



report

...cold and heat, life and death, cruel and tender, fire and ice, white and black, spoilt and harsh, slowed down and moved, shy and open, Viking and modern, most expensive and more expensive still... Drunk from this magic and never ending contrast we have had the opportunity to discover all these Icelands, often indescribable, during our journey of 10 days.

Although we intended to arrive at Iceland by sea, we had to leave the caravan and the van in the FolkeCenter because of the expensive cost of the ferry .We had no other choice than to look for airplane tickets, and thus the 15th of September we set off from Copenhagen for the Icelandic capital.

After a trip of 3 hours we arrived in Reykjavik, where we had to put our clocks back 2 hours . Before landing, from the window of the airplane the landscape appeared totally different from all the sights up to now. It almost hurt your eyes; the volcanic rocks, empty of life, depressing, the blackened land... the sensation of being on another planet would not leave us throughout the trip. For that reason it did not surprise us too much to learn that before their trip to the moon Neil Amstrong and Aldrin Spent trained in Icelandic territory.

After passing the interrogations and controls of the airport, in the bus we contemplated the sad and desert landscape that accompanied us during the 40 km that separated us from the youth hostel situated in the capital.

It was in the entrance of the hostel where the peace and tranquility that we breathed from the airport to Reykjavik itself, vanished to give way to the bustle and intensity of a multitude of people of all parts and colours, dodging for rucksacks, upstairs and downstairs... is clear that it is in the capital where there is more movement and atmosphere. Of course that it's not strange, since of all the population of the island, 260,000 people- 180,000 live in Reykjavik. In order to get an idea, on the entire island there are as many people as in the Left Margin of Bilbao.

Reykjavik is peculiar-it 's a capital that seems to be a calm town, where only sporadic small planes break the silence... a capital that makes life around its neighborhoods... turns out to be at the head of the latest trends and cultural movements. Laugaverun, home of taverns and the high street, reunite in summer people of all sides and has much influence on the European cultural scene. Art, music, literature, cooking, fashion... always one step ahead in spite of the smallness of the island through its culture.

We suppose that all this productivity must be a result of something they have to spare in Iceland- time. Apparently even the birds do not leave in winter. So that in winter it gives time them to reflect. Sometimes, too much. A significant fact about Iceland is that in the same way that it is the country with more writers per inhabitant on a worldwide scale it is also the one with the highest number of suicides.

Although the real reason for such a high suicide rate could in fact be-at least for people from outside the island- the extortionate prices. Think of the most expensive you know, multiply it by 2 and you will approach the prices of Iceland. In order to get an idea, a litre jar of beer cost us mortals 30€.

Since we had decided to go round the island,the first thing was to rent a car. This we did the following morning, still amazed after seeing our first Aurora borealis .

We went towards the north, and we arrived at Grundarfjörður.

We wanted to enjoy the places that surrounded this small town of the west of Iceland, and mainly to visit the Snæfellsjökull, the volcano where "Journey to the centre of the Earth" by Julius Verne begins .

But this volcano is not only famous because of this French novel but also because of the glaciers that surround it, since the place worldwide is known for its telluric energy and its curative and magical powers. Also some say that it is a point of contact for extraterrestrial beings. We don't know if it's magic or not,but it is true that this land that nature has produced of such a steep and sharp form, is enchanting.Of course, if it's true that they spend the summer there, you can't deny that the Martians know how to choose.

After a frozen night, we followed the coast towards Reykhólar, with the hope of seeing some whales. In fact the controversy which has arisen regarding the hunting of the whales made us even more interested in seeing the cetaceans.



One of the known Viking symbols



Shield of Reykjavik, Icelandic capital



The popular tavern, owned by Blur's singer



The most popular Icelandic beer

The government has raised the prohibition to hunt whales, and alleging "scientific reasons" it has given permission to 75 units to hunt. The Rainbow Warrior of Greenpeace had gone ahead of us, arriving days before to denounce and to fight against this decision at the different ports of the island.

In spite of our desire to see them the whales did not seem impressed and they went away. They will return once winter has begun. So we decided to try it more to the north and we went towards Akureyri, a fishing port. But it was not the whales here but bad weather that stopped us going to sea.

On the way towards Akureyri we began to realise why we needed a 4-wheel drive with its giant wheels. Gusty winds, stones, dust, rain... all this and more we found while we made the 200 km that separated us from our destiny in a rented Corolla, (we ended up nicknaming it " grey fury" thanks to its heroic deeds) that in spite of everything could cross several rivers and avoid infinite stones... By the way, if while travelling around the island you come across a "government maintained road"... keep away! From the conditions of these ways it's clear that the government always travels by airplane.

