



**ECOSOUM**

# **ACTIVITY REPORT**



**2021**

# INTRODUCTION

Ecosoum is a Mongolian association for transition and local resilience based on ecological and solidarity values. Founded in Khishig-Undur, Mongolia, the organization aims to empower its inhabitants so they can make their soum a model of autonomous and sustainable community that can inspire the whole country.

This report summarizes the main activities conducted by Ecosoum to pursue this objective over the course of the year 2021.

# WASTE MANAGEMENT

**ECOSOUM'S OBJECTIVE IS TO SET UP AN EFFICIENT AND SUSTAINABLE WASTE MANAGEMENT SYSTEM, BY PROMOTING WASTE REDUCTION, SORTING, REUSING AND RECYCLING, AIMING AT ZERO ULTIMATE WASTE ON THE SCALE OF THE SOUM.**

## FIELD RESEARCH, BASELINE STUDY AND RECOMMENDATION REPORTS

Following the first household waste composition studies we published in 2019 and 2020, we conducted more detailed field researches and produced an extensive waste management baseline study for the entire soum of Khishig-Undur. The findings of this baseline study led us to produce a clear recommendation report for waste management scheme, so that the local administration can adequately renew its waste management Masterplan.

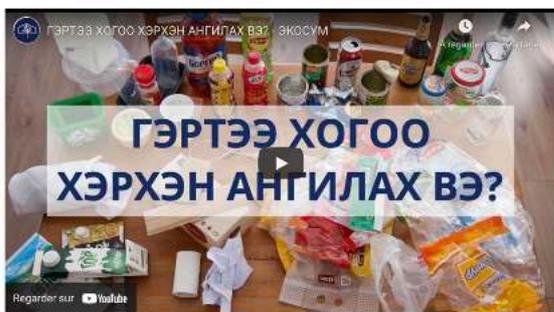
Additionally, we produced a report entitled *Zero Waste and Circular Economy: the Way Forward*, in which we clarify our general position regarding the global waste crisis and suggest recommendations for national level.



All reports produced by Ecosoum since 2018 are available in English and Mongolian on the association's website ([www.ecosoum.org](http://www.ecosoum.org)).

## PRODUCTION OF AWARENESS-RAISING MATERIAL

In order to raise awareness about the waste issue in general and waste management in Khishig-Undur, we produced a wide range of material. First of all, we created a dedicated awareness-raising page on our website, where we regrouped most of the information and material. We designed, printed and distributed practical guidebooks on how to sort waste at home. We produced training presentations to support awareness-raising events in public institutions. We released a video tutorial on how to sort waste and an interview that summarized the key points of our *Zero Waste and Circular Economy* report. Finally, we subtitled and dubbed existing videos from The Story of Stuff Project, including the 90-minutes long documentary entitled *The Story of Plastic*.



All the material produced by Ecosoum is available on the association's website ([www.ecosoum.org](http://www.ecosoum.org)).

## TRAININGS AND AWARENESS-RAISING ACTIVITIES

We organized several group trainings at school, administration, hospital, etc. to inform people about the waste issue and train them on waste sorting. We also individually trained and followed up on each household who received a sorting bin. More broadly we have been collaborating with and advising local administration to set up a proper waste management system.



## CONSTRUCTION OF A WASTE MANAGEMENT FACILITY

We have been constructing a brand-new waste management facility for Khishig-Undur soum. This new facility will be used to sort all the waste produced in the soum before to either recycle it locally or send it to Ulaanbaatar for reusing or recycling. The facility will be operational at the beginning of 2022.



## ACQUISITION OF RECYCLING MACHINES

In addition to the two shredding machines we purchased in 2020, we ordered three machines to complete our set: one PET bottle press (to compress and easily send PET bottles to urban recyclers), one extruder (to melt and mold shredded plastic into beams) and one sheetpress (to melt and mold shredded plastic into large sheets). These machines will be delivered and assembled soon and we will start operating them early 2022. In addition, a medical autoclave was also purchased to install in the local hospital, so that medical hazardous waste can be handled and managed properly.



## MANUFACTURE OF HOUSEHOLD SORTING BINS

After the first 30 bins manufactured in 2020, we kept producing and distributing more for people who wanted to start sorting their waste. At the end of 2021, 186 households (over 60% of families in our village) were equipped. More bins will be produced in 2022 so that all households can sort their waste easily.



# ECO-CONSTRUCTION AND INSULATION

ECOSOUM'S OBJECTIVE IS TO IMPROVE THE RESILIENCE OF RURAL COMMUNITIES TO CLIMATE CHANGE THROUGH THE DEVELOPMENT OF LOCALLY PRODUCED ECO-CONSTRUCTION MATERIALS AND THE PROMOTION OF PROPER HOUSE INSULATION.

## MANUFACTURE OF CEB MACHINES

We started by manufacturing a prototype of manual pressing machine to produce compressed earth bricks (CEB). After a series of tests and improvements, the first task of the project participants was to collaboratively manufacture their own machines: 6 manual presses were thus fully assembled by the project participants during their technical training. Self-assembly has the great advantage for participants to learn how to use and repair the machines themselves in the long run, as well as to improve the technology of the machine so as to increase productivity.



## CREATION AND TRAINING OF A LOCAL COOPERATIVE

One of the main results of the first year of the project was to establish a brand-new local cooperative (*khoshoo*), which was named “Eco Temuulel” by its founding members. The purpose of creating such a cooperative was to unite community people and support their desire to work together for the benefit of their soum. Over its first 6 months of existence, the cooperative successfully produced thousands of bricks and blocks, and entirely constructed two buildings.



