

THE JAGA HUB

THE JEWEL OF AGRICULTURAL AND GENERATING
AUXILLIARY OF ALBAY



PROJECT BRIEF:

LEGAZPI ALBAY IS KNOWN FOR ITS AGRICULTURE AND COASTLINES. THEY ARE KNOWN TO PRODUCE AND EXPORT COPRA AND ABACA THAT CAN BE USED AS AN ALTERNATIVE RENEWABLE RESOURCE LIKE FISHING LINES AND NETS MADE FROM ABACA FIBER. FISHING IS ALSO A MAJOR OCCUPATION DUE TO ITS RICH MARINE BIODIVERSITY: SOME EXAMPLES OF AQUATIC RESOURCES THAT CAN BE FOUND ALONG ITS SHORELINES ARE MILKFISH, GROUPER, MUD CRABS AND PRAWNS.

OUR PROJECT SITE IS LOCATED ALONG THE COASTLINES OF THE ALBAY GULF. THE SITE IS PRONE TO FLOODING AND NATURAL DISASTERS WHICH HINDERS DEVELOPMENT WITHIN THE AREA. IT IS ALSO INHABITED BY INFORMAL SETTLERS WHICH MAKES THEM VULNERABLE TO NATURAL DISASTERS ESPECIALLY TYPHOONS.

DESIGN OBJECTIVES:

- 1.) TO DESIGN FACILITIES (ECOPARK, WATER TREATMENT FACILITY, DISASTER REDUCTION HUB) THAT WOULD HELP THE ECONOMIC GROWTH OF THE CITY AS WELL AS PROVIDE A SUSTAINABLE RECREATIONAL SPACE FOR THE CITIZENS TO ENJOY.
- 2.) TO PROTECT THE CITY FROM NATURAL DISASTERS BY INTEGRATING THE POWER OF NATURE (MANGROVES) WITH MODERN SOLUTIONS TO ENSURE THE SAFETY OF ITS RESIDENTS
- 3.) TO USE DIFFERENT SUSTAINABLE SOLUTIONS AND STRATEGIES LIKE VERTICAL FARMING AND AQUACULTURE TO HARVEST CROPS AND OTHER NATURAL GIFTS OF NATURE AND BOOST THE QUALITY OF LIFE AROUND THE CITY.

DESIGN CONCEPT:

J.A.G.A. (WHICH MEANS "TO GUARD OR A SENTINEL") HUB ALSO KNOWN AS THE JEWEL OF AGRICULTURAL AND GENERATING AUXILLIARY OF ALBAY IS AN ECO PARK COMPLEX AND DISASTER REDUCTION HUB DESIGNED TO PROTECT THE CITY FROM FLOODING AS WELL AS HARNESS THE POWER OF NATURE THRU THE USE OF ENERGY HARVESTING FACILITIES AND SOLUTIONS. THE PROJECT PLANS TO MAXIMIZE SURROUNDING NATURE. RIVERS AROUND THE CITY IN ORDER TO PROVIDE A NEXT GENERATION AND SELF SUSTAINABLE CITY FOR THE FUTURE.

THE SOLE PURPOSE OF JAGA IS TO DEVELOP A HUB WHICH PRIORITIZES THE SAFETY OF ITS RESIDENTS, PROVIDE A CONSISTENT WATER SUPPLY AS WELL AS IMPROVE THEIR SOCIAL LIVELIHOOD EXPERIENCE. THE PROJECT SEEKS TO INTEGRATE A PROTOTYPE OF DISASTER REDUCTION COMPOUNDS WHERE THE AFFECTED RESIDENTS COULD STAY TEMPORARILY AFTER A DISASTER. THROUGH THE USE OF PROPER PLANNING COMBINED WITH THE NATURAL ELEMENTS OF NATURE, THIS PROPOSED HUB WILL GIVE THEM THE COMFORT AND SECURITY THEY DESERVE.

