



## ECOLOGICAL OFFSETTING: A SOLUTION FOR BIODIVERSITY

Orano's subsidiary in Mongolia is developing a mining project at the Zuuvch Ovoo site in the Gobi Desert. To avoid the loss of biodiversity caused by the construction of the pilot site, Badrakh Energy has opted for ecological offsetting by organizing the planting of saxauls, the iconic trees of the region.

### Avoid – Minimize – Rehabilitate / Restore – Offset

From the very first phases of a project, environmental impact studies are conducted to identify a series of recommendations aimed at minimizing the negative impacts of development projects on biodiversity. These recommendations are structured into four major categories or goals: avoid, minimize, rehabilitate / restore and offset. This is called the «mitigation hierarchy».

During the construction of the Zuuvch Ovoo Pilot in Mongolia, the teams chose three types of measures:

#### 1 | Avoidance measures

- The majority of the facilities are built outside the areas with a high density of saxauls to avoid having to remove them as far as possible.
- The drills and other machinery have been installed, wherever possible, in areas where the vegetation is sparse. This strategy makes it possible to limit damage to the vegetation and in particular the saxauls.
- During the works, an awareness campaign was conducted among the teams concerning biodiversity and the protection of the trees and shrubs.

#### 2 | Rehabilitation / restoration measures

The remediation plan for the Zuuvch Ovoo pilot site, which was drawn up at the beginning of the project, provides solutions to erase as completely as possible the footprint on the mined areas and to allow biodiversity to reclaim the site. The equipment will be dismantled, the buildings demolished and the land occupied by the industrial zone re-vegetated.

#### 3 | Replantation offset measures

For Badrakh Energy, the challenge is to replant saxauls over a surface area equivalent to that affected by the pilot (5 hectares).

To carry out this project, the area to be planted was carefully selected with the support of a committee of Mongolian experts specialized in planting in arid zones. The area in question was to be nearby and meet the criteria for sustainable recovery of the trees: no intensive grazing, easily accessible, and with a source of water nearby.

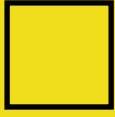
This approach was approved by the stakeholders, with the condition that replanting be carried out in full respect of local traditions. From an economic and social standpoint, a benchmark of the practices implemented by other mining companies operating in the region was carried out. The planting work will be done by local companies and by Mongolian professionals specialized in offsetting and replanting trees in arid regions.

The completion of this offset project for the pilot mine will enable us to benefit from comprehensive feedback for the future mine.

# ZOOM



## Offset project: key dates and figures



**5 hectares**  
the surface area of  
the plantation



**3000**  
the number of  
saxauls replanted

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**2016-2018**  
studies, benchmarking  
and project planning

**2020**  
choice of the plantation site  
and construction of the nursery

**2021**  
start of the planting work



### Going further...

Orano Mining is conducting research in collaboration with CIRAD\* into optimizing principles for ecological offsetting through planting in arid areas of Central Asia such as Kazakhstan, Mongolia and Uzbekistan.

This research work makes it possible to select the appropriate species and to optimize their integration into the surrounding landscapes and ecosystems. Special attention is paid to respecting the practices and customs of the local population. It requires that priority be given to an «ecosystem services» approach in order to ensure responsible and sustainable ecological offsetting.

\* French Agricultural Research Centre for International Development