

Puerto Montt:

Community participation & Nature-based Solutions for Sustainable Urban Planning

Historically, Nature-based Solutions (NBS) were widely used by indigenous communities in sustainable practices. The approach gained more popularity since the Paris Agreements, in which it appeared as key to achieving climate change adaptation and mitigation. In the framework of Puerto Montt (Chile) and Piraeus (Greece) cooperation in the [IURC Latin America programme](#), both cities engaged in innovative discussions and knowledge sharing sessions focused on integrating the role of natural ecosystems in the provision of structural services. The pairing thus exchanged about the fundamental role of community engagement to incorporate NBS into the urban cultural fabric. Puerto Montt also identified the relevance of integrating indigenous people as central stakeholders that carry ancestral knowledge, directly connected to natural cycles and sustainable interrelations. With additional learnings from Piraeus about technical implementation of NBS, the municipality of Puerto Montt established a general roadmap summarizing the connection of NBS initiatives with participatory processes and indigenous knowledge.



PARTICIPATION STRATEGIES IN LOCAL COMMUNITIES

Puerto Montt is facing and unplanned urban sprawl, inducing challenges linked to the invasion of natural environment, the lack of services and urban equipment in peripheral areas, and territorialised

inequalities. The Urban Planning Department is working on reversing these trends and ensuring environmental protection by collaborating closely with local communities and learning from citizens' knowledge.

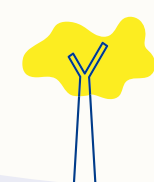
In Chile, citizen's participation in planning processes is mandatory since 2018, as stipulated in the [Law 21.078](#). In the [target 16.7](#), the Sustainable Development Goals also highlight the relevance of inclusive and participatory decision making processes in planning for conflict resolution.

Puerto Montt introduced participatory methodologies at the core of its [Land Use Plan](#), which led to the participation of around 12,000 persons since 2018. The introduction of diverse engagement activities allowed to adapt participatory methodologies over time and to promote the inclusion of different groups of stakeholders, including indigenous communities.

Chile ratified the [International Labor Organization 169 Convention](#), defining standards for indigenous peoples' political, economic, and cultural rights, including their right to be consulted on policies affecting them. This recognition allowed to form binding agreements with indigenous people to ensure trustful relationships with them and to fruitfully collaborate on reversing the degradation of their natural environment.

NBS AND TRADITIONAL KNOWLEDGE ON WETLANDS

According to the Ramsar definition, wetlands are "areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide doesn't exceed six metres".



5 LEARNINGS & RECOMMENDATIONS FROM PUERTO MONTT



Wetlands offer eco-systemic values by providing sweet water reservoirs, absorbing CO₂, preventing surface runoff, and protecting biodiversity. They also have important educational, scientific, cultural, and economic functions. Wetlands are therefore aligned with sustainable urban development objectives, promoting the densification of central areas to limit unplanned sprawl and protect natural areas.

In Chile, there are over 40,000 wetlands, from which 6,995 are located in the Los Lagos Region surrounding Puerto Montt. Urban wetlands are protected by Law 21.202 obliging urban planning instruments to classify them as natural protected areas, and therefore, requiring Environmental Impact Evaluations for projects potentially affecting them. Puerto Montt has 5 recognised wetlands and 17 awaiting official recognition, and will thus become the city with the highest number of official wetlands

In this regard, it is essential to fully engage indigenous communities in promoting NBS and a nature-based existence model through a participatory-oriented approach to planning.

Masterplan lead to the development of innovative NBS, replacing or supporting grey infrastructure with green infrastructure. Piraeus representatives were inspired by the visit of Ralleion, which showcased the complementarity of green and grey infrastructure to improve the regeneration of biodiversity and natural assets, while restoring wetlands' capacity to prevent rainwater runoff.

in Chile. Unfortunately, 64% of wetlands worldwide have disappeared since 1900, and Piraeus' representatives could observe how urban growth also drained out a large part of wetlands during their study visit in Puerto Montt.

NBS encompass an understanding of natural processes' value, including wetland's essential functions. In this regard, their legal recognition and modifications to the Rainwater



CONCLUSIONS

NBS are key to promote a sustainable urban future, through their increasingly relevant functions for water efficiency, soil protection, biodiversity, and risk reduction, amongst others. Puerto Montt could develop participatory methodologies that capitalise on existing laws and regulations, recognising the potential of wetlands in NBS strategies in the framework of the Rainwater Master Plan. In this regard, the inclusion of indigenous people appeared as essential to create accountability towards environmental protection and to include ancestral knowledge as part of NBS strategies.