

MORE-THAN-FARMING MADRID

A single garden can change the life of a person. Farming can change life in the city. Urban agriculture, as caring practice, is capable of repairing ecosystems, strengthening local food supplies and constructing commons. But it must overcome an anthropocentric vision, promoting a symbiotic metabolism that enhances biodiversity. It needs to be more-than-farming.

Taking as a minimum environmental unit the neighborhood, implementations should be site-specific as well as network-specific. Considering latent resources in San Blas, we expand the activities revolving around farming such as processing, distributing, recycling or cooking. Different farm-forms are designed, scalable and adaptable to a diversity of sites, members, timeframes or budgets. Rooted in place, creating a 'seedstem' rather than a system, three different scenarios emerged: caring 'neighbourfood', growing local livelihoods and biodiversity front yard.

NOURISHING MADRID

Recent years has seen a resurgence in urban farming, but this is not a new practice. In ancient Mesopotamia, the expansion of the city was already conceived by allocating space for food production. It was during the 20th century, with rapid industrial sprawl and globalization, that the modern city model polarized production and consumption. This dichotomy, in addition to increasing food miles, being highly polluting, became a black box, making urbanites oblivious to what they eat. This mirage of stability quickly shows its vulnerability whenever environmental, economic or sanitary disruptions.

Urban farming can be more than a lifestyle trend or a hobby. It can be a backup buffer in the face of risk situations, such as climate catastrophes or pandemics, such as the Covid-19 Pandemic or the Filomena storm. It can improve biodiversity, water management, generate energy, strengthen local food supply chains, recycle biomass waste and reduce pollution. Its design must be embedded in the reality of Madrid, actively related to other places in its territory, conceived from the management of shared resources. This maintenance of the commons, as a caring practice, can provide a sense of identity, increase citizens' skills, create jobs, prevent food insecurity or eliminate food deserts. Cultivating urban food requires growing knowledge, caring for more-than-humans and ultimately, taking care of the city through farming, nourishing Madrid.

FROM SYSTEM TO SEEDSTEM

We can no longer think of urban agriculture in conventional terms, we must avoid the logic of monoculture and not replicate totalizing strategies. We need to broaden its understanding from seed to dish to all those adjacent activities, which could interconnect and feed back. We need to generate a seedstem and not a system, avoiding the pitfalls of homogenization and repeating yet another generic city model that overlooks the complexities of each site.

FROM SITE SPECIFIC TO NETWORK SPECIFIC

To generate a 'seedstem' applicable to the whole city with a transversal will, from the territorial to the furniture scale, it must be adapted not only to the indosyncratic nature of Madrid, but also to each specific urban fabric. The minimum unit of study is the neighborhood, not a single plot of land. As the name of Madrid's agricultural plan indicates, *barrios productores*, if we are to profoundly change the city model and not be an isolated and ephemeral case, it has to take root, it has to be conceived from the "barrio". Understanding its social ecosystem, the resources available and the latencies within it. It has to be not only site-specific, grounded in place, but also linked to the social fabric that will ensure its maintenance. It also needs to be network-specific.

FROM GRAN SAN BLAS TO GREEN SAN BLAS

We chose San Blas as a paradigmatic case study for the transformation of a neighborhood with a Fordist conception into a neighborhood for ecological transformation. We propose to switch from Gran San Blas to Green San Blas, not from an aesthetic or cosmetic beautification, but from a change of its urban metabolism. In fact, the Greek root of the word ecology, *oikos*, means "house" or "place to live". It is a matter of planning the management of our habitat in collaboration with other species, in relation to both the environment and the physical context.

San Blas has been planned under the binary model of a dormitory town that depends on the center for work and services. Many homes have minimal dimensions and most of its streets lack commercial first floors, leaving the ground level deserted of any activity. It is therefore critical to improve outdoor spaces. Urban voids, streets and inter-block spaces are in urgent need of repair and would especially benefit from the injection of urban agriculture. In fact, the first community to move in from rural areas brought some of their practices with them. Old photos show open-air markets, street stalls or the transhumance of sheep in front of the housing blocks. Today it is inhabited by a diverse and multicultural community, with a migrant population not only from other provinces of Spain but also from other geographies such as Rumania, Latin America or China. Understanding its urban network can promote social cohesion while enhancing biodiversity, creating community through food.

FARM FORMS

Farming already has a wide variety of spatial elements associated with it. Still, it is necessary to propose an adaptive and resilient system that can respond to the extensive diversity of sites, members, timeframes, and budgets. And also retain a recognizable identity that can generate a sense of belonging. To this end, a minimum unit is proposed, the M of Madrid. It is a frame with three supports that can perform as an independent unit or be associated longitudinally, superficially, vertically, and three-dimensionally.

Room for (Bio)Diversity. The construction system comprises standard galvanized steel tubular bars and nodes. Three M-frame families are proposed depending on the scale: Mini-M, made with 1200x50x2mm bars, Midi-M of 2400x100x5mm, and Maxi-M of 3600x150x10mm. The nodes will allow joints in 30°, 45°, and 90° angles. These structures can be totally or partially enclosed, accommodating a wide range of materialities. As a hyperstatic frame where pillars become beams, the

need for concrete foundations is minimized, reducing the disruption of the vital soil networks. This system can be kept permanently or be dismantled and repurposed in a new location.

We identify the specific character of each site, assessing its environmental and social affordability, detecting potentialities and latencies to ensure that the implementation can take root in place.

