

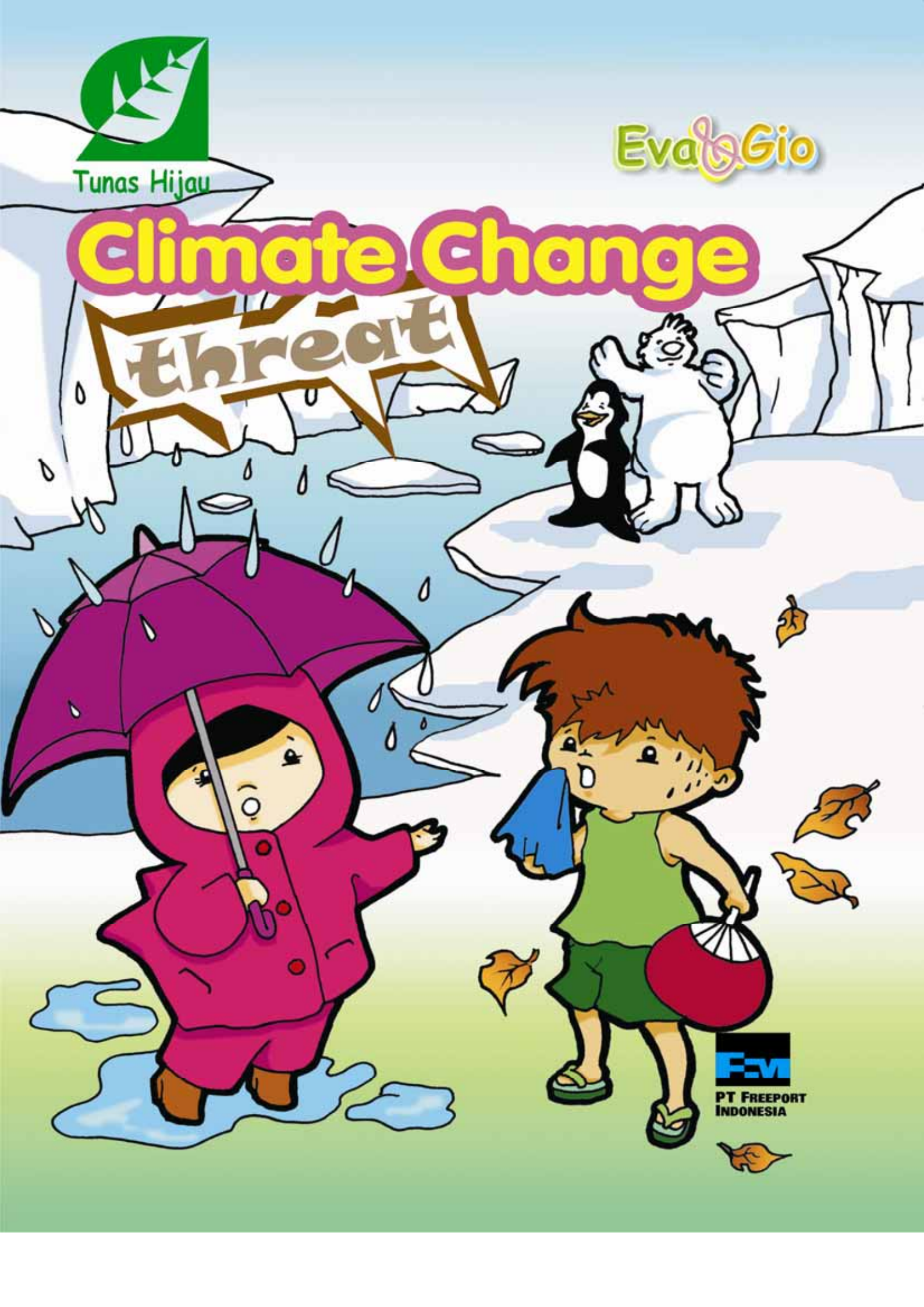


Tunas Hijau

Eva & Gio

Climate Change

Threat



FMI
PT FREEPORT
INDONESIA



EVA

Genius but a bit careless and afraid



GIO
Nice, curious and patient



BIRO BEAR
Wise and open minded



PINGITA PENGUIN
Chatterbox but caring



Everytime she's back to her room, Eva always finds that her computer turned off by itself. Even her lights nadair cond. Actually, her toy Penguin did it all.

