## The Tempers of the Earth

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## Dear Colleagues,

## Dear Parents,

By means of this story, a voyage into an imaginary world, children will come to realise that all the natural disasters shown in the media are not necessarily due to global warming.

Travelling from the Island of Flowers to the Ice-Block Island, they will discover that earthquakes, volcanic eruptions and tsunamis are the "The Earth's Tempers" against which nothing can be done.

But, they will also understand that it is possible to act against global warming by saving energy. They will be reminded how this can be done with a few easy actions.

As she had done every morning for many, many years, Kori left her home, carrying her basket in her hand.

Nothing in the world could stop her from appreciating the magical waking moments of her Island's dawn.

One by one, thousands of flowers opened, saying good morning, and sharing all the freshness of their perfume.

Kori who had the unusual ability to finely perceive each scent, travelled the island's footpaths, picking here and there the sweetest, most perfumed flowers.

- What a pleasure it is to be picked by you, Madam Kori, seemingly said the rose, landing in the basket.
- Hooray! I have been chosen, cried the violet in her last breath.

Because, on the Island of Flowers, everybody knows Kori and her flower flavoured sweets which she sells under the shadow of an umbrella pine, every evening at the end of the school day.



Kori's morning pickings often take her near an isolated and often empty house surrounded by flowers.

The mysterious owner is, it is said, an explorer who spends long months in the coldest polar regions of the earth.

One day, Kori saw him, carrying a huge bag on his back and pulling a heavy polar sleigh.

- He looks like a Sherpa! (= a mountain guide and porter) she thought. I'll call him Mister Sherpa, it's pretty, she hummed to herself cheerfully as she chose her flowers.

And when, a few moments later she almost bumped into him, she said absent mindedly:

- Hello Mister Sherpa!

The explorer looked at her with such astonishment that Kori blushed, stammered something incomprehensible and ran away, quite ashamed.

Next morning, to be forgiven for her audacity, Kori placed a big packet of sweets in front of the big man's door, then, too busy with her flowers, she forgot about Mister Sherpa.



But Mister Sherpa enjoyed Kori's sweets so much that he got into the habit of slipping a packet into his sleigh at the start of each expedition.

Kori was proud that her flower flavoured sweets were appreciated so much that they travelled far, ... but since then, many tourists came to the island by boat and hurried every day to under the parasol pine to buy her sweets.

- I'll never be able to make enough sweets, she sighed, exhausted.

One day, when she thought she was alone, she sobbed while picking flowers, as she felt that the burden of work seemed so overwhelming.

Mister Sherpa overheard her, but that day, he was about to leave the island, to board a ship bound for polar lands on a journey to last several months.

So, to cheer her up, he left the book he had written at her doorstep. He signed his book "Mister Sherpa" on the inside, hoping to make her smile.



- How wonderful! How magical! repeated Kori again and again, every time she discovered a new page of Mister Sherpa's present.

But when she saw the photograph illustrating the centre-spread, she gasped:

- That's, that's ... that's where I want to be, she heard herself say suddenly, spellbound by the power of this immense white and turquoise shimmering ice block which some people call an iceberg.

From that moment on, Kori forgot about the burden of her work. She had become obsessed with the idea of discovering Ice-Block Island. She even dreamt that she was preparing "flower flavoured ice-sweets"!



Kori worked hard for several months in order to pay for the boat trip that would take her far away.

Finally, she set off, carrying a big black bag on her back...

Passing in front of Mister Sherpa's house, she dropped off a large packet of sweets for the day he would return, as well as a short letter for him:

"Dear Mister Sherpa,

I'm leaving for Ice-Block Island, today. My bag is full of flower perfumes, because I'm hoping to bring you some delicious flower flavoured ice sweets. I'm also taking your book, which I already know by heart, a warm pull-over, tights and boots, because I read that it's very cold over there.

Best regards,

Kori"

Then, as she daydreamed, she got onto the wrong boat.



- Hey, there's Kori, on the boat leaving for Dragon Island! observed Mister Sherpa, coming home tired after his expedition, and he was a little disappointed that he had missed her, and his chance of buying a supply of sweets.

On deck, carefree Kori looked at the sea, hoping to see dancing dolphins join her setting-off for adventure, and didn't notice Mister Sherpa making signs and calling out for her. Finally, he returned home.

- But she's taken the wrong boat! he cried, distraught after discovering Kori's letter. And, she is so poorly equipped she will freeze if she doesn't take any special clothing. Nobody lives on Ice-Block Island, apart from a few well-equipped scientists living on-base. I must catch up with her!

He hurriedly added warm clothing for Kori to his bag which he had not yet undone, smiled as he picked up the packet of sweets, and resumed his journey.

Kori had just left, he was too late ... He had to wait until evening to embark on a boat for Dragon Island.



- There's no ice here, and it's so hot. Could this be global warming? Kori asked herself, after two days travelling.

The old loudspeaker on deck answered her:

Dragon Island in sight! Get ready to drop anchor!

Kori shuddered, confused, when she realised she had taken the wrong boat, and might see fire-breathing dragons.

- Be brave, Kori, she said to herself, you have to take another boat!

But when she set down on land she saw so many beautiful flowers, she forgot her fear, ventured onto the island and was happy despite a refreshing shower of rain which gave the flowers a drink!



- I'll never catch up with her! Mister Sherpa said impatiently, taking his binoculars to scan the horizon. This boat is far too slow!

Suddenly, to his amazement, he saw a strange cloud of smoke in the distance, rising into the sky.

- The Dragon has been asleep for 150 years. How can it wake up just on the day that Kori gets to this Island? he asked, worried.

