DEPARTEMEN ARSITEKTUR
FAKULTAS TEKNIK
UNIVERSITAS DIPONEGORO

TA 162
SYNANTHROPIA

ARSITEKTUR SEBAGAI AGEN SISTEM KONSERVASI IN-SITU:
PERANCANGAN FASILITAS PENGELOLAAN TAMAN NASIONAL DAN LANSKAP KONSERVASI GAJAH DI TWA SEBLAT, BENGKULU.

RETHINKING ARCHITECTURE'S RELATIONSHIP WITH WILDLIFE CONSERVATION

This project aims to challenge the usual assumption in architectural intervention within the context of wildlife conservation are usually captive conservation centers, zoos and etc

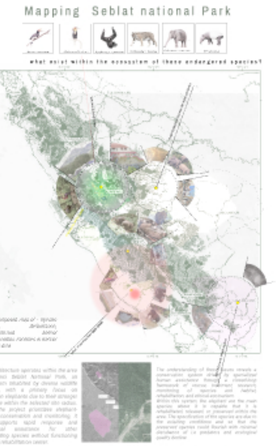
RECURRING ISSUES OF IN-SITU EFFORTS

captivity 4 life?
ex-situ: kebun binatang, penangkaran, breeding center, bank gen
Aordor to cultivate?
in - situ: taman nasional, zona rehabilitasi, koridor satwa
decaying habitat?

If architecture often contributes to conservation primarily through ex-situ approaches by providing artificial environments or habitats in the form of enclosures, this project questions whether architecture could instead contribute directly within natural habitats as an active agent for broader ecosystem and biodiversity conservation. Rather than positioning wildlife as objects contained within architecture, the project explores how architecture can operate more subtly within the landscape of the real habitat of the wildlife protection and conservation methods of the in-situ paradigm.

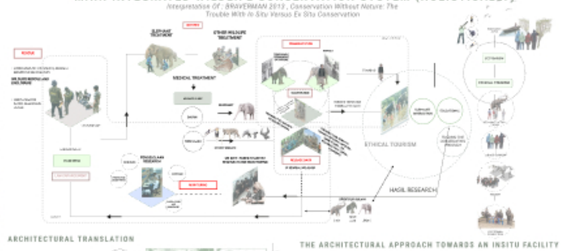
This understanding of the recurring issues within existing broader conservation systems triggers the development of a new conservation framework that addresses these challenges while also protecting the remaining forest ecosystem as a vital ecological lung, sustaining biodiversity, carbon absorption, and environmental continuity.

Mapping Seblat national Park

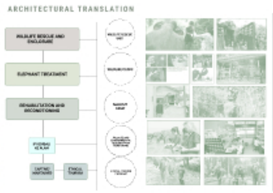


MAIN INTEGRATED WILDLIFE CONSERVATION SYSTEM (HOLISTICALLY)

Interpretation of : BRAVERMAN 2013 , Conservation Without Nature: The Trouble With In Situ Versus Ex Situ Conservation