The first thing we did on arriving at Akureyri was to go and experience what soon would become an almost essential custom, mainly to get a rest from the long hours in the car... the thermal swimming pools. In almost all of the towns of the island they have hot water swimming pools and/or thermal baths, as a result of the good use that they make of the resources that the Earth offers to them, and that we will comment on later.

After verifying the benefits of a bath of 43°C, you perfectly understand the healthy aspect of the elderly people who take a walk over there, after one of these baths you feel like a new person.

It's something that we should import. Just as the Icelanders when they try our swimming pools, we asked ourselves why on earth we bath in cold water, when there are a thousand ways to warm up water that are clean and cheap, for swimming pools for example.

Also the night is peculiar in Iceland. The weekends in Reykjavik are really famous for their atmosphere. We could not see it, except for the nights of Akureyri.

And to tell the truth, the technique used by the young people to get to know each other and to have fun left us even more surprised .

It looks like a ghost town, empty until about ten o'clock, when dozens of cars appear out of the blue and begin to go round the block where almost all the bars in the town can be found. They are full of young people with their mobile phones, trying their luck in the game to watch and to be watched. But without leaving the car. Like in a ritual, the giant 4x4, Chryslers, Beetles, sports cars... the showier the better. Hours go by in this way. Imagine how many times they go round the same block during 3 or 4 hours! Surprising at least. It is true that, because of the cold temperatures there it's easy to go out, but surely there are other more adequate ways of getting to know people and to having a social life.

After visiting Detifoss (the waterfall of the children) and Godafoss (waterfall of the Gods. It's said that their pagan Gods were thrown into it when they decided to adopt Christianity), two incredible waterfalls. After a rest in a beautiful hotel, made entirely of wood made, in Höfn, we drove towards Vatnajökull, the greater glacier of the island, along the highway to the south of it.

The extraordinary beauty of the landscape forces to you to go very slowly with the car if you don't want miss everything that it offers you. Snow-covered mountains, ice everywhere, lost little villages, brooks arising from any corner, infinity of small waterfalls creating furrows in the rock in a constant fight against the wind, insisting on rising towards the great sky, big lakes, small lakes, flocks of birds, ewes protecting themselves from the bleak cold... but no sign of people. We found no others as brave, or as reckless as us. It's obvious that the native people would be well protected in their houses.

By the same route we came to Jökunsarlör, a frozen water lake dotted by a small multitude of icebergs. Known for a famous scene of a 007 film it is no wonder its beauty captivated the directors of photography of this production. Continuing on our way we stopped in the Skaftafell Natural Park that is surrounded by two glaciers of great seismic activity combining the beauty of its colourful forests and the force of these ice giants.

With the intention of visiting the Gullfoss waterfall and the geyser called "Geyser" (the one that gave the name to them), we went towards Hvergerdi, not very far from the capital, where there is what they call "Eden", a concentration of greenhouses that was not too attractive to us, perhaps because we are more accustomed to them. But the name that they have been given is not strange considering that, in winter they reach 20° below zero, it seems extraordinary to be able to cultivate tropical plants, among others.

So this small Eden is very popular among the Icelanders .

Still we had time to astonish ourselves with the force and beauty that radiated from the Gullfoss waterfall, surrounded by frozen flowers (while near us was filmed a T.V. spot of sports equipment), and to enjoy like a child the



Logotype of a whale-watching center



Sometimes we missed a snow car like this



The new catholic Icelanders, throwing pagan gods by Godafoss



One of the innumerable volcanic eruptions in Iceland



Viking warrior toy



The lake and the Geothermal one, in Blue Lagoon

eruptions of the geysers, before finishing the round of the island, and back to Reykjavik.

We took advantage of the couple of days that we had reserved, before returning to Denmark, to see the outskirts of the capital.

We approached Thingvellir. A valley furrowed by the ridge that divides the two tectonic plates, Euro-Asian and American, cradle of the ancestral Viking roots. There, around a great stone from which the laws were recited, 1000 years ago the Viking tribes began to meet once a year. The first well-known parliament was therefore born.

Icelanders are very proud of their Irish and Viking roots; and thanks to their premature tradition of passing to written Literature the oral tradition is documented: the Sagas. Jealous of their past, in spite of being the youngest country, they are known for keeping their essence and conserving the oldest language of Scandinavia. Although it seems incredible, many admit to believing in the sagas and their mythological characters- Trolls, Elves, and spirits appear in recent, present histories.

For example: They tell of a highway in construction which passed over a place known as "place of elves". The authorities did not want to listen to the neighbors, like always, and decided to continue construction.. Later they had to change the layout and to respect that place because of failures and "strange" accidents. Nobody doubted in attributing these events to the Elves

Icelanders are very integrated and respect the nature excessively of a land that served as inspiration to J.R.R. Tolkien in its insurmountable "Lord of rings".