Why did the toy Penguin do that?

.....
CLIMATE CHANGE





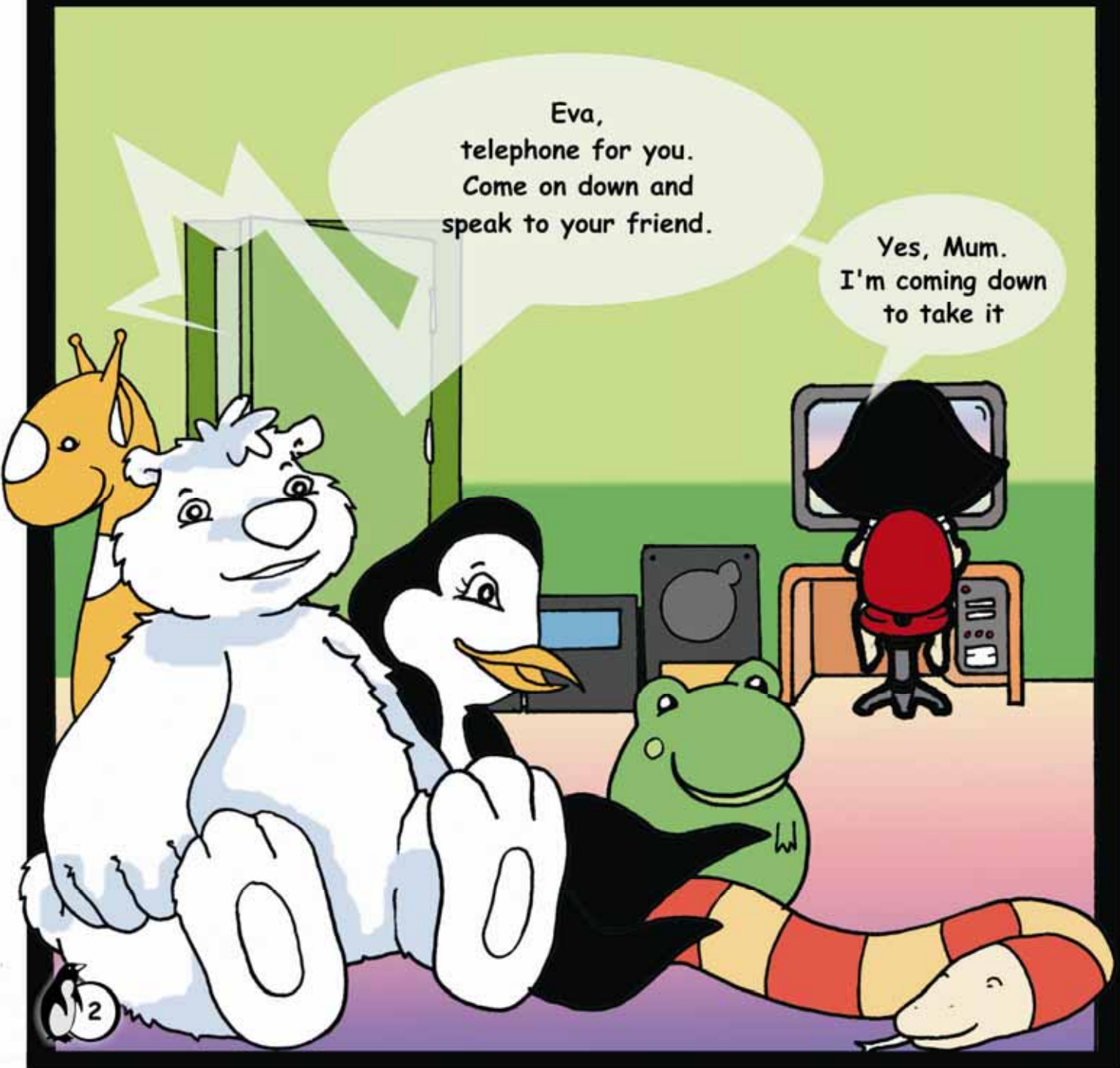
click...

kring... kring... kring...