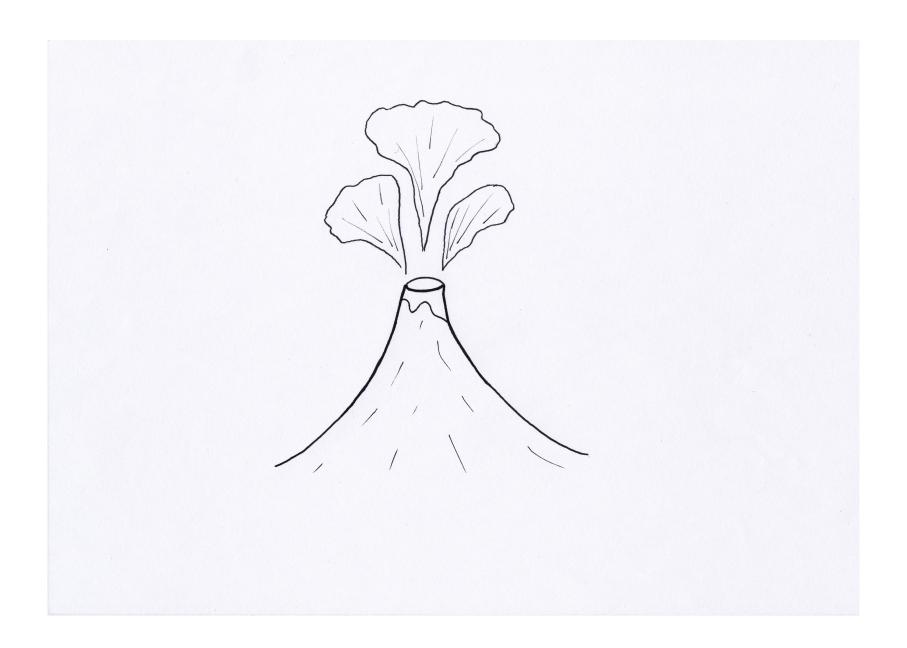
He heard a terrifying roar which left him in no doubt; the dragon-called volcano, had decided to wake noisily from its slumber. It started by coughing up so much grey smoke that the sun was hidden, plunging the Island and its surroundings into darkness.

A strange smell was everywhere, and the rain which was so refreshing a moment earlier, mixed with the volcano's ashes to form a hideous river of mud, which rushed down at full speed, hitting everything in its path.

Kori was so frightened, she ran as fast as she could to the port.

The fog-horns signalled the impending departures ...

Trembling with fear, she embarked on the first boat without looking at its destination.



- Change of course. We're going to the Island of Giants, announced the Captain of the boat taking Mister Sherpa. The Dragon is waking, it's far too dangerous!
- No way! shouted Mister Sherpa loudly. We have to save Kori!
- That's impossible, replied the Captain who was alarmed, I cannot take any risks.

The Captain would not listen and Mister Sherpa was worried ... They had a big argument ...

Not for one moment did Mister Sherpa imagine that Kori was also sailing towards the Island of Giants.

In order to chase away her fears, Kori made herself comfortable on the deck of the boat, opened her bag, planning to read the book she loved so much, again.

- How terrible! There are grey steaks all over my things. Everything is disgusting and it stinks! I wonder if the volcano that started to cough again, has done so because of global warming? she asked aloud.

Discouraged, she threw her sweets into the dustbin and allowed large tears to flow down her cheeks.

- A real explorer wouldn't have cried like me, she reacted, drying her eyes. Mister Sherpa would surely have washed everything as he started out again. I should do like him! On the Island of Giants, it must be possible to clean up! she tried to reassure herself.



As soon as she got off the boat, Kori started to look for an isolated watering place, where she could clean herself up and wash her laundry, in private ... but she couldn't find such a place.

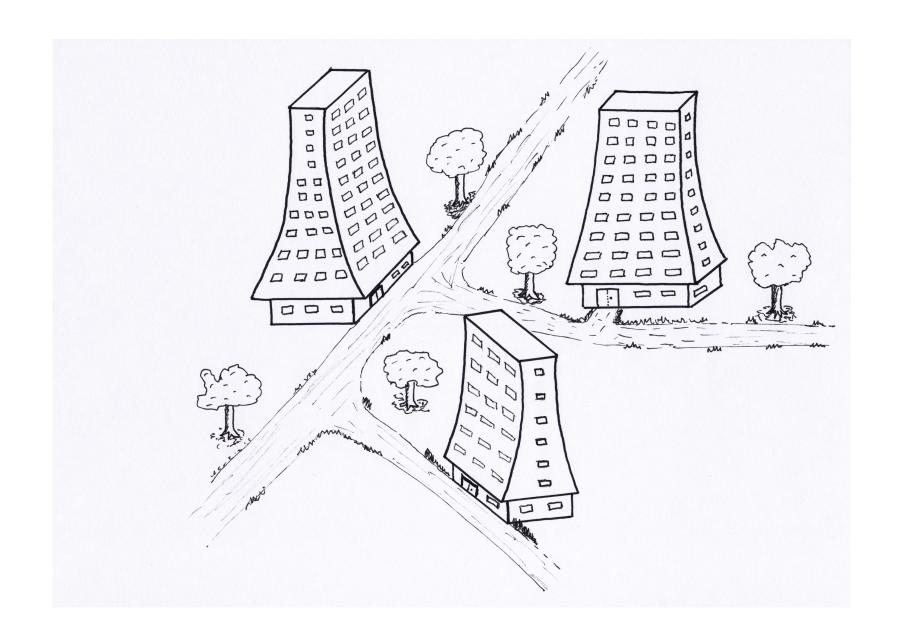
So, in order to pass the time while waiting for the next departure for Ice-Block Island, she wandered around the island.

- These houses are strange, built with a wide base at the bottom, then thin and light at the top! They really look like giants' hats. I hope there aren't any on this island, she said worriedly, all of a sudden.

She would have liked to go and rest in the building which housed a restaurant on its top floor, but she didn't dare as she was really far too dusty and her clothes smelled bad.

So she sat under a pine tree laden with huge pine cones, took her book out, and the sweet smell of the tree made her feel relaxed and it reminded her of Christmas at home on her Island, and she fell asleep.

Meanwhile, Mister Sherpa was eating alone at the restaurant, wondering how he might find Kori.