On the following day, knowing that in the evening we would enjoy relaxing in the spas of the Blue Lagoon, we split into groups- two of us after the whales, being able to observe an infinity of marine birds accompanied by the dolphins- the other ones went on an excursion, riding beautiful " Icelandic Horses" with that cheeky image that the long manes give them.

So there we were also, to enjoy one of the places most visited by the tourists, with the intention of restoring our bodies from the morning beating. The Blue Lagoon, with the tranquility of its artificial spas and strange beauty, has well gained its fame .

This lake was born as a result of the construction of a geothermal power station. It owes its name to the seaweed that grows on its pipes, which give a blue dye to the waters. This blue dye and the just as famous white mud, are beneficial for the skin and the health. As is habitual in these cases, some livened up promoter took over what was previously public and privatized it imposing abusive prices.

Still with relaxation of the bath, we got ready to go out and enjoy our last night on the island that had given us such a good impression –guess where- in a Viking tavern.

At daybreak, almost without sleeping, from the highway to the airport to fly to Copenhagen, another bitterness was added to that which the Brennivin, Icelandic typical liquor also call black death had left us. It was the sight of the ships of the American navy that exposed the presence of the only existing military base in Iceland. In fact this one is a country without an army in spite belonging to NATO (which it joined to have more weight in its "Cod Wars" against Great Britain). And in spite of the attempts of the government to promote the debate about the creation of an army, these children of those militant Vikings have rejected this possibility at the moment. It's another peculiar contrast of this island.

And thus we arrived at the airport of Keflavik, just at the moment in which the departure of our plane was announced. Not to expound still more, we let many vicissitudes in the inkpot; if you are interested in knowing more and have the opportunity, (and money) to visit this island it's well worth it.

ekogaia project

Iceland has been right from the beginning one of our most desired destinies, since it is the place in Europe where there is most benefit from renewable energy.

Data of interest:

- 99% of the consumed electrical energy comes from renewable systems, such as geothermal and hydraulic plants.
- Of the total of energy consumed by the country, 70% is renewable.
- Iceland is leading the way in being the first country without CO2



The codfish, basic for the Icelandic fishing industry



With a fisherman of the zone



Brandy that was drunk during the dry law



Drawing of the Viking tavern that we visited

emissions in a near future.

It goes without saying that these are impossible data for any other country of Europe and the world, nowadays.

In spite of the importance of hydroelectric energy for Iceland, we wanted to investigate other forms of extended energy in other places: geothermal and the hydrogen.

It's worth mentioning the massive and elaborated use that is given to geothermal energy. In a land of radical resistance the Icelanders have been lucky enough to have the best tools to cover its sanitary necessities - hot water and heating, no mean feat in confronting the hardness of a land full of ice and swept constantly by strong winds. And it is that this energy comes in its totality out of the ground, that is to say, all the hot water that is used nowadays in Iceland is extracted from the geothermal power stations.

A system that besides being very cheap for the population, puts the country in a good position for self-sufficient power..

We visited two of these power stations, and were able to see the systems that are used to generate electricity and to distribute the hot water to all the points of the island.

These power stations are located in places of great seismic movement, almost always at a short distance from some volcano.

After drilling into the ground, they take advantage of the steam produced by the water in contact with lava to move the turbines that will generate the electricity.

With the heat that generates the movement of the turbines, the remaining steam and hot water of the process, they warm up cold water that will travel at a temperature of 85°C to the houses by means of a never ending network of isolated pipes .

Thus there is a double advantage, the heat that the land offers them in those places, produces in addition hardly any pollution. .

It is also necessary to emphasize the projection of hydrogen. It seems quite sure and accepted generally, that it is going to be the major power plant in the future, and Iceland is one of the leading countries in this field. Since they consider it a high-priority subject in the field of the energy, they have important plans for the coming years, such as the pretense that the great majority of the automobile park uses hydrogen as fuel.

Positive factors of hydrogen:

- Its process of production is much less polluting and more fertile than other sources of power.
- It can be said that it is inexhaustible since it is the most abundant element in the universe. In addition it is present in all parts of the planet.
- It contains a greater percentage of energy, more than any other type of power source.

Hydrogen is obtained by separating the oxygen in the water, or by means of a specific treatment of natural gas or the biomass.

And turned into electricity, it is stored in denominated "fuel cells" which are similar to normal batteries, with the added use that they are rechargeable.

The only remaining substance that is created in this process is clean water.

For the process of separation of hydrogen the use of electrical energy is necessary, for which any other renewable source can be used.

In the station that we visited naturally the electricity was of geothermal origin .

