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Xochimilco: Chinampas, Pre-Hispanic Knowledge and Agroecological Practices in Mexico City.

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Abstract

In the south of Mexico City (CDMX) is the lacustre zone of Xochimilco (Galicia et al., 2019) declared a World Heritage Site by the United Nations Educational, Scientific and Cultural Organization (UNESCO), as well as being part of the Globally Important Agricultural Heritage Systems (GIAHS) by the Food and Agriculture Organization of the United Nations (FAO), and as a wetland of global importance in the Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Torres-Lima and Cruz-Castillo, 2019). Xochimilco is a territory that is home to an environmental and cultural ecosystem with an ancestral agricultural culture of pre-Hispanic origin which are the chinampas; an artificial cultivation system built in areas where water is the main resource, with the aim of growing plants and vegetables (González, 2019). There are currently 20,000 chinampas, with different land uses from: agricultural activities, tourism, residential use and flower production (Pérez-Belmont et al., 2021). However, the chinampas suffer from a complex problem that comes from the impact of urbanisation, the misery of agricultural activity, and the contradictory and limited public policies that have been promoted to conserve this territory, but paradoxically have contributed to its destruction (Delgadillo, 2009). However, the chinampas show the complexity of agricultural activity for the sustainable use of water, soil, organic waste and the cultivation of native species (Merlo-Geleazzi et al., 2021); managing to consolidate a form of local development and a space for mitigating climate change, as it is an innovative agricultural production system that was developed before colonialism and is still being used today for food production (González and Torres, 2014). These floating islands form part of 59% of Mexico City's conservation land and it is there where residents of this area are dedicated to the production of vegetables and corn, to satisfy part of the local demand for food by the inhabitants of Mexico City (Rojas and Aguilar, 2020). In recent years, thanks to the become aware of the producers through the support of local authorities (Merlín-Uribe et al., 2013), non-governmental organisations and academic institutions, it has been decided to reactivate the agricultural activity in these pre-Hispanic agroecosystems with an agroecological vision, taking advantage of endogenous resources: mud, water lilies, sediments, organic waste (González and Torres, 2014) to obtain bioinputs that allow the production of food free of agrochemicals and taking advantage of the high productivity of the chinampera area (Díaz, 2019). In addition to cleaning canals and reconditioning abandoned and unfit for agricultural practices chinampas (González, 2019).

Keywords: Agroecology, endogenous resources and local development