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Project Name: DOCE_SSA Pollinating Urban Meliponary Network in the city of Salvador
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TO POLLINATE ARCHITECTURE, TO PROMOTE BIODIVERSITY, FOR A BETTER URBAN PLANET.

In wild and sometimes hidden sites, bees maintain terrestrial ecosystems through pollination, ensuring the recovery of native flora and accounting for about 70% of food crops in the world, ensuring quality and security for agricultural economy. Nevertheless, bee population decreased, caused mostly by pesticides and habitat loss, which is a global issue.

Taking advantage of a strong local context of urban resilience, of the cohesion of several agents and the expansion of Meliponiculture, the enterprise of rationalizing of Native "Kinglet" bees, Doce_Ssa was born as an "unintended" architecture, based on the United Nations Sustainable Development Goals in an integral participatory interdisciplinary process, evolving towards the Municipality's interest.

Meliponiculture, which is part of traditional communities' cultural and subsistence practices, in addition to providing honey and NBS, products, supporting emergent species and contributing to sustainable agriculture, also plays a strong role in the recovery of the Atlantic Forest biomes, a global biodiversity hotspot. Although small and fragmented, the aforementioned biomes, where 100% of Salvador's territory is located and where 72% of the Brazilian population lives, in architectural context, it was the confrontation with the urban design project Honey Factory that revealed urban meliponiculture, in place of urban agriculture, as a protagonist in Brazilian reality. Our native bees can exist in the urban cities, since they are species with stunted wings, therefore, unable to harm humans.

As a pilot action of coordinated design, a network of pollinating urban meliponaries is proposed for the city of Salvador, in order to house and promote the multiplication of NBS colonies. It involves mobilization architecture and ephemeral architecture of any other ones which may be able to contribute to the network construction, thus exceeding different scales. The basic architectural project, supported by a principle of urban occupation, comprises microarchitecture ideologically linked to local programs - urban parks, school and community vegetable gardens and orchards, and (educational) "ferries" (cyclostation wrap tent) - becoming centers of pollination and environmental education. Urban green spaces and areas for social engagement are articulated for this new mission, designed with Municipality's actions of ecological landscaping and implementation of urban gardens network, embracing both the project and the range of action and light of the main bee species adapted for it: the Melipona Scutellaris, which is up to 3-km, in addition, there is a proposed Melipona in the main urban park of the city, where a small "honey" was temporary built to exhibition of the project and was presented to the general public, a fester of the macroarchitecture that manages the network.

Possibilities for architecture do not end here. A new field of action for design of the service of biodiversity is presented, envisioning public policies control of pollution and pollination in a broader sense, anchored to socio-environmental preservation in a proactive measure of the city - architecture - object relationship. Doce_Ssa implies a pioneering low-cost, high-impact design strategy based on nature, to mitigate the climate emergency and the need for cities to adapt, while bringing people closer to these elementary social issues.

Thinking locally thinking globally. More bees, more green spaces, more healthy food, more pleasant, livable, aesthetic and resilient cities for people and biodiversity.



URBAN MELIPONARIES

WHAT ARE THEY?
 They are microarchitectures for urban meliponiculture. They accommodate the precious Native Stingless Bee Nests (NBS or Meliponary) inside an natural breeding system which replicates the physiological conditions of the nests found in nature, facilitating their finding (induced multiplication of colonies and extraction of products).

WHAT ARE THEY FOR?
 Support for a lively and conscious environmental EDUCATION, and for POLLINATION of urban vegetable gardens and orchards (qualification of cultivation), and the Atlantic Rain Forest Biome (restoration and plant conservation).
 Reduction of local global deficit of pollinators. Promotion of biodiversity. Exchange of direct and indirect economic benefits generated by NBS, of environmental, social, cultural and economic scope.

WHO THEY ADDRESS?
 Pilot project proposed to the Department of Innovation, Sustainability and Resilience's City Council, envisioning the "Salvador Capital da Mata Atlântica" Program.
 Agents "guardians of bees" = local communities, members of Meliponiculture, students and researchers.
 Support of NBS colonies for the implementation phase of the project - registered local meliponaries (production chain promotion).

WHICH TYPES?
 As a result of a non-linear design process, there are 2 types seeking to align the project's objectives with the available local resources and with the sustainable criteria of meliponiculture practices. They limit the usage of the traditional, rural technique, adapted to the urban environment. They can consist:

MICROARCHITECTURE 01 - suggested for urban parks, with anti-theft devices, given the NBS colony added value. It explores playful + educational aspects in its essential, with attraction points providing the experience of contextualizing the important and fantastic NBS universe, in detail, the indigenous painting, applied by a visual artist, to the wood supports, presents indigenous cultural heritage rescue when dealing with the bees.