PROBLEM:

ONE OF THE MAIN PROBLEMS OF LEGAZPI IN GENERAL IS FLOODING DUE TO ITS 365KM COASTLINE AND CLOSE VICINITY TO THE MAYON VOLCANO. THIS CAUSE THE COASTLINE AREAS TO BE UNDERDEVELOPED AND IS THEREFORE CURRENTLY SWARMED WITH STREET DWELLERS AND CONGESTED INFORMAL HOUSING. THE SITE ALSO IMPOSES A THREAT TO COMMERCIAL ECONOMIC GROWTH DUE TO THE HAZARDOUS EFFECTS OF SUCH DISASTERS



SUSTAINABILITY
& AGRICULTURE

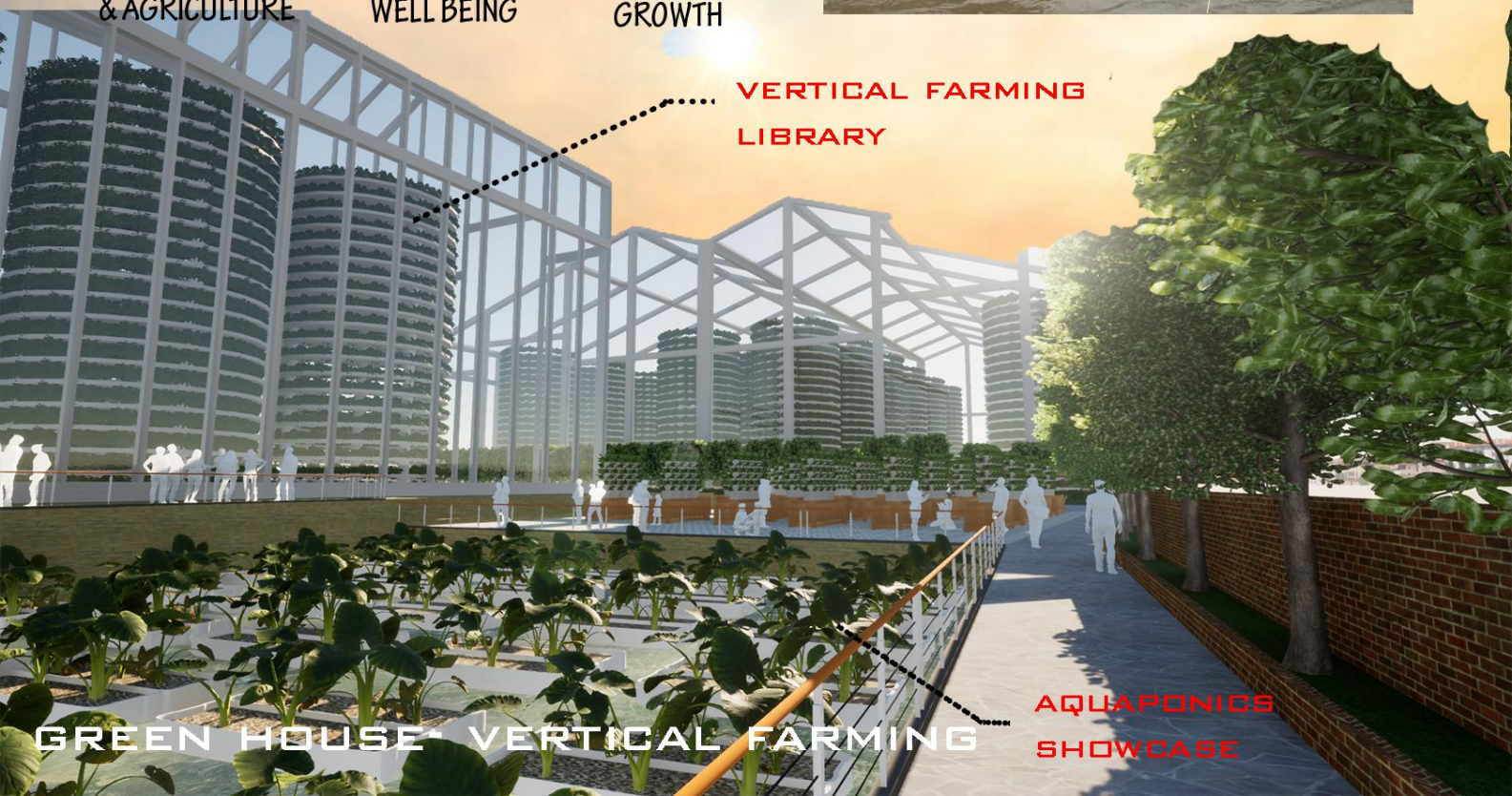


HEALTH &
WELL BEING



ECONOMIC
GROWTH

DESIGN CONSIDERATIONS:



Mayon
Volcano
Natural Park

CITY OF LEGAZPI

SITE ANALYSIS



AMIHAN
(NORTHEAST MONSOON)