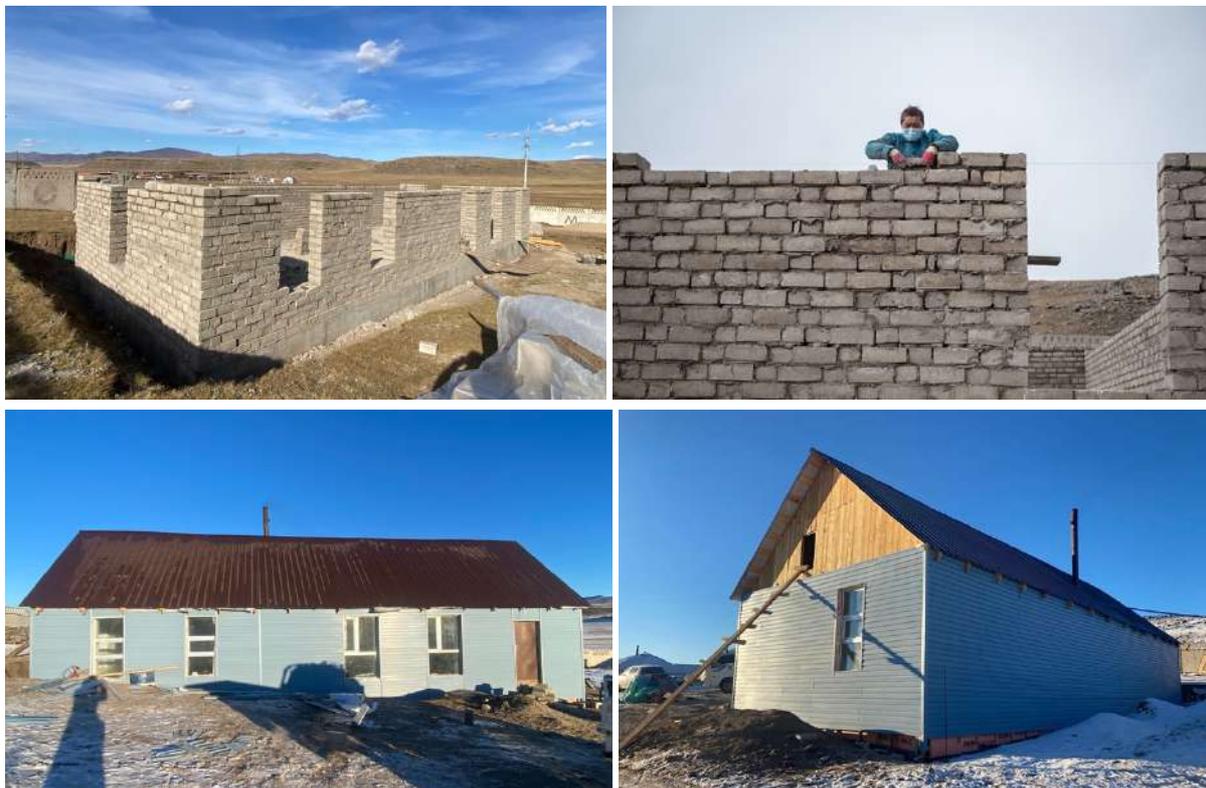
## PRODUCTION OF 7,000 CEB AND 1,500 CONCRETE BLOCKS

During the last summer, the members of newly created Eco Temuulel khorshoo manufactured 7,000 compressed earth bricks following the guidance of our technicians and expert partner. This amount of brick was necessary to build the first prototype building planned in the project. This brick-making technology, which can be made using primarily local raw materials, is featured by low cement content and good heat retention. In addition, we supported Eco Temuulel to purchase a more conventional concrete block machine, so that they can diversify their production and match all expressed local needs.



## CONSTRUCTION OF PROTOTYPE BUILDINGS

Eco Temuulel was then hired by Ecosoum to build two buildings with our technicians. The first building was the prototype made with the 7,000 CEB that the cooperative just finished producing. As the next phase of the project will be focusing on insulation, the prototype building was properly insulated following simple and effective standards, so that the building can be used for demonstration to local communities.



The second building was the new waste management facility, which was partially built with the 1,500 concrete blocks produced by the khorshoo. Eco Temuulel worked not only on building the walls with their blocks, but on all the phases of the construction, from foundation to inside work, so that they can learn all aspects of house construction from our experts. Both buildings are now virtually finished, although some outside work will still be necessary next year.



## DEVELOPMENT OF AN INSULATION “DECISION-MAKING TOOL”

The project has been developing a tool for insulation decision-making. This study's main goal is to produce a supporting document for households that includes decision-making technical features for choosing and sizing house insulation materials. Currently, most of the needed data for this interactive tool – such as price analysis of insulation materials, supplier information and common house designs, etc. – has been gathered and the main framework is finished. The tool will soon be tested on five private houses before to be finalized and shared publicly.



## OTHER ACTIVITES

### STUDENTS CLUB AFFILIATED WITH ECOSOUM

As the largest and most efficient way to disseminate information in the soum is the school, especially via children, we held several meetings with students to discuss children's rights, children's participation, and various issues that they face. Children participated voluntarily in all of these meetings and the size of the group grew event after event. Children expressed their desire to come together and form a club to share information (and take action) about climate change and other topics, amongst themselves and their peers. The club will soon be formalized and Ecosoum will support children to carry out all the actions that they consider appropriate.

