



IN PARTNERSHIP WITH



CITY CASE STUDY

COUNTRY	CITY	POPULATION	MITIGATION TARGET	NATIONAL EMISSIONS IN 2015
MONGOLIA	ULAANBAATAR	1,400,000	TO CONTRIBUTE TO HALF OF THE EFFORTS MADE BY THE MONGOLIAN GOVERNMENT (-14% OF EMISSIONS COMPARED TO THE BAU SCENARIO IN 2030)	37.6 MTCO ₂ E

In Ulaanbaatar, Geres is creating an ecosystem for the thermal insulation of precarious housing

More than 50% of Mongolians live in the capital, Ulaanbaatar. The coldest city in the world, its heating needs make it the city with the highest level of air pollution [in the world](#). The heating season lasts 8 months and a majority of the population heats and cooks with cheap, low-quality charcoal, especially in the Ger area, a semi-formal settlement area consisting of fenced plots with one or more ger (yurts) and/or houses made of modern materials, poorly insulated and heated with low-efficiency stoves that emit fine particles.

More than [60%](#) of the city's population live in this area. Each year, around 80% of the city's air pollution is caused by the 600,000+ tonnes of coal used for cooking and heating, between November and March. Such was the situation that in early 2017, the government declared a state of emergency in Ulaanbaatar, with the intent of exploring solutions to this problem.

The Switch Off Air Pollution project

After 10 years working in the energy field in Mongolia, the NGO [Geres](#) launched the Switch Off Air Pollution (SOAP) project in 2018 for a 4-year period. SOAP aims to create an insulation market, with certified materials and work carried out by micro, small and medium-sized building enterprises (MSMEs), trained and supported in order to fight air pollution in Ulaanbaatar by improving the energy efficiency of housing in the Ger area, reducing respiratory infections, fuel costs and GHG emissions. Insulation techniques are standardised, with quality materials and quality installation. A step-by-step approach is made possible, ranging from simple low-cost solutions to comprehensive insulation, and loans suitable for low-income households are offered by local financial agents. SOAP is implemented with the Building Energy Efficiency Center of the Mongolian university, the Mongolian National Construction Association and the Czech NGO People In

Need, in partnership with local banks and with the financial support of the European Union, the Abbé Pierre Foundation and French and Czech Development Agencies.

Promising results

Initially, a comprehensive study made it possible to 1) determine the attitude of the inhabitants on these matters and their socio-economic situation, 2) establish a typology of housing with 4 categories according to their building envelopes, and 3) compile a database on the skills and resources of MSMEs in the 6 districts of the capital.

On the supply side, standardised and progressive technical solutions and recommendations for energy-efficient houses have been established and distributed to building professionals and households. On the demand side, [a website](#) has been created to promote insulation and coordinate the various actors involved by tracking and recording all stages of work. In addition to this website, there is a Facebook account and a functioning call centre.

By the end of 2020, 30 houses had been insulated, 10 of them with a green loan from Xac Bank. Delayed by the pandemic, a campaign to promote [simple insulation solutions](#) was launched in late 2020 in two districts, with the support of 22 local Red Cross volunteers. 375 households were thus able to carry out small jobs at a low

cost, resulting in energy efficiency gains of around 8%. When these households can prove that they have persuaded five others, they win a 5 cm-thick roof insulation (providing energy savings of the order of 15%), a strategy aimed at increasing the number of homes improved and households brought into the loop.

By the end of 2022, the insulation of 1,000 homes is expected to save at least 800 tonnes of coal and avoid the emission of 3,000 tCO₂. This will improve the living conditions and the purchasing power of households, stimulate local employment and improve the local and global environment.

A project from which the entire nation can draw inspiration

To support the project, the Mongolian National Construction Association has created a new branch to recruit, train and support its members in the thermal insulation field. It is working closely with public authorities to include this approach in local and national policies. In mid-2020, the Ministry of Construction and Urban Development [modified its standards](#) on the thermal insulation of buildings, based on the techniques developed by the project. This new regulation came into force in January 2021.