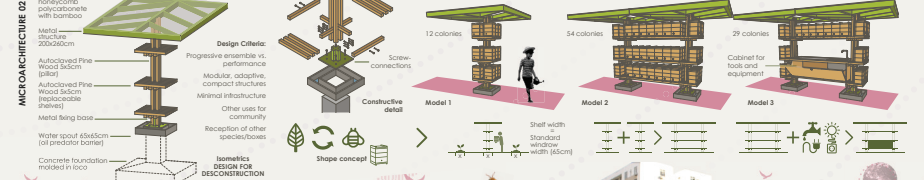
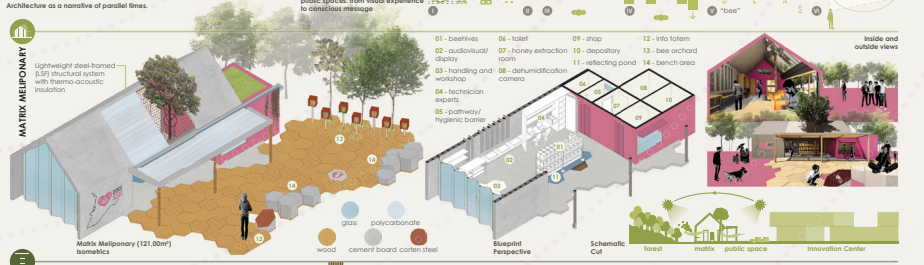
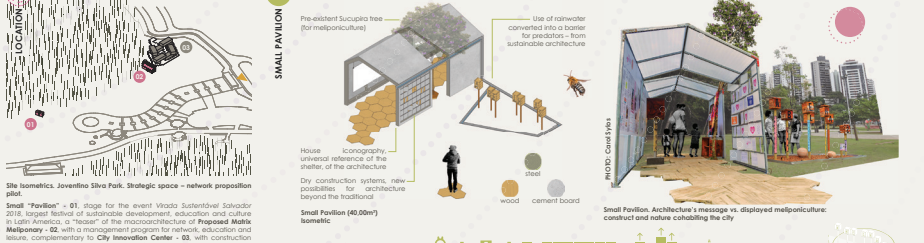
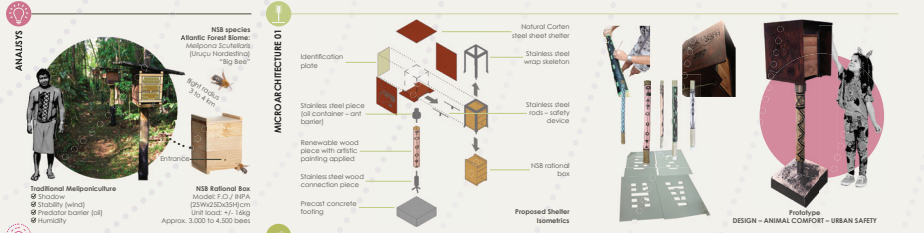
MICROARCHITECTURE 02 - already conceived as a Municipality demand for vegetable garden dynamics and with a pre-existent security system in these areas, its design reflects the intrinsic ecologic relationship NBS vs. flora, and implantation logic variables (the induced growth of the colonies in the intended management schedule, the progression level of community's participation, and budget availability).

HOW?
 A first step towards the network...

MICROARCHITECTURE PROGRESSIVE-EVALUATIVE IMPLEMENTATION (TRANSPIRANT)
 DIAGNOSIS - selection of sites based on the list of vegetable gardens already implanted by the Municipality. Criteria:
 - Distance (0-4km) from polluting sources, factories, waste stations, etc.
 - Close to natural areas with pre-existing flora (Meliponary potential) and/or growing area close to parking stations, also considering the connectivity of great areas and the range of action and light of the main NBS species adapted (3-4km);
 - Good level of social cohesion in communities and management.

HANDLING WORKSHOPS FOR GUARDIANS - MICROARCHITECTURE INSTALLATION 01
CONTINUOUS EVALUATION - MICROARCHITECTURES PROGRESSIVE IMPLEMENTATION 02 (goal: 5 to 100 colonies - seasonal spring)
COLONIES DIVISION FOR OTHER MELIPONARIES INSTALLATION - PROJECT'S MULTIPLICATION PATH

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All the worlds. Just one world
 Architecture 21