These are the places visited:

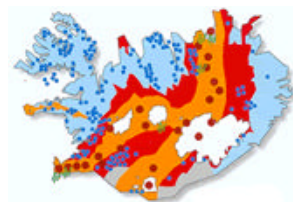
• KRAFLA Geothermal power station

In this power station, located towards the northeast of the island, 18 people work in the middle of a hot spot (zone of great geothermal-seismic movement), next to the famous crater VITI (hell), whose name is understood when you approach the centre part, because it presents a really infernal aspect with the smoke and the smell of sulphur (like rotten eggs) that can be noticed from the surrounding fields and mountains.

The first of the two existing turbines it was installed in 1977; now with a power of 60Mw and a production of 480Gwh, it supplies energy to the city of Keyrievic and the surrounding area .

In addition to the habitual technical problems, it is customary here to deal with other "natural little problems", volcanic eruptions. It is a very active zone, as is demonstrated by the nine eruptions that took place between 1975 and 1984. It seems that since then this activity has somewhat reduced.

Apart from its basic function, that is to create energy, the power station has



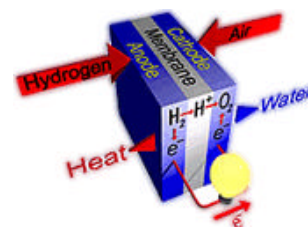
Map of the volcanic active areas



Graph of a turbine of the geothermal power station



Mall pillow of the drill used to perforate the land



Composition of a hydrogen battery

been prepared to serve as a tourist destination. So that after visiting its facilities, seeing its system work and the process of the energy, one can finish the circuit in a sauna. Of course, you are in Iceland!

The company that manages this power station is Landsvirkjun, working in Iceland since 1965 and 50% is aided by the Icelandic state, 45%, by the city of Reykjavik and the remaining 5% by the town of Akureyri.



Exhibition of the operation of a turbine in Krafla

• NESJAVELLIR Geothermal power station

About 40 km from the capital, surrounded by mountains, we found this great geothermal plant property of Orkuveita Reykjavíkur (Reykjavik Energy).

Begun in 1965 in the zone of Hengill, one of the volcanic zones with the highest temperatures of the island, it's located to the south of the Hrómundartindur volcano. No less than 24,000 tremors of 0,5 on the Richter scale have shaken the place between 1993 and 1997!

The strongest quake that it suffered was of 5,3 on the Richter scale in June 1998.

It is constructed on one of the 30 hot spots existing on the island, where the temperature of the water reaches 200°C at a depth of 1000 mts.

Nowadays, this company supplies hot water, heating and electricity to 26,000 houses; nearly 60 million litres of hot water circulate around its framework of pipes.



Observing the informative panels of the power station

• VETNI SSTÖÐ, Shell hydrogen

Located when coming out of Reykjavik, is the first commercial hydrogen jet in operation in the world.

It works in a similar way to the normal jets of the powerboats; you put hydrogen in the deposit, you pay and you go away.

Surrounding the jet is a fence with innumerable panels informing you of the production of the hydrogen and the plans of the country in the area of renewable energy in general.

A great advance

Unfortunately simultaneously there is also one more sample of the hypocrisy of the multinational- Shell in this case.

On the one hand, a company that after increasing its monopoly has not hesitated in encouraging the invasion of Iraq, being one of the greater beneficiaries of this action; or whose interests either do not doubt in supporting violent actions as in the case of Nigeria and the massacre of the Ogoni ethnic group at the hands of paramilitaries.

On the other hand, and in an attempt to improve its image, in addition to continuing its benefits and maintaining its hegemony on a worldwide level, they cash in on the renewable energies trying to give a good image that hides behind it a dark side that is with them wherever they go.



The main panel of the powerboat

• TRAFÖSS hydroelectric station

This power station has been producing electricity on the Sog River from 1953.

It produced 31Mw of power until 1963 which became 47.7 Mw of production thanks to the installation of one-second turbine.

Located between two waterfalls, it is fed by waters of the beautiful Úlfjótsvant Lake.

Of the three plants that make up the set of the hydroelectric power station Tráfoss is the one with most power and the one that has better facilities for the public.

What we were able to verify in an interesting trip through the centre of the plant, was that the tunnels that were used for its construction, many metres under the earth, were still open. Between the oldest plants, Ljósafoss of 1937; the last one, Steingrímsstöð, installed in 1959, and the above mentioned, produce a total of 97,8 Mw of power.

Within the project that gives the name to the set of the facilities, Sog Power Stations, the station is being restored to give capacity to an educative space and for exhibition that already welcomes artistic samples.

This hydroelectric power station has joined the network of the already mentioned Landsvirkjun Company.



In conversation with a technician of the hydroelectric one



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