Legazpi City

THE COASTAL LINE ALONG LEGAZPI CITY SPECIFICALLY THE AREAS NEAR BRGY. SAN ROQUE, IS DUMPED WITH PILES OF SAND AND SOIL ACCUMULATED THROUGH DIFFERENT EFFECTS OF TYPHOON, WHICH HINDERS THE AREA TO HAVE OPPORTUNITIES FOR A NEW TOURIST ATTRACTION SITE AS SEEN WITH THE CURRENT EXISTING STRUCTURES SUCH AS THE EMBARCADERO DE LEGAZPI. IN EFFECT, THE PLACE IS CONSTATNTLY UNDERDEVELOPED, AND THE SUPPOSED

THE CITY.THE WHOLE CITY IS MOSTLY COVERED WITH NATURAL LANDSCAPE WHICH IS 70% OF LEGAZPI DESPITE ITS RAPID URBANIZATION. THE OTHER 30% IS THE URBAN LANDSCAPE WHICH IS BUILT UP OF THE CITY'S CENTRAL BUSINESS DISTRICT AND SMALL BARANGAYS FOUND AROUND THE CITY.



HABAGAT
(SOUTHWEST MONSOON)



THE QUANTITATIVE RELATIONSHIP BETWEEN NATURAL AND URBAN LANDSCAPE DIFFERENCE MAKES AGRICULTURE A VERY SUSTAINABLE SOURCE OF BUSINESS FOR THE WHOLE COMMUNITY OF LEGAZPI.

ACCORDING TO UP NOAA(N.D) THE PICTURE SHOWS FLOOD HAZARD MAP IN ACCORDANCE TO RAINFALL RETURN RATE, THE SPECIFIC SITE WHERE JAGA PROTOTYPE WOULD BE DEVELOPED IS SEEN TO HAVE A MORE FEASIBLE AT THE SAME TIME EFFECTIVE PLANNING FOR THE SOLUTION OF THE CITY.

THE CURRENT HOUSES BUILT IN BRGY. SAN ROQUE SHALL BE RELOCATED AS PER LAW OF EXPROPRIATION, AND BE GIVEN A BETTER HOUSING AND LIVELIHOOD EXPERIENCE.

FLOOD HAZARD

	1.5m	HIGH
	0.5m	MEDIUM
		LOW

Mayon
Volcano
Natural Park

CITY OF LEGAZPI

N

SCALE 1:40000



METERS

Santo
Domingo

Legazpi City

A WATER TREATMENT FACILITY LOCATED AT BRGY. SAN ROQUE ADJACENT TO TIBU RIVER CLEANS WATER SO THAT THEY CAN BE RETURNED TO THE ENVIRONMENT. THESE PLANTS REMOVE SOLIDS AND POLLUTANTS, BREAK DOWN ORGANIC MATTER AND RESTORE OXYGEN CONTENT OF TREATED WATER. A NETWORK OF SEWAGE SYSTEMS CAN COVER THE WHOLE CITY OF LEGAZPI (70 BARANGBAYS) TO PROVIDE ENOUGH WATER AS STATED BY ERIC BANK(2017).

PROTOTYPE OF DISASTER REDUCTION COM-
PUND AIMS TO PROVIDE A TEMPORARY SHEL-
TER FOR THE AFFECTED RESIDENTS. IT HAS
A SOUP KITCHEN AND STORAGE FOR THE
DONATIONS OF FOOD AND OTHER GOODS.
THIS ALSO GIVES THE USERS A COMFORTA-
BLE AND WARM PLACE TO STAY IN, WHILE
THEY GET BACK TO THEIR FEET. IT ALSO
COVERS SPACE FOR TENTS AND REDREA-
TIONAL PURPOSES.

A 50M OFFSET OF MANGROVES TO THE
COASTLINE OF LEGAZPI WOULD SERVE AS A
BUFFER PROTECTION TO PREVENT FLOOD-
ING AND WITHSTAND OTHER IMPACTS OF TY-
PHOON DISASTER. MANGROVES IN THE
PHILIPPINES ARE USED TO REDUCE THE
FORCE OF RAMPANT WAVES AND SERVE AS A
MAIN FLOOD PROTECTION AS STATED BY
NATURE CONSERVANCY (2017).

THE PROPOSED RELOCATION SITE FOR DIS-
PLACED HOUSEHOLDS IN BRGY. SAN
ROQUE WOULD BE SITUATED IN TOURISM
HIGHWAY COR. PURO ROAD, AT BRGYS.
BURAGUIS AND PURO RESPECTIVELY, WHICH
IS APPROXIMATELY 2.5 KILOMETERS AWAY
FROM THE ORIGINAL SITE.