- Oh! That's strange. A siren is wailing, calling the firemen as it does on the Island of Flowers! thought Kori, as she woke suddenly.

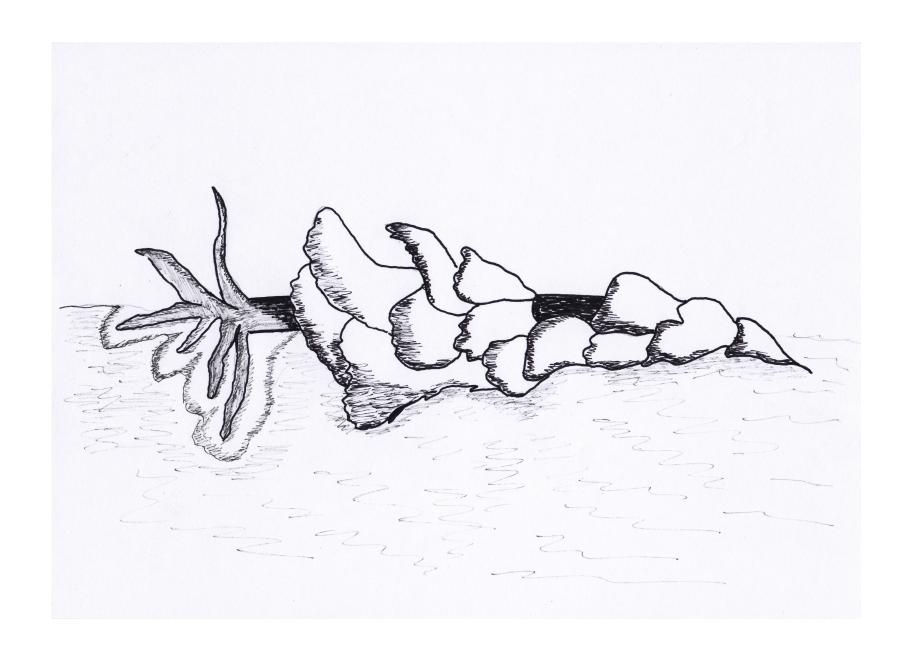
But she was mistaken ... On the Island of Giants, this signal told the population to take shelter under the tables of their strange homes, as the earth began to move.

Mister Sherpa, who was impressed by these tremors, did like everyone else. Someone said to him calmly:

- Don't panic! Here, all the furniture is attached to the walls, and our reserves are locked away in chests fixed to the ground. You are safe here. As candles are forbidden on the Island, there won't be any fires, you'll just have to wait a few uncomfortable moments for things to calm down.

The restaurant began to rock like a boat floating upon the waves, as the ground moved.

For Kori, who had stayed outside, it was completely different. The ground shook so hard under her feet, that she thought that a giant was approaching. The pine tree which was above her shook violently, bombarding her with so many huge pine cones that she ended up fainting, so she didn't see what fell next to her ...

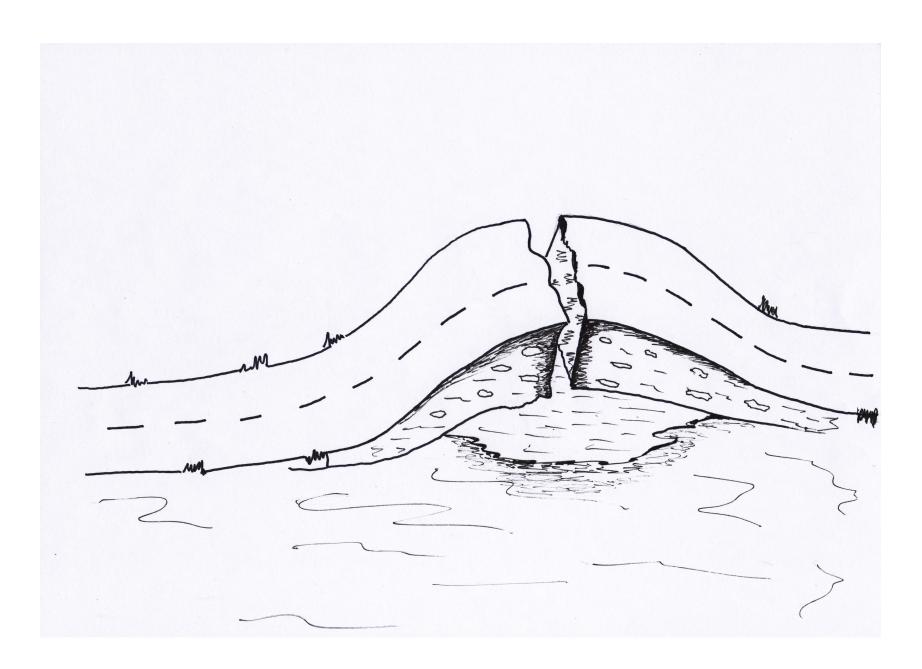


The residents of the island, who had always been used to this kind of devastating earthquake, knew what to do. Once the tremors had stopped, they criss-crossed the island looking for those who might need help.

Mister Sherpa joined them. He was horrified when he saw a road cut in two, one part of it above the other. He saw trees lying on the ground, and then he realised that if it were not for these special houses that moved, there would have been many more victims. He shuddered at the thought.

One of the island leaders told him:

- If the earthquake had started under the sea, near the coast, a tsunami (= a huge tidal wave) might have happened. For that reason, the port and the beach were now out of bounds for several days!



Mister Sherpa was determined to find Kori, so he turned away from the group and called his Scientific Base on Ice-Block Island with his satellite phone, to ask them to send a helicopter.

As he was talking on the phone, he noticed his book lying on the ground next to a fallen pine tree.

- Kori! Kori! he yelled, so loudly that everyone heard.

It was a miracle, the branches that covered Kori were not very thick, and after they had been sawn through, Kori was freed.

Despite not having major injuries, Kori remained unconscious, so a worried Mister Sherpa, held her in his arms until the helicopter arrived.