CARING NEIGHBOURFOOD

San Blas G has a neighborly and domestic character, presenting a social housing fabric with a **public school** at its core. This condition is ideal for introducing **agriculture as a playground**, extending the educational experience beyond walls. Taking into account the **existing trees** and **recycling pavement** materials to create continuous benches, the interblock condition is used to create an **accessible** and **safe** space for **conviviality**. Care is shared and **intergenerational**, connecting **elderly** people who are alone in their homes, relieving the burden of **childcare** normally associated with **women**, nourishing the neighborfood across **ages**, **genders** and **species**. *Actors* Individual neighbors, neighborhood associations, Ramón María del Valle Inclán Public School. *More-than-human* existing trees, fruit trees, mulberry trees, mulberry leaf worms *Scale* neighborhood, superblock scale. *Design strategies* Planting of sunny farming areas, following the 1m2 grid through which a neighbor can easily start cultivating. A continuous strip is created along the facades without access, establishing a safe and climatic buffer for the ground floor dwellings. Fruit trees, mulberry trees and productive bushes are planted to naturalize the school boundary, where a pond of aquatic plants is incorporated to help purify and recirculate water. Existing trees are enhanced by expanding the permeable area and fostering different activities around them. The reuse of materials is encouraged, using salvaged bricks to create benches that separate public use areas from farming zones. Tanks are implemented for the use and storage of rainwater for irrigation. The blind wall, enjoys a sunny and windy condition, perfect for drying food and preserving the fruit tree crops. All this cultivation system is interwoven with intergenerational care elements, benches for resting, swings, soft areas, transforming an underused area in a productive playground. *Investment* Public. Low budget. Implementation through workshops with neighbors that would generate a sense of belonging and dissemination of knowledge. *Stages of Implementation* start with the small plots of 1m2 of farming and planting the mulberry trees, in a next stage incorporate the play elements, final stage implement drying device. *Plans* Barrios Productores

GROWING LOCAL LIVELIHOODS

San Blas F has a great connection being located on a major transit route. A cultivated strip will foster naturalization, reinforcing public transportation, implementing bike lanes and reducing car traffic. Its high visibility and accessibility together with the repetition of blind walls (medianeras) make it a unique spatial resource for local business growth. By implementing vertical farming, greenhouses, energy collectors and small stores, domestic markets could be boosted, food mileage reduced and access to healthier products facilitated. It could become a biological corridor that would function not only for humans but also for other species such as birds or insects that could travel across this green way. *Actors* local business , individual neighbors, neighborhood

associations, IES Carlos III Highschool. **More-than-human** biological corridor **Scale** District neighbourhood scale. **Design strategies** This stripe is thought as the perimeter of a pedestrian superblock, with bike lanes, trees and permeable soil. 1m² cultivation belts are attached to the residential buildings in the transversal streets to give continuity. The equipped medianeras, having good solar orientation and positioned in the wind direction, enjoy small spaces with which to expand towards the street and showcase local products. There are a variety of applications, creating a diverse landscape. For example, the left one is a greenhouse, where baby vegetables and vertical farming with aquaponics, having a small restaurant where to taste the products grown there. The other one is a micro-winery, with a terrace under a canopy, a small bar and the production of wine with solar energy captured on the roof. This implementation would also influence adjacent educational facilities, such as the IES Carlos III institute that could requalify its residual spaces as productive grounds.

Investment Private on public land. **Stages of Implementation** public tender for low rent concessions in exchange for industries of production, processing or sustainable distribution of local short-circuit food. **Plans** Barrios Productores, European funds for Environmental Development, aid for entrepreneurship from the Community of Madrid and Spain.

BIODIVERSITY FRONT YARD

Las Rosas is located in a border condition of the city currently relegated to a ideal end situation. However, it has great potential for connection on a territorial scale through the subway, the commuter train, highways and the metropolitan bicycle ring. In addition, its open field character allow for implementing a large cultivation area, expanding the notion of urban horticulture and introducing small animals such as bees, sheep or chickens. This urban ecosystem also connects with the future metropolitan forest, being able to relate to the urban forestry resources coming from its maintenance. Migratory birds and other species would find refuge here. Revitalizing and reversing its current condition, going from being where the city ends to where it begins, becoming the front yard of biodiversity. **Actors** neighborhood associations, local businesses, collaboration with private stakeholders for reducing the carbon footprint, such as Mercadona. Metropolitan ring cyclists as potential seasonal tourists **More-than-human** connection with the future metropolitan forest. Bird sanctuary lagoon in the old Tolsa mines. Good site condition for bees in conjunction with flower cultivation. **Scale:** metropolitan scale **Design strategies** Extensive cultivation area with diverse crops and fields. A recycling center for urban forestry and upcycling urban materials. Transversal connection of the cycling ring with the interior of San Blas and connection to the new urban forest. Introduction of a productive flower landscape with bee hives that help pollination. A stripe of fruit trees in terraced area creates a buffer zone for the single family houses. This implementation presents the opportunity to hack the typology of the supermarket, attaching to Mercadona an equipped bleachers with storage space for local processed products. This helps connecting the rooftop and reduce energy consumption in insulation. The position enhances public-private collaboration introducing local produced foods in conventional supermarkets **Investment** Public-private **Stages of Implementation** First stage cultivation plots, second stage introduction of small animals, third stage collaboration with private entities such as Mercadona. Finally the recycling center for the management of the urban forest. In a final stage, one can imagine that the houses also use the garden as a orchard. **Plans** Barrios Productores, Bosque Metropolitano.