THE RELOCATION SITE IS EASILY ACCESSIBLE
TO SCHOOLS (BURAGUIS ELEMENTARY
SCHOOL), RESIDENTIAL, INSTITUTIONAL
AND SMALL RECREATIONAL PARKS, (IMPERI-
AL RIDGEVIEW MINI PARK). THE AREA OF RE-
LOCATION SITE IS ENOUGH TO COVER THE
EXISTING 130,000 M2 AREA OF HOUSE-
HOLDS COVERING BRGY. SAN ROQUE

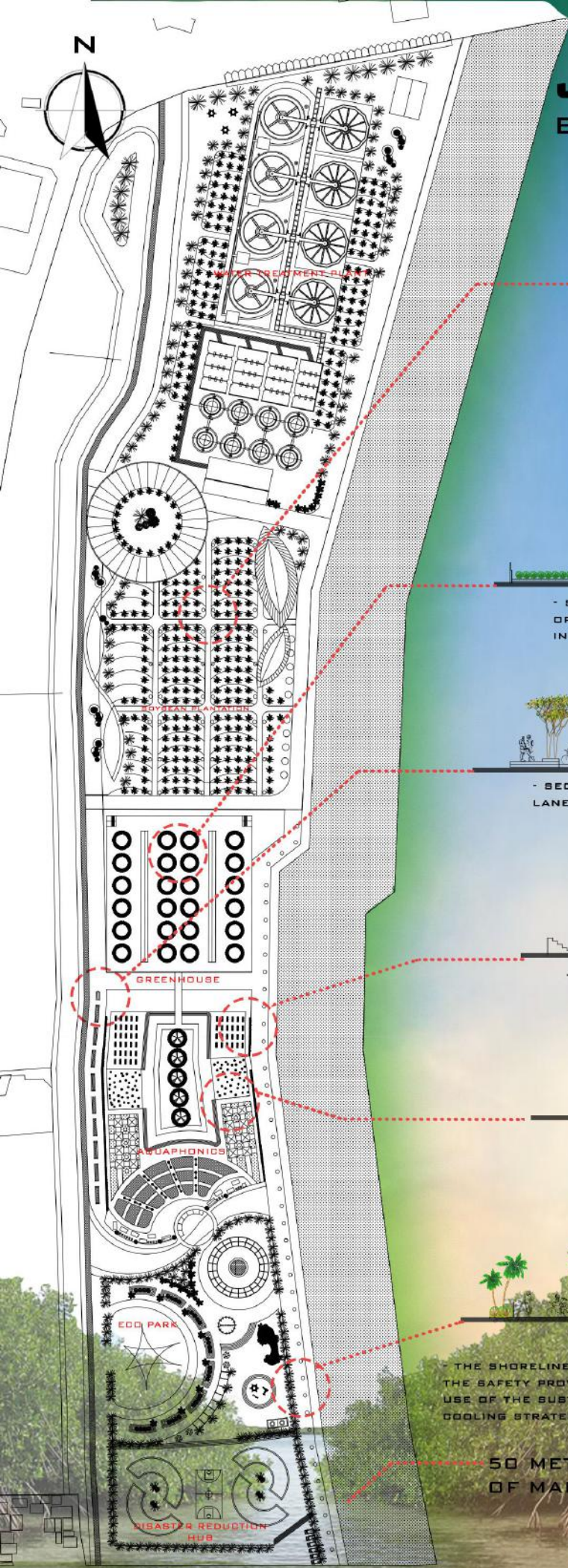
SITE 1
(104,000M2)

SITE 2
(74,000M2)

Poliqui Bay

JAGA PROTOTYPE

BRGY. SAN ROQUE - PROTOTYPE



- PIONEERING SOYBEAN PLANTATION THAT WOULD OPEN OPPORTUNITIES FOR ECONOMIC AND AGRICULTURAL GROWTH IN LEGAZPI.

- SECTION OF THE GREENHOUSE CONCEPT, VERTICAL FARMING PORTION OF THE HUB EMPHASIZES ON EDUCATING LOCALS ON THE POSSIBLE INNOVATIONS IN THE AGRICULTURAL BUSINESS.

- SECTION OF ROAD DESIGN CONSIDERS THE SPACES NEEDED FOR BIKE LANES AS OPPOSED TO THE CAR DOMINATED ROAD LANDSCAPES.

