

RESEARCH TOPIC: CIRCULAR CITIES. ENVIRONMENTAL IMPACT OF INFRASTRUCTURE AND SERVICES IN COMPACT URBANIZATIONS

Summary: In recent years, territorial models have undergone major transformations, evolving from compact urban models to diffuse city models. These processes have been revealed with the expansion and densification of central areas, and as a consequence, agricultural or natural soils become urban soils. In terms of land use, to densify the suburban territories could give a solution for residential needs, but the requirements of infrastructure and services such as roads, electricity, water supply, among others, could represent an additional impact that could be a negative aspect for sustainable cities.

General objectives:

To investigate how to optimize the use of resources in sustainable and circular cities when densify the urbanizations is an positive environmental alternative to the growing residential needs.
To quantify the environmental impact of infrastructure and services of densify cities is needed to find the break point in decoupling sustainable development and resources consumption.

Main activities:

Estimation of the demand for materials in a compact neighborhood.
Estimation of the services demand for supplying the population in that compact neighborhood
Selection of the most suitable arrangement from an environmental point of view (LCA)
Recommend strategies to minimize the impact of residential growing in suburban territories.

WORKING GOUPS: Grupo CLIOPE — Energía, ambiente y desarrollo sustentable. Centro de estudios sobre desarrollo sustentable. Universidad Tecnológica Nacional Facultad Regional Mendoza, Mendoza, Argentina. Grupo Sostenipra Ecología Industrial ICTA UAB

RESEARCH LINE: CIRCULAR GREEN CITIES. SUSTAINABLE PLANNING AND ACV IN SUBURBAN TERRITORIES.

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