During the flight, Kori gradually woke up.

- Where ... where are the giants? she managed to ask, at last.
- There are no giants, Kori, replied Mister Sherpa taking her hand. It was only the earth that shook.

As her body was aching so much, Kori closed her eyes ...

- If the earth trembles, it must be because it's frightened of warming up, she imagined to reassure herself.

But all of a sudden, she realised that she smelt very very bad. She felt so ashamed that she took her hand away from Mister Sherpa's, as a tear rolled down her cheek.

- Let's stop at Spring-Water Island, suggested Mister Sherpa to the pilot. Kori has to get her equipment ready before she can face the glacial cold. And as this is a desert island, she'll be more at ease.



Moments later, near a small lake, Kori tried to get her pullover from the bottom of her bag, but clumsily, she spilled the entire contents onto the ground.

- *Uh oh! she cried.* 

Luckily, Mister Sherpa, who was very alert, managed to catch the box of precious flower essences, in mid-air.

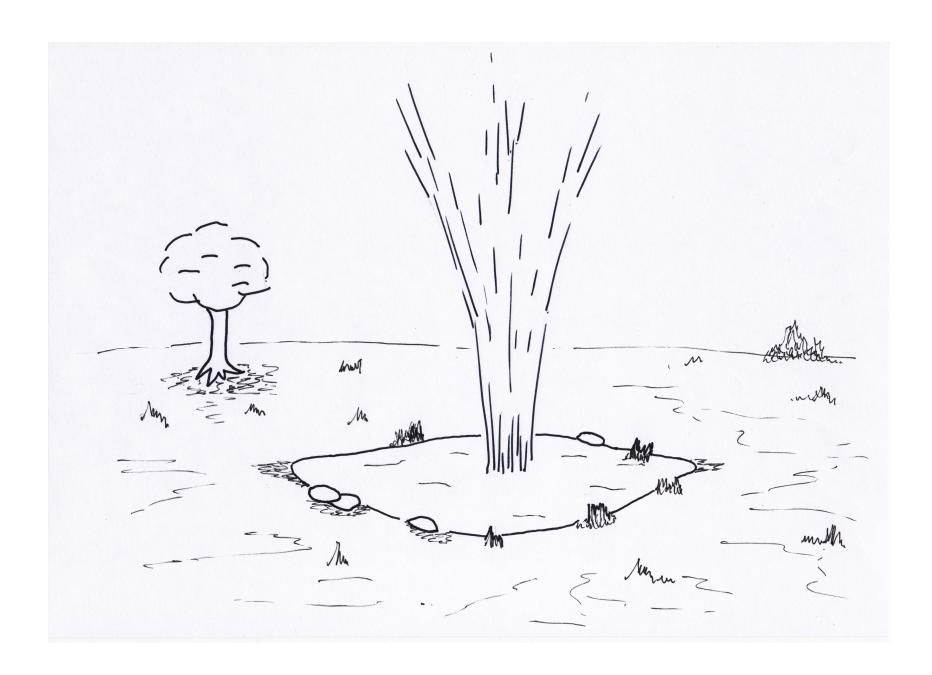
- How would I have managed to make my sweets? There are no flowers on Ice-Block Island, she said, thanking him.

Suddenly she couldn't believe her eyes; her bar of soap had rolled down into the lake and was making big bubbles all on its own! As she plunged her arm to get it back, a huge jet of hot water sprang up splashing her.

In amazement she recoiled, but Mister Sherpa laughed as he moved away, and told her,

- Enjoy this gift of nature, then when you're fully ready, come join me on the beach nearby!

Despite the injuries that were hurting her, Kori relished to the full, bathing slowly in the deliciously warm water.



Clean at last, and rigged out in her polar equipment, she went slowly down to the sea.

- Hey, that's strange, she said, all the animals are running away from the beach!

She didn't have time to think any longer, because in the distance she saw Mister Sherpa was also running while screaming,

- Follow them!

He knew that animals could feel some natural disasters before humans could, and that their instinct was always right. He did the same as them, and as he ran, he grabbed Kori and moments later, both were sitting in the helicopter which took off straight away.



Full of sadness, they saw suddenly from their vantage point up in the sky, the sea withdrawing far from the island, as if it was taking a tremendous breath, revealing a huge beach. A moment later, they saw a giant wave crashing down, drenching the very place they had been earlier.

- Global warming is really serious: the earth shakes as if it is scared, the sea throws up giant waves and the mountain is coughing, Kori kept on repeating to herself, terrified.

Mister Sherpa and the pilot both looked at her, worried.

- She must be delirious, it must be the shock! said Mister Sherpa. Hurry! Let's get her straight to Ice-Block Island! he ordered the pilot.

And radio-ing to the base, he insisted that the best room should be made ready for Kori, the one with the best view of the bay, where wonderful icebergs floated, as beautiful as the picture in the centre-spread of his book.



Kori soon recovered from her injuries, pampered as she was by everyone, but she had become withdrawn, silently spending long hours at the window of her room admiring the large lumps of floating ice which reflected hints of different colours, according to the mood of the day.