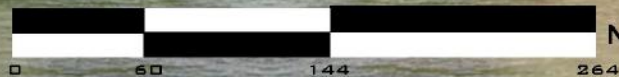
- SECTION OF VERTICAL FARMING SHOWCASE

- IN LINE WITH THE EDUCATIONAL ASPECT OF THE RECREATIONAL PARK, THE HUB SHOWCASES THE PROCESS OF AQUAPONICS AS AN INNOVATION IN AGRICULTURE.

- THE SHORELINE BAYWALK IS IMPLEMENTED TO MAKE USE OF THE SAFETY PROVIDED BEHIND THE MANGROVES AND MAKES USE OF THE SUSTAINABLE WATER CATCHMENT TOWER AS A COOLING STRATEGY FOR THEIR OUTDOOR EXPERIENCE.

50 METER OFFSET OF MANGROVES

METERS



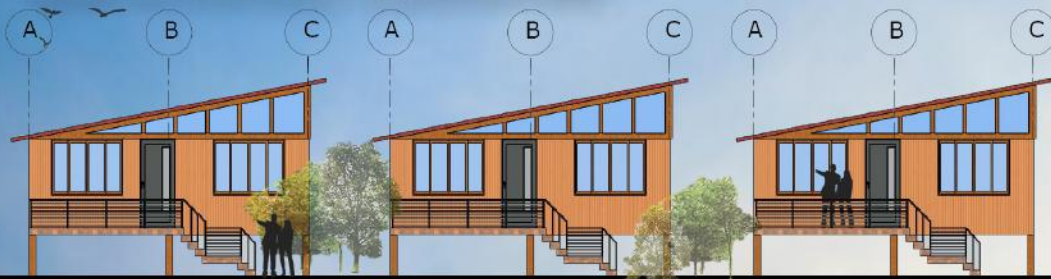
HOUSING PROJECT

JAGA HOUSING - PROTOTYPE

THE HOUSING SOLUTION FOCUSES OF BEING ABLE TO PROVIDE THE BASIC NECESSITIES OF THE RESIDENTS THROUGH THE NEW RELOCATED SITE FOR THEIR NEIGHBORHOOD WHICH IS ROUGHLY 2.5KM AWAY FROM IT'S ORIGINAL LOCATION. THIS RELOCATION CONSIDERS BOTH THE SAFETY OF ITS DWELLERS AS WELL AS THEIR QUALITY OF LIFE THROUGH MOVING THE RESIDENTS AWAY FROM THE DANGER ZONE OF THE PREVAILING FLOODS ALONG THE SHORELINE AND AT THE SAME TIME KEEPING A CLOSE PROXIMITY WITH THE USUAL SOCIAL LOCALITIES SUCH AS SCHOOLS, CHURCHES ETC.



PERSPECTIVE



FRONT ELEVATION
SCALE 1:75mts

FOR MATERIALS USED THE HOUSING DESIGN OPTED TO USE SUSTAINABLE MATERIALS WITH HARDWOOD FOR THE SUPPORTING STILTS OF THE HOUSES, BAMBOO SLATS FOR THE WALLS AND FLOORING AND COCO LUMBER FOR THE ROOF FRAMING.



GROUND FLOOR PLAN
SCALE 1:75mts



RIGHT ELEVATION
SCALE 1:75mts



PERSPECTIVES



BIKE LANE & AQUAPHONICS

THE BIKE LANES AROUND THE HUB ARE DESIGNED TO COPE WITH THE SURROUNDING FACILITIES THROUGH THE USE OF GREENERY. ARTICULATION OF GREENERY AND INCORPORATED BIKE LANES CREATES AN ILLUSION TO COVER UP THE WATER TREATMENT PLANT, AS REFERRED IN MICRO SITE.



GRAND WALKWAY & PLANTATION

THE SOYBEAN PLANTATION WOULD BE OPEN FOR TOURISTS TO EXPLORE THE BEAUTY OF NATURE AND RECOGNIZE THE RICH AGRICULTURAL INDUSTRY OF LEGAZPI CITY.



ECO PARK - AGORA

THE PURPOSE OF THE AGORA IS TO PROVIDE A RETURN OF INVESTMENT FOR THE HUB AND A PLACE WHERE THE FARMERS COULD SELL THEIR FRESH HOMEGROWN CROPS FROM THE PLANTATIONS TO THE TOURISTS AND MAKE THEM EXPERIENCE THE TRUE ESSENCE OF COUNTRY LIVING.

