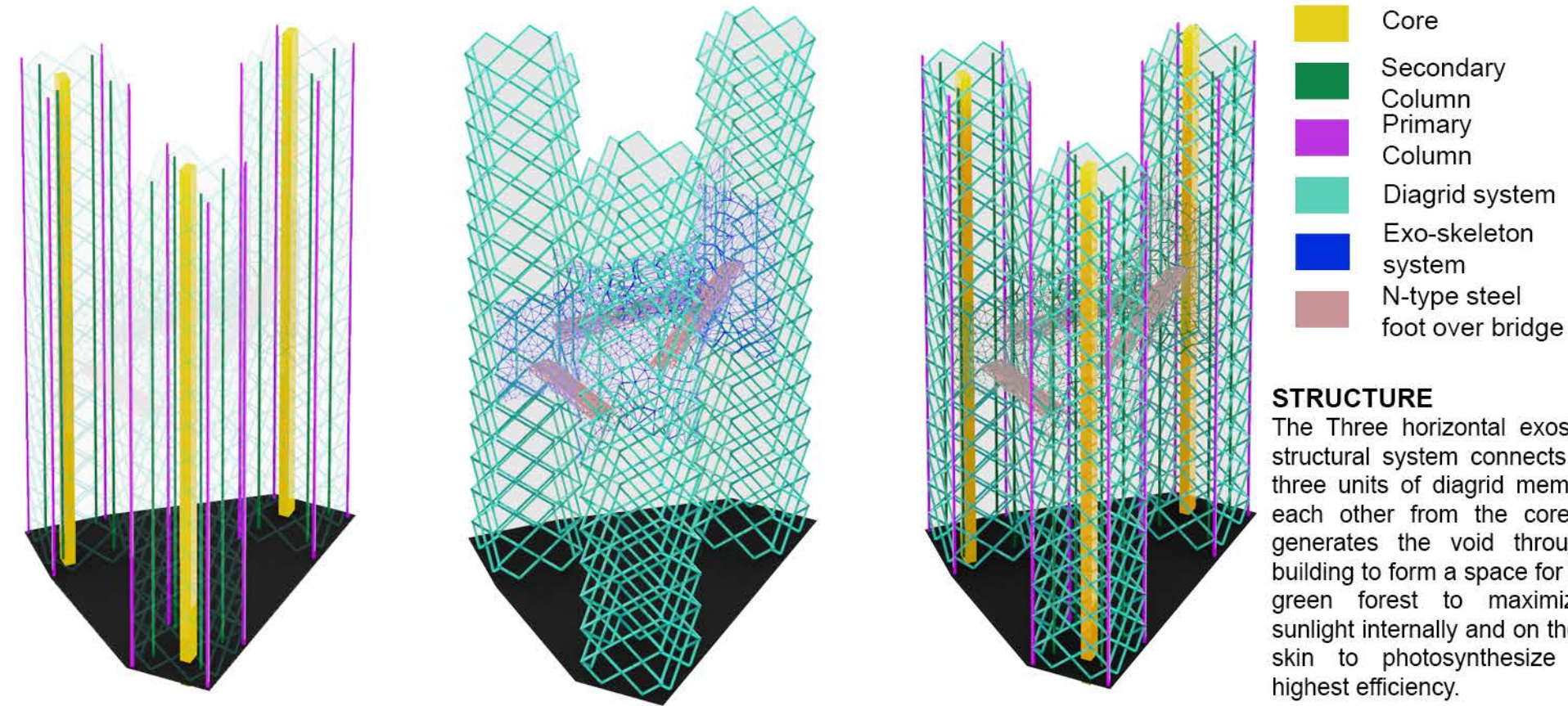
WASTE MANAGEMENT

Trash collected from residential apartments and commercial buildings will be treated by composting. The organic matter will be reused as manures in vertical farming and green zones. The bio gas released will be converted into fuel and electricity. The storm water is invested and used in farming.



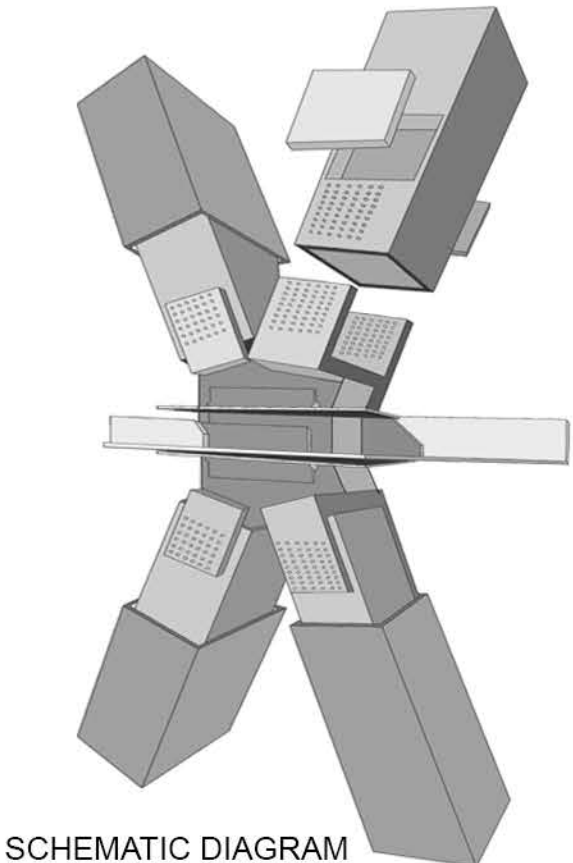
BIO LOGICAL AND DIGITAL RESPONSIVE SKIN

Algae Skin developed by Ecologic Studio is an innovative photosynthetic system for building skin. Algae is filled between ETFE. It absorbs considerable supplies of carbon dioxide and oxygen, while simultaneously performs as a second skin of buildings with passive cooling while producing oxygen of up to 2kg which is equivalent to 25 large trees. Micro-algae perform a crucial photosynthetic activity with 150kg of biomass per day – 60% of which are natural vegetal proteins.



STRUCTURE

The Three horizontal exoskeleton structural system connects all the three units of diagrid members to each other from the core which generates the void through the building to form a space for the lush green forest to maximize the sunlight internally and on the Algae skin to photosynthesize at its highest efficiency.



SCHEMATIC DIAGRAM OF DIAGRID SYSTEM

