

MINI - GRID SYSTEM DESCRIPTION

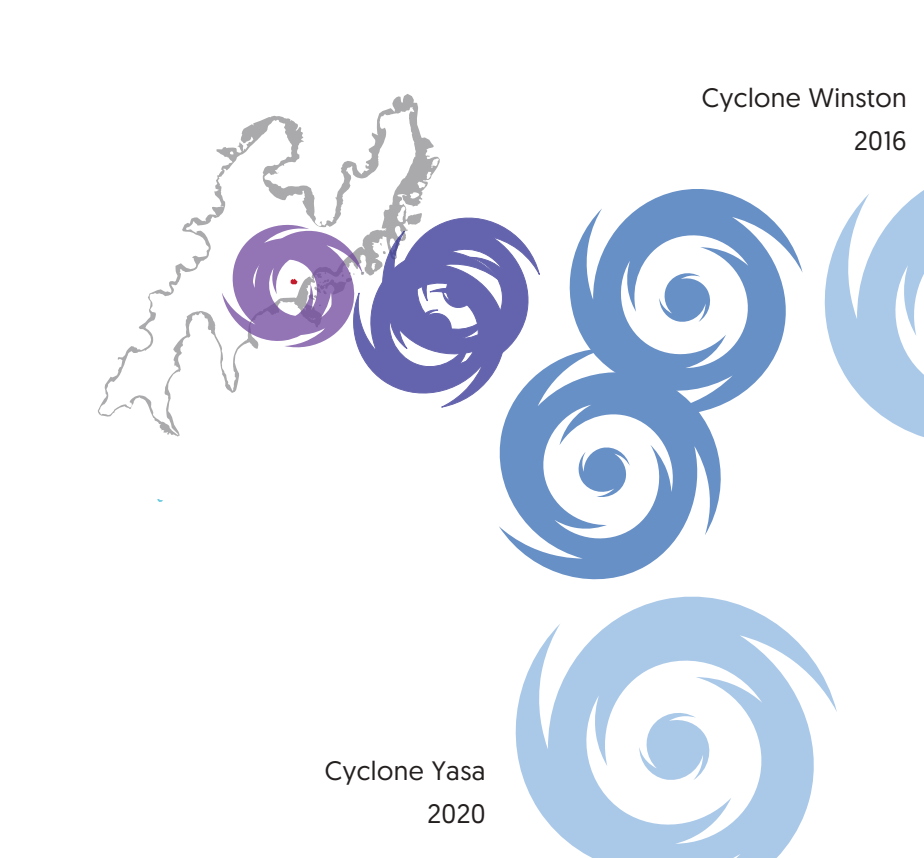
- Total number of photovoltaic panels : **352**
- Standard size of a single module with dimensions of **1.44 m²**
- Total potovoltaic area :  $352 \times 1.44 \text{ m}^2 = \mathbf{506,88 \text{ m}^2}$   
\*not including the constitution skeleton
- Total electricity production in one day = **505 kWh**
- Taking into account the daily energy needs of the residents of Marou, which is about **244 kWh**.
- We can therefore allocate **375 kWh** for the operation of the shelter, water filtration, lighting, and powering the long-term energy storage, which will be a source of energy in times of energy shortage.

place for safe storage of photovoltaic modules and batteries.