Hello...

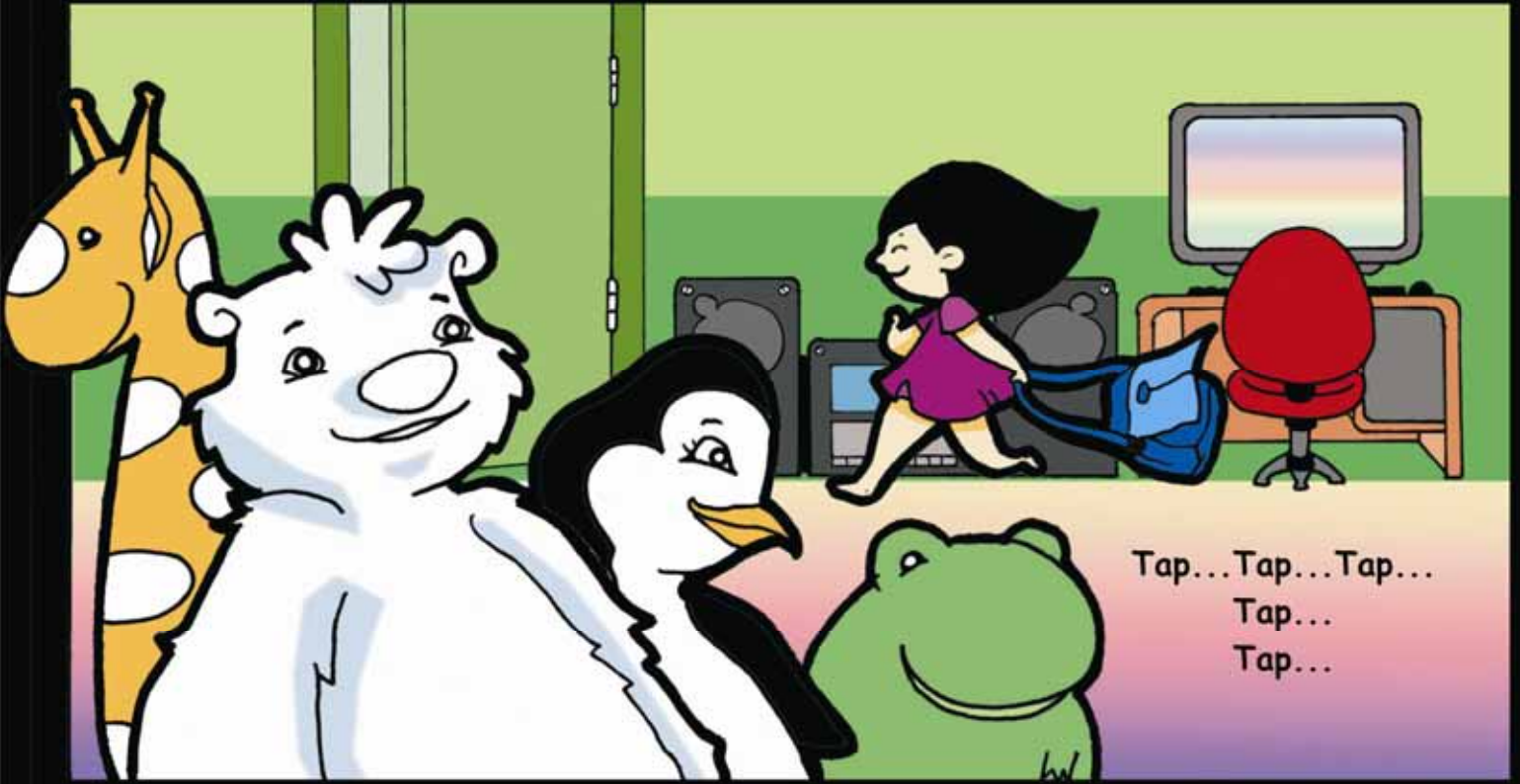
Eva,
telephone for you.
Come on down and
speak to your friend.