Whenever he had some free time, Mister Sherpa who was worried, sat with her. One day, he noticed that in his book, Kori had drawn a little heart next to an Adelie penguin and that gave him an idea;

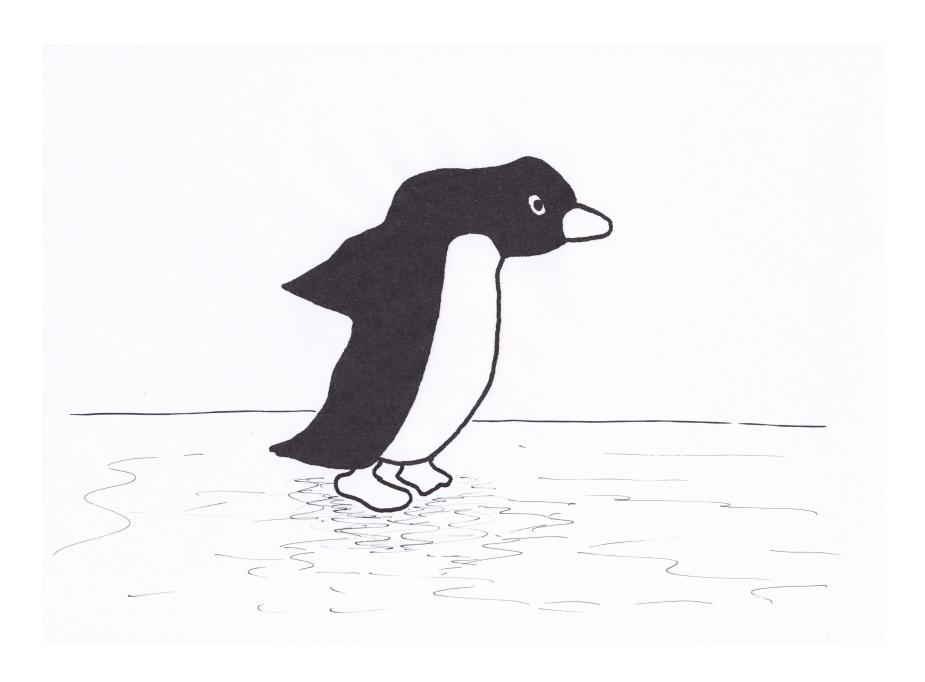
- I must take her to the kingdom of penguins! he mused, smiling to himself.

As soon as the erratic weather on Ice-Block Island allowed, Mister Sherpa got onto his snowmobile and took Kori to meet the flightless marine birds ... and when a small, waddling, black and white creature, bolder than the others dared get closer to her, Kori exclaimed;

- An Adelie penguin! Look how cute he is, with those little white circles around his eyes!

And she explained all she knew about this animal. There was no way of stopping her talking ...

From that moment onwards, Kori felt a burden relieved, and she found that sparkle of hers again.



And every day since then, she went with the scientists doing their research on the ground. Even if they were only writing down numbers which she didn't understand, she liked to stay near them, because the scenery was so beautiful.

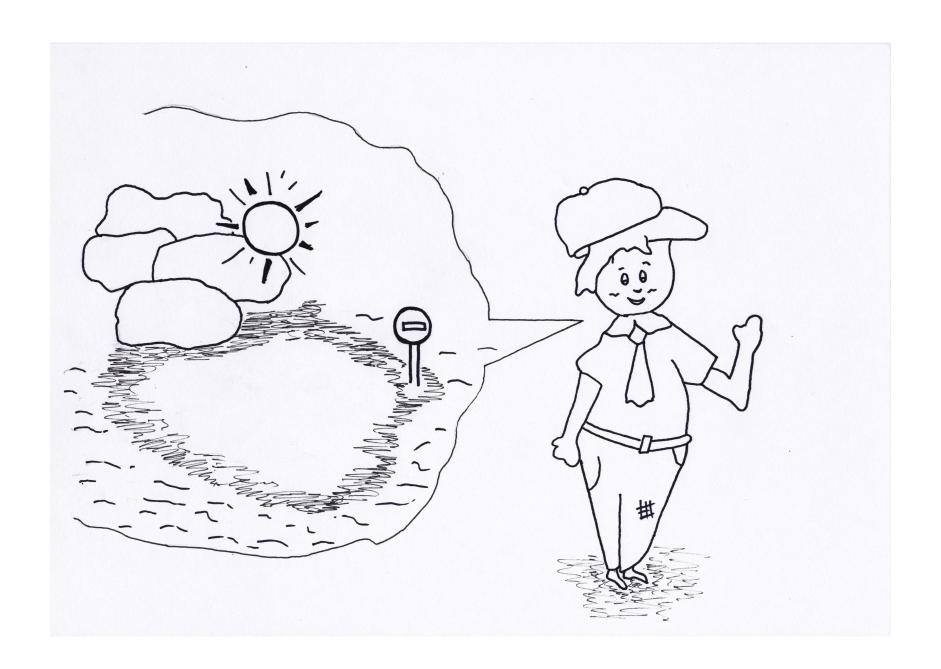
But one morning, before leaving, she overheard Mister Sherpa speaking to a biologist:

- Please don't take Kori to the end of the Island today, as there will be fog. Make a detour if you have to!

All day long, Kori had a lump in her throat. What were they hiding?

Because she was so anxious, she even spilled some valuable specimens ... and on the return journey, when nobody was looking, big tears rolled down her cheeks.

But the cold turned them into ice, and Mister Sherpa couldn't help noticing.



That evening, Kori couldn't get to sleep.

- Here, the sun never sets; all night long it stays light. No need to turn on the lights, so I can make my sweets without waking anyone.

On the tiptoes, she went to the stove, carrying her flower perfumes under her arm.