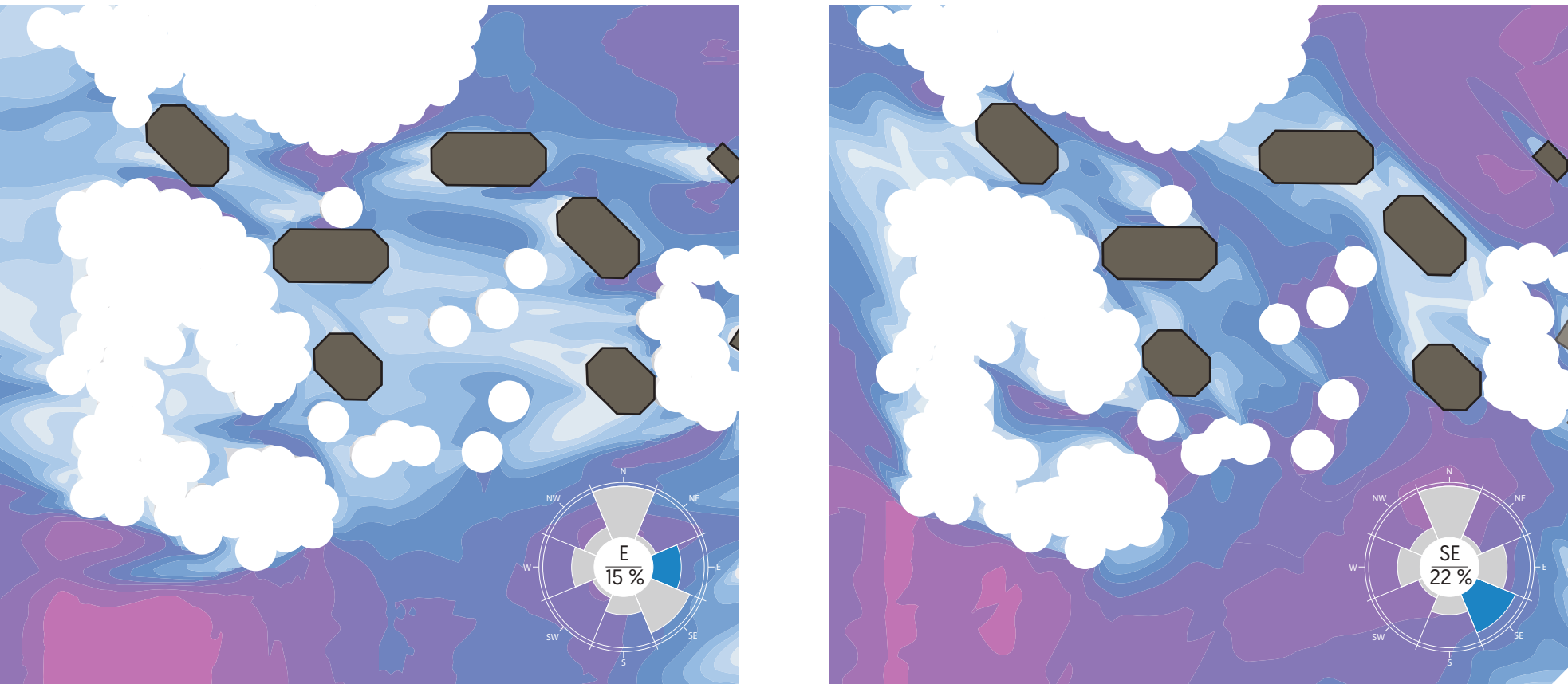
PREVIOUS CYCLONE TRACKS

they determined the directions for the arrangement of buildings



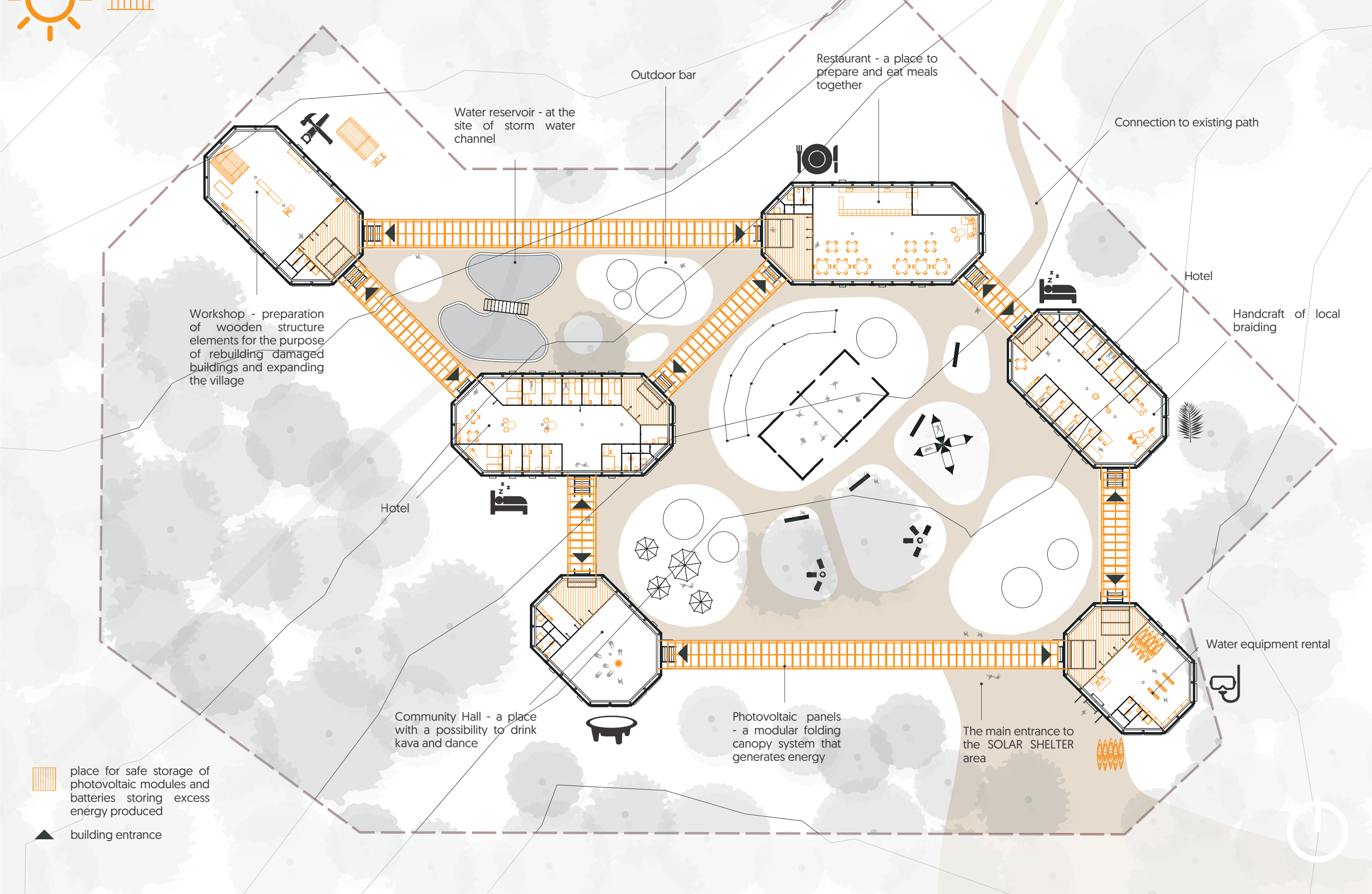
ANALYSIS OF THE TWO MAIN DIRECTIONS OF PREVIOUS CYCLONES AND WINDS DURING THE YEAR

The buildings are oriented the shorter side towards the east and south-east to significantly increase the chances of breaking without any damage  
\*Information based on analysis from Autodesk Forma



