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Kárahnjúkar Hydropower plant in Eastern Iceland



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Industry is a big part of the modern world. Almost everything we use has been manufactured somewhere else. And very often the material used in the making of the object is mined or produced in yet another part of the world.

In Iceland heavy industry has a short history. The first aluminum plant was built in 1970. Today Iceland is the second biggest aluminum producer in Europe, after Norway.

It's obvious that all this heavy industry needs a big amount of energy. In order to provide that, one of the most controversial structures in Iceland was built. The Kárahnjúka Hydropower plant.

Location and purpose

In 2003 the making of Kárahnjúkavirkjun begun. It opened in 2007. It is located in the highlands of Iceland, on the northern side of Vatnajökull. It consists of dams that dam the glacial rivers of Vatnajökull. Jökulsá á Dal, Jökulsá á Fljótssdal, Kelduá and its three side rivers.

All these dammed rivers form a big reservoir called Háslón. It covers 57 square km. The dam wall itself, Kárahnjúkastífla, is 700m long and 198m high.

This hydro power plant produces 4600 GWts a year. Just to put that in context one gigawatt could power 750.000 homes. There are 368.792 people living in Iceland. One gigawatt is equal to 1.3 million horse powers. All this energy, 4.600 GWts a year, power the aluminum plant in Reyðarfjörður. Fjarðaál Alcoa.

Kárahnjúkavirkjun Pros and cons

Cons?

From the very beginning, the building of Kárahnjúkar dam was full of controversy. Many environmental activists, including well known artists were protesting against this investment. Andri Snær Magnússon and Ómar Ragnarsson probably are the most famous activists. Magnússon published a book called Dreamland, there is also a movie based on this book.

The biggest allegations against the dam were and still are connected to the environmental issue:

Impacts on Biodiversity

- loss of unique and ecologically important highland vegetation
- erosion, and dust and sand storms are expected

Wildlife

- the lake the dam created destroy prime habitat for the reindeer and wild geese
- birds species which are impacted:
 - Red-throated Diver
 - Pink-footed Goose
 - Greylag Goose
 - Pintail

- Gyrfalcon
- Whimbrel
- Red-necked Phalarope
- Great Skua
- Arctic Skua

Landscape and Wilderness Issues

- total change of the landscape: project turn Kárahnjúkar mountain into a small peak rising out of a huge lake, numbers of waterfalls disappear

Climate Change Implications and numbers of still unknown implications

Pros?

But yet, almost nothing in this world is black or white. Without doubt the building of Kárahnjúkar dam destroyed nature around it, yet there are some advantages which would probably never have happened in the scale if not for this massive hydropower plant.

- **Vatnajökull National Park**

Preparations for the Vatnajökull National Park began in 1999 when Althing passed a parliamentary resolution to establish the park, but the biggest nature reserve in Europe was established in 2008 with some financial support of Alcoa. Some might say it was a "paying back" for the destruction of a massive part of the highlands.

- **Development of the region**

Before Kárahnjúkar was built, the East part of Iceland was pretty isolated and not very well developed with infrastructure. Two big investment: building of Alcoa aluminum smelter and Kárahnjúkar dam bring to the region many new inhabitants as the new working places were created. New roads were built. East from the pretty remote and poor part of Iceland become better accessible as well as the rich part of Iceland. And Alcoa still supports many local investments as well as cultural projects.

- **Tourism**

Kárahnjúkar dam itself started to be a tourist destination for local travelers as well as for tourists from abroad. Before the dam was created road nr 910 was a typical highland road: gravel and with some river to cross, it was impossible to get there with a small car. Now this road is paved and during the summer all cars have an access there, and people can enjoy the unique landscape of Icelandic highlands and majestic Snæfell and Heldurbraid mountains.

Stuðlagil is another popular destination, an amazing canyon with turquoise weather and an impressive basaltic column. Before the dam was built this beauty was covered by the water.

Tourist infrastructure. After the dam was built tourist infrastructure like hotels or restaurants were built too.

Controversy around the dam

There have been mixed feelings coming from the public opinion in regard to the construction of the dam. During the first decade of the century it was probably the most dividing topic of debate in the country. A lot of celebrities and artists got involved in the protection of the area. Andri Snær Magnason a bookwriter and Omar Ragnarson who is an Icelandic media personality, both of them activists for nature and environment fought for many years against the construction of the dam.

Andri wrote a book called *Draumalandið* which has been the book of the year 2006, raising even more debate about the destruction of the pristine Icelandic nature. His book was followed by a documentary inspired by the book.

Omar also made a documentary called *Á Meðan Land Byggist*, when he realised 94% of the nation didn't know about *Kárahnjúkar*. Many protests got held all around the country year after year. Omar organized a march in 2006 where 15 000 joined! It was surprising the amount of people who joined the protest to support the cause. Residents of the Westfjords, the North, the South fought for the cause as everyone believed that it doesn't matter where you are in Iceland, Iceland is one when it comes to environmental issues and natural destruction. Locals from *Isafjörður* mentioned "This is our heritage and we have an obligation to pass it on to future generations."

Numerous declarations against the project were made by Icelandic celebrities. For example the world known Icelandic singer Björk and her mother have been following the events. Björk's mom participated in two Hunger strikes. She has been starving herself for 11 days in the hope of making things change! The famous band *Sigur Ros* held a protest concert. Other actions were taken like spray paint on the houses of people involved in the dam project with slogans such as "Stop destruction now". *Saving Iceland* a global network that supports non violent actions against heavy industry in Iceland was founded as a consequence of the dam project. Protest camps appear on and near the construction site. Human blockade has been used to slow down the destruction. Protesters made a human chain to prevent the trucks from entering the area. Locals started hiking tours to show the pristine Icelandic wilderness to the world. Artists used their talents and creativity to raise awareness and show the world what is happening. Unfortunately, after years of fighting in vain the dam was constructed against the will of many inhabitants in 2008.

Following the construction, jobs have been created as promised, new roads got built improving the access to the East of Iceland, it supports the local economy. Many

disputes can be held on this subject. What is more important? Preserving our pristine Icelandic nature? Or creating jobs for our economy?

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