Yes, Mum.
I'm coming down
to take it

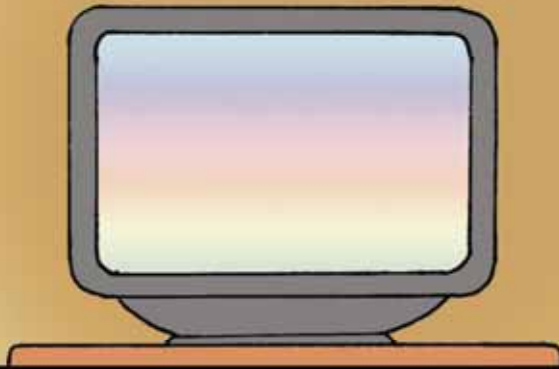


OK, Gio.
I'll get there
soon

Tut... Tut... Tut...
Tut...



Tap... Tap... Tap...
Tap...
Tap...



zzzzrrrrrtttttt.....

titt.....



Suddenly, the computer's
turned off by itself



Hi, how are you?

Sorry, I'm late

Did you know that
I just played in
game zone.
I was very
satisfied.

I know that.
Everyone saw you
having fun just there

Hihihihhi....

Fiuuhhh...
I feel very hot

Miauuuuwww.....
It's really hot

We talk in my room.
It's cool,
cause air conditioned,
while we play
the computer game

OK

What???



....What??...



Again and again
and again....

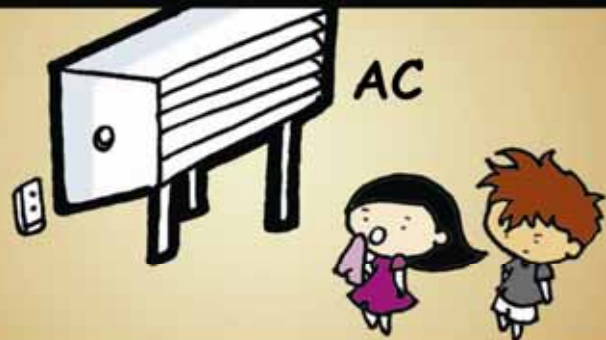
I wonder,
whenever I go out and
back again to my room,
I always have my electrical
things off



Lamp



AC



My mum didn't turn it off.
The electricity is also on

.....
Or don't say.....

What do you mean?



Hey...Hey...
Keep quiet.
Eva is still
setting the hang of it
with what you just said



em...em...
mmmmmmmmmm



You guys
can really talk.....

Climate Change??



Look at
your ice creams.
Didn't that ice cream melt because
of the heat conditions in the earth
right now?


Just like
what happens in the North Pole
and the South Pole
- IT MELTS -

What?
Melts??

Yes, iceberg in the poles melt.
As part of the impact
of climate change

Can you imagine,
how will the earth
looks like if the iceberg
from the North and
South Pole melt?





OK, it looks like
I have to tell you
about the current condition
that is happening on
our beloved earth

Before that,
I introduce you,
I am Biro Bear

Introduce me,
I am Pingita Penguin

Hi Pingita
Penguin

Hi
Biro Bear and
Pingita Penguin.
I am Gio,
Eva's friend

Eva and Gio,
earth condition is worst
because this climate change
is seriously talked by the elites
and the world
expert teams

But, oh no....
It means that all data
on my computer lost.
I haven't saved them yet.
Hiks...hiks...hiks...



Just calm, Eva.
Please stop your crying.
We're not as fool as you thought.
I have saved all your data
before shutted down your computer

Are you sure
Pingita Penguin?