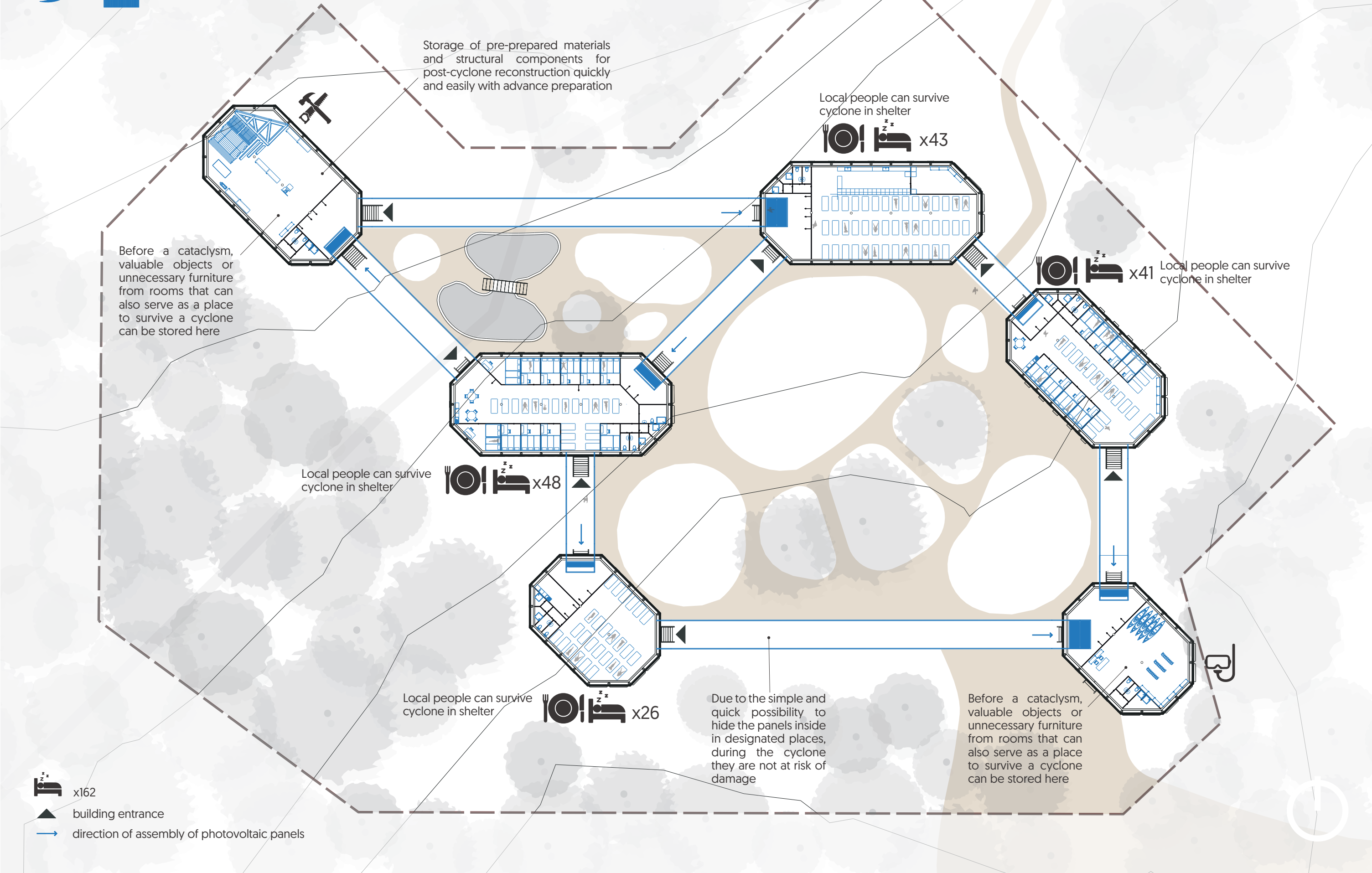
NON CYCLONE SCENARIO - TOURISM, JOB AND COMMUNITY MEETING PLACE

\*with photovoltaic panels unfolded not including the moment of hurricane occurrence



CYCLONE SCENARIO - INTERIORS FORMERLY USED AS A TOURIST RESORT, WORK PLACE FOR LOCAL PEOPLE CAN SERVE AS A CYCLONE SHELTER