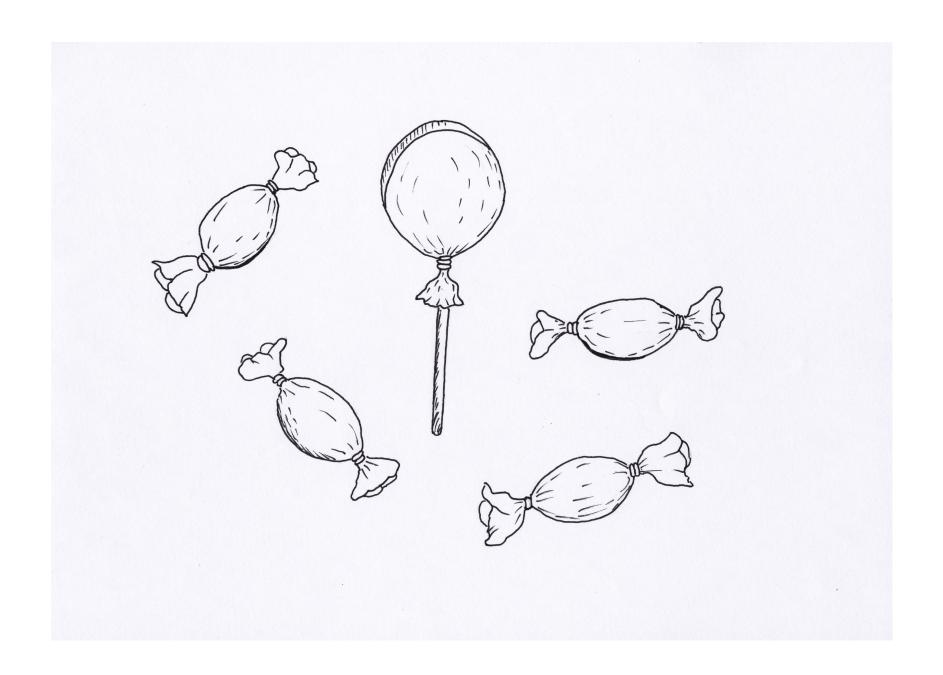
Shortly afterwards, a delicate smell of flowers began to fill the kitchen. As she was working, Kori started to think aloud:

- The earth shakes as if it is scared, throwing up giant waves from the sea, and the mountain coughs. I'm sure it must be because of global warming. It must be serious and Mister Sherpa probably wants to protect me.
- Yummy! It smells so good here! she heard all of a sudden, from over her shoulder.

Kori, startled, jumped but quickly recognised the reassuring voice of Mister Sherpa.

- You're wrong, Kori, it's not because of global warming that there are earthquakes. Continue making your sweets, I'll explain it to you, he said.

She was so happy to have an answer at last, that she flung her arms around his neck and kissed him hard on his cheek.



### Somewhat embarrassed, Mister Sherpa began:

- Global warming is the increase in average surface temperature of the planet. This increase is mainly due to greenhouse gases that mankind emits into the atmosphere. Unfortunately this also increases the number and the strength of storms, floods and droughts which promote fires.

...

- Oh! said Kori surprised. In order to produce less of these bad gases, shouldn't we turn off the lights, not leave electrical appliances on standby, use cars and aeroplanes as little as possible, put a lid on saucepans, ...?
- Yes, Kori, replied Mister Sherpa seriously, and it's becoming urgent, because here the ice is melting. In some places, it has already disappeared.

Then, with a heavy heart, Kori thought about the Adelie penguins which were having fun sliding on the ice as if they were on sledges, and as she wondered what they would do if it all melted, she stopped turning her spoon in the saucepan. But Mister Sherpa, who was a bit of a gourmet, was watching her and he reminded her not to stop!

- What's happening, then? The earth is shivering, there are huge waves and volcanoes? Kori asked, worried.
- The earth is merely expressing its temper, replied Mister Sherpa. Tomorrow, dress up warmly. We'll all go to the end of the island together.



Even though she had not slept much, Kori was ready first.

Because she was afraid of catching cold, she had put on so many clothes, she looked like an astronaut, ready to walk on the moon.

When he saw her, Mister Sherpa burst out laughing so hard, that she was upset.

- To keep warm, he explained, air must be able to circulate between the layers of clothing. If they are too tight, you'll get cold.

And he made her take off at least two pullovers and a pair of trousers.

Under an exceptionally cloudless sky, they all left happily in a convoy of snowmobiles. Mister Sherpa leading the way.



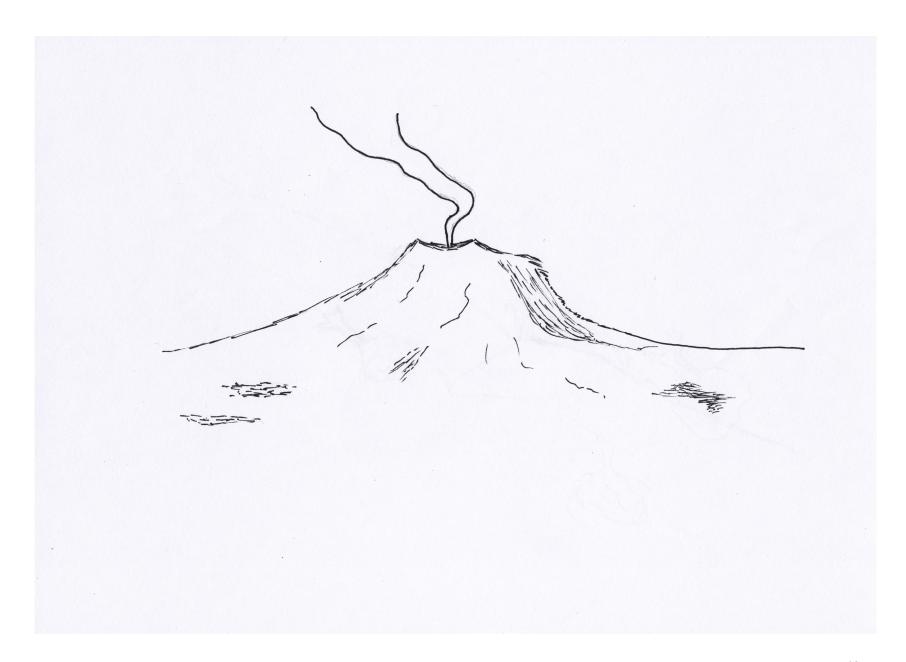
A wonderful mountain of ice soon appeared. From its peak, a white cloud of smoke escaped, curling in the wind.

Kori who was sitting at the back of the snowmobile clung so tightly to Mister Sherpa, that he understood she was scared.

- Let's stop! he cried, as he turned off the motor. We'll have hot tea, chocolate and flower sweets for everyone!