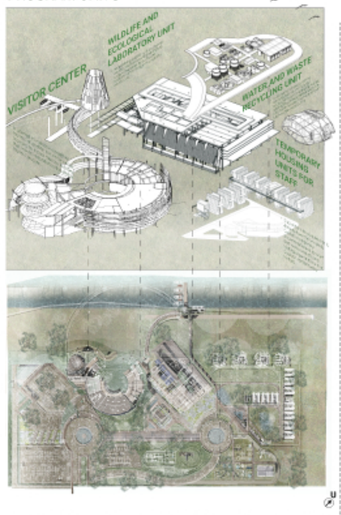


ARCHITECTURAL TRANSLATION



THE ARCHITECTURAL APPROACH TOWARDS AN INSITU FACILITY

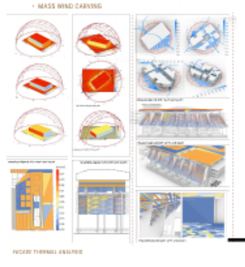
PROGRAM UNITS



Part 2 : Tourism and Research Unit

Passive Energy Building Strategies

- RADIATION BASED MASSING STRATEGIES WITH GRASSHOPPER
- MASS WIND CARVING

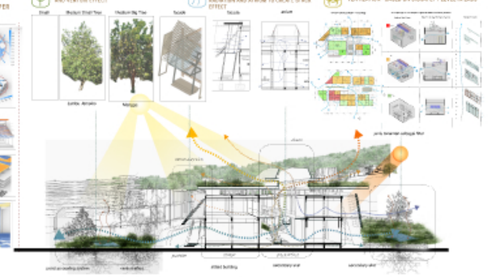


Passive Cooling Scheme

EXPLOITATION OF TREES AND PONDS AS COOLING ARCHITECTURE EFFECT

EXPLOITATION OF POROUS FACADE LIKE SUN ENCAPTION AND ATRIUM TO CREATE STACK EFFECT

CUSTOMIZED OPENINGS THAT ENABLES CROSS VENTILATION - BASED ON DIRECTIONAL LEVEL IN LABS

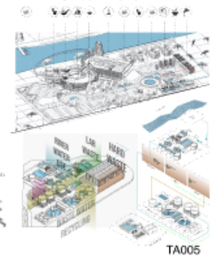


Low Impact Construction - Prefabricated ready to Install Semi-Permanent Structure

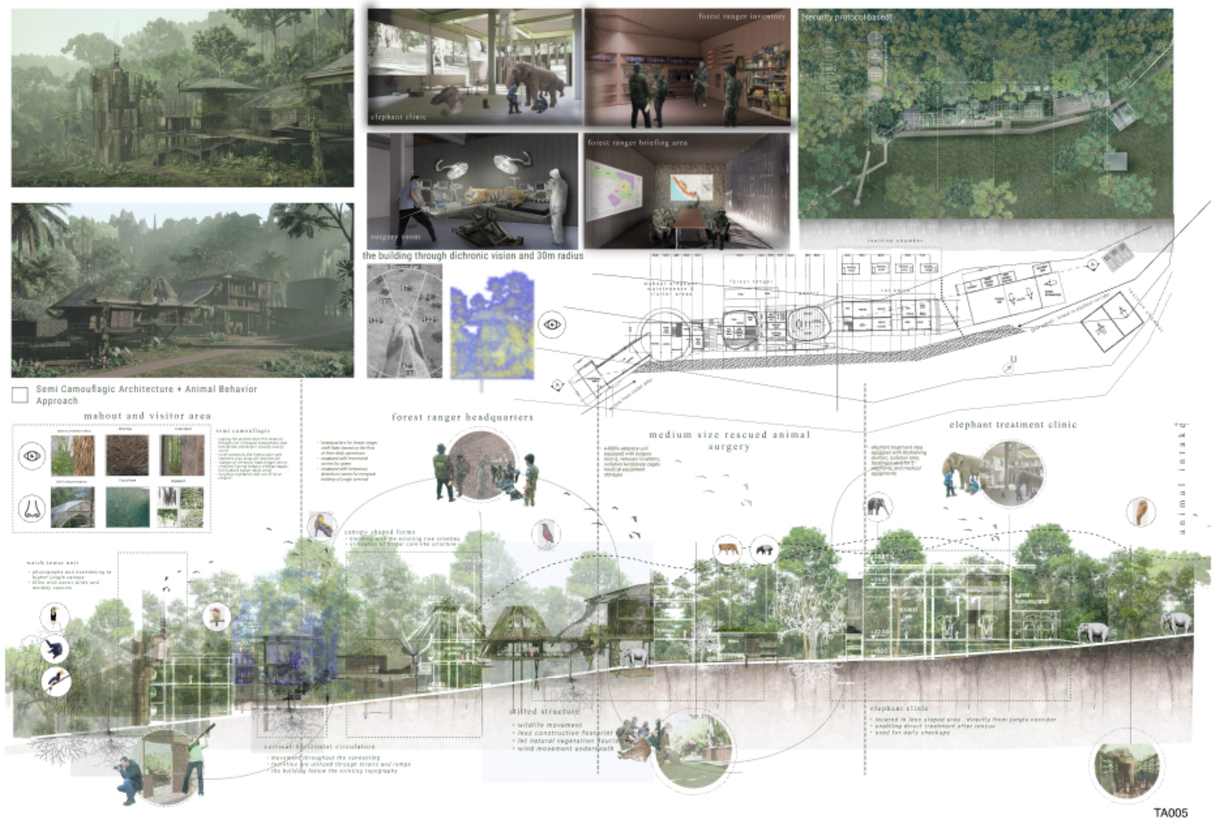
Minimizing Construction Impact to nearby ecosystem

Local Water Resource Utilization - Waste Recycling Close Loop

Minimizing Waste Impact to nearby ecosystem



TA005



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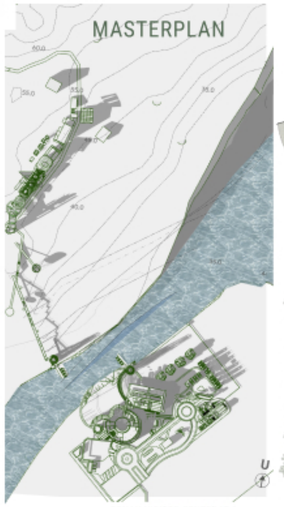
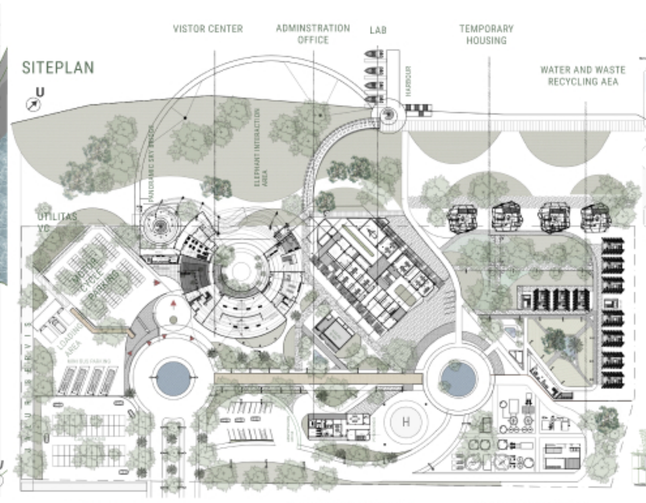
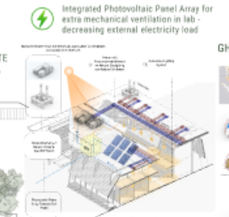
MASTERPLAN



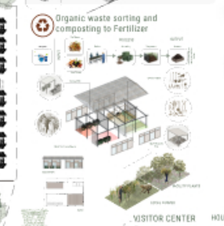
SITEPLAN



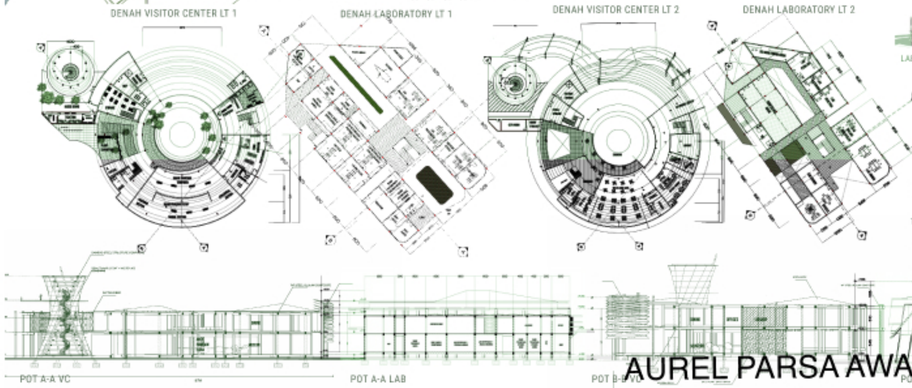
Integrated Photovoltaic Panel Array for extra mechanical ventilation in lab - decreasing external electricity load



Organic waste sorting and composting to Fertilizer



GH SCHRIPTS



AUREL PARSA AWANTA - 21020121140132