\*with photovoltaic panels in cyclone mode, folded and safe at building



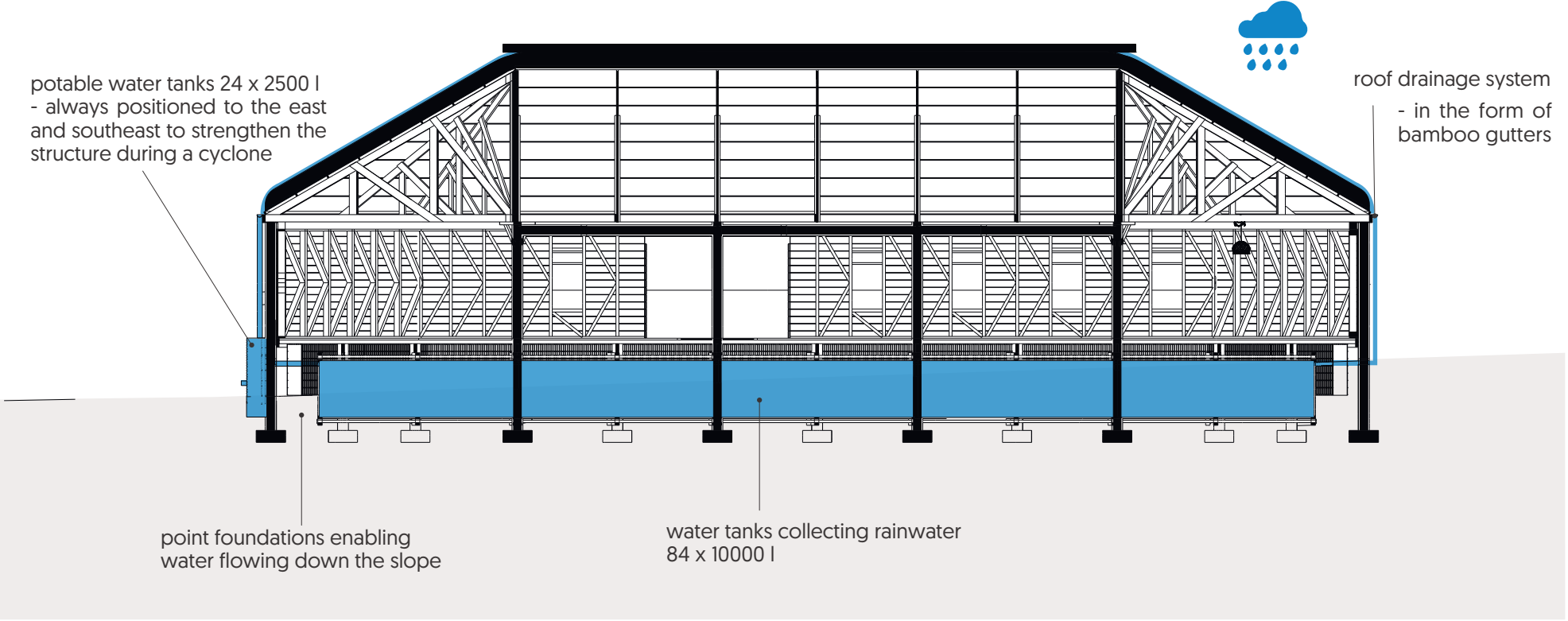
MULTI - FUNCTIONAL FLEXIBLE SPACES



WATER STORAGE 900 000 liters

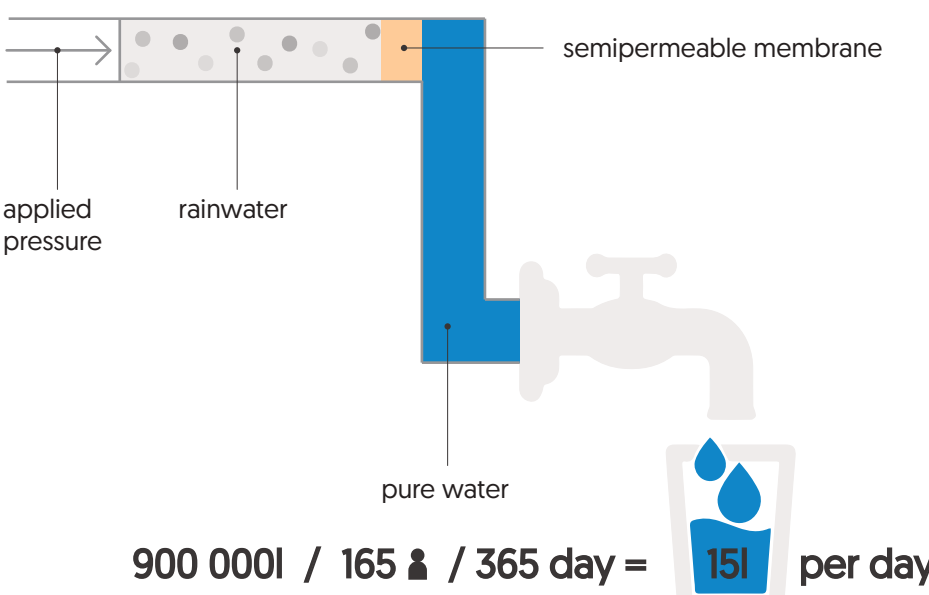
Volume possible to be collected by our solution :  $900 \text{ m}^3 = 900\,000 \text{ l}$   
Total surface area of roofs :  $2160 \text{ m}^2$   
Average annual rainfall per  $\text{m}^2$  :  $2000 \text{ mm}$

potable water tanks  $24 \times 2500 \text{ l}$   
- always positioned to the east and southeast to strengthen the structure during a cyclone



WATER SECURITY - FILTRATION METHOD

Reverse osmosis



Drinking water is a primary use. Residents often rely on rainwater as their main source of clean drinking water for most of the year. After drinking water, a lot of rainwater is used for cooking-especially since seawater or saline ground water is not suitable for that.