Her body shuddered as she recalled her lucky escape from Dragon Island. Clutching the cup of hot tea tightly, Kori listened carefully as the volcanologist explained to the group:

- Some mountains, like the one we are seeing, are made of matter from within the earth. They are called volcanoes, not dragons she said turning to Kori. Did you know that deep inside the earth is a huge ball of molten rock, of matter in fusion? And that at the surface of this ball, there is a thin crust (= cover) on which we live?
- What is 'matter in fusion'? Kori whispered, frightened, into Mister Sherpa's ear.
- It's a thick sticky goo which is incredibly hot. she replied.



But seeing that Kori was still shaking, he took her into his arms, and continued:

- The earth is living, and sometimes, when it is sad or jittery, it cries tears of molten rock which flow in rivers of lava, or it coughs up gases and ashes which rise into the sky like smoke.

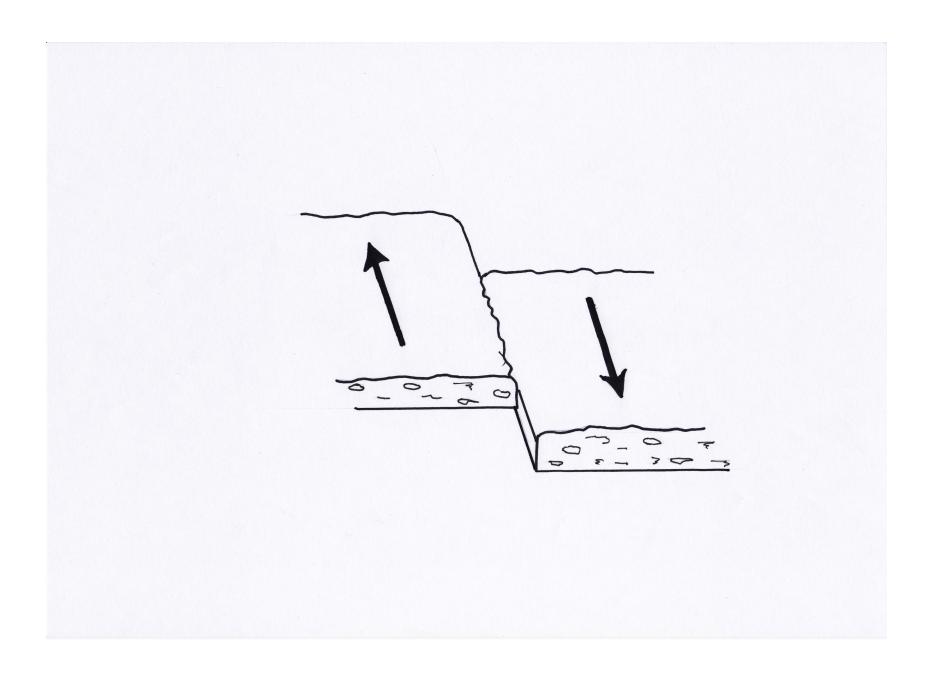
We can't do anything about it, the earth has its tempers!



- And when the earth shakes, is it because it is afraid of warming up? Kori asked shyly.
- Of course not! replied the team's seismologist (= a specialist who studies earthquakes). In some places, when the earth is in a very bad temper, it grinds its teeth by knocking together some of the plates that form its outer crust.

Sometimes these plates don't slide against each other, but get so stuck, that the plates get more and more stressed until all of a sudden, the plates move.

When this happens, we have earthquakes, and houses in these areas can be destroyed, unless they are built to withstand the earth's temper.



Somewhat reassured, Kori dared ask one more question:

- And the giant wave, is that also one of the earth's tempers?
- Yes, Kori. replied the oceanographer (= a person who studies the oceans. There are also earthquakes and volcanoes deep under the sea. We don't see them, but sometimes the earth's tempers can cause a very fast moving wave, which as it gets closer to the coast, turns into a huge devastating tidal wave. We call this a tsunami.
- I hate the earth's tempers, muttered Kori under her breath, as she regained her place behind Mister Sherpa, on the snowmobile.

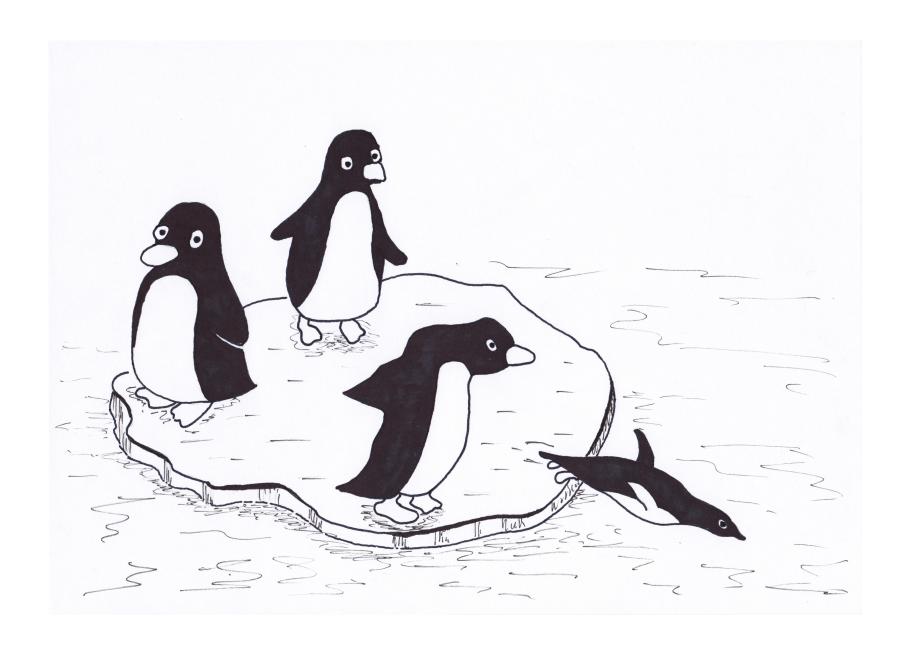


Mister Sherpa who liked Kori pretended not to hear her. Later on, he would show her that the earth could also be in a good mood. But for now, he pretended to lose his way, and changed his course to the sea, where thousands of noisy penguins were having fun on the icebergs.

Seeing them leap out of the water, Kori forgot her fear and laughed heartily.

- Nothing can be done against the earth's tempers, Mister Sherpa told her. All we can do is to watch out, and try to foresee them. On the other hand, there is something we can do to fight against global warming which is melting the magnificent ice and causing serious disasters for many people in the world!

For the second time, she put her arms around him and kissed him on the cheek. She had come to understand what she had to do.

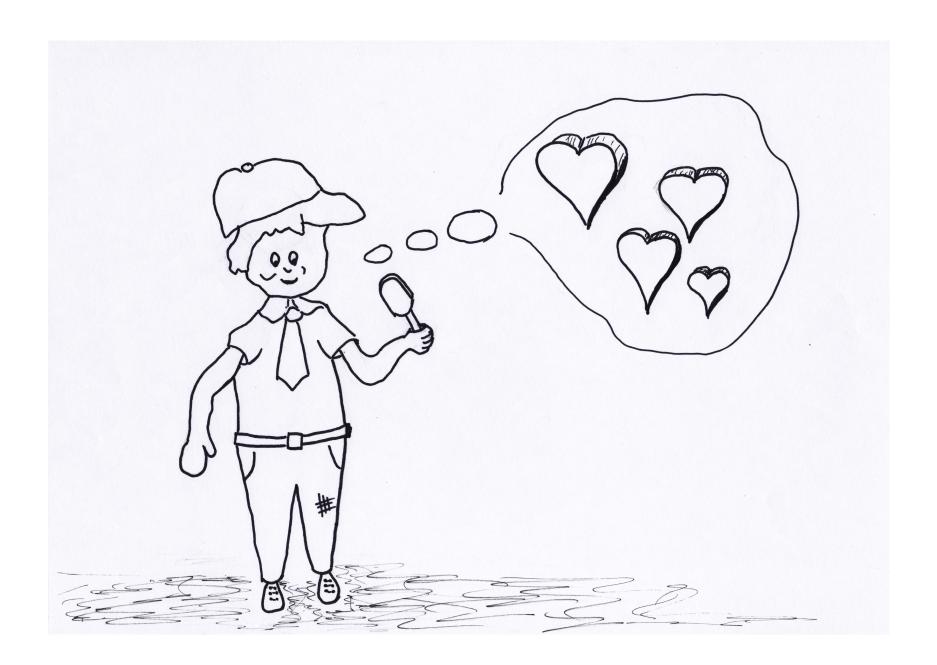


Upon returning to under her umbrella pine, Kori surprised everyone; next to her sweets, she had placed a box covered in solar panels and filled with delicious ice sweets!

The wrappers had a picture of an iceberg as well as a sentence suggesting how to save energy.

Each week, Kori changed the picture and the phrase. Her customers eagerness did the rest. And soon, thanks to Kori, her sweets and ice sweets, everybody on the Island of Flowers fought effectively against climate change.

As Mister Sherpa unwrapped one of Kori's surprisingly delicious ice sweets, he dreamed that one day, surrounded by penguins, he would hold Kori in his arms again.



#### Teachers notes:

- Beforehand, the teacher, with the help of the children, will have collected photographs, newspaper-headlines, books or drawings of natural disasters (volcanic eruptions, floods, landslides, tidal waves or tsunamis, earthquakes, melting glaciers, forest fires, etc..)

  There will be as many documents as there are children.
- Draw two columns on the board, one headed "The Earth's Tempers" written in white, the other headed "Global Warming" in red.

<u>Note</u>: Scientists usually show rising temperatures in red. The redder it is, the hotter it is. If necessary, show the children a red liquid thermometer

- Give out the documents to the children.
- Each child comes to stick their document in the right column. They should explain their choice. If placed in the red column, the child receives a red sticker; if in the white column, a white sticker.

<u>Note</u>: Be careful, climate change can affect the frequency and intensity of flooding and forest fires, but floods and fires are not necessarily related to climate change.

Volcanic eruptions are not caused by climate change, but they can influence it.

- The teacher then shows the class a world globe or world map. Allow the children to discover the continents, as well as their country.
- The children should try to stick their sticker at the correct place on the planet where a catastrophe has happened. For this, reference should be made to the names on their documents, otherwise, ask the class to use their memory. (TV reports, their own reading, their holidays, etc..)

- The teacher then explains:
- White dots (natural disasters) are almost all known, but there could be others. Maps and measuring instruments can help scientists to foresee the times and places where there is a risk. Thus, it is possible to monitor the earth's tempers.
- red dots (impacts of climate change) may appear anywhere in the world, and to avoid further ice melting and more floods and forest fires, we have to try to fight against global warming.
- Ask the children what to do to fight against climatic warming and to identify energy saving actions.
- Allow the children to speak, and write correct sentences on the board.
- Then ask the children: "Do you know an island like Ice-Block Island, where Kori absolutely wants to go? What is its real name?"

First allow them to find clues:

- nobody lives on the island apart from scientists
- there are penguins
- there is a volcano
- it is very cold

Answer: Antarctica

(If the children talk about the islands near the North Pole, point out to them that there are no penguins in the North, instead there are bears. Also, the islands are inhabited. The North Pole is not an Island, but a point in the ocean.

- It is the penguins which touch Kori emotionally, and give her the urge to fight against global warming. Then get the children to make the following craft work:

http://www.contespedagogiques.be (click on craft)

and to put messages to save energy between the penguin's paws, just as Kori had done around her ice sweets. (See the sentences on the board.)

Suggest several activities, for example, setting the table with decorations for when their grandparents or friends come for a meal, so that they, like Kori, can become valuable ambassadors for the climate.



## « To a child I would give wings,

# but I would let him learn to fly by himself. »

Gabriel Garcia-Marquez (Latin American writer)

#### **Dedications:**

- to my American friend and mother of Kori
- to all those as well, who are casualties of natural catastrophes, either in their bodies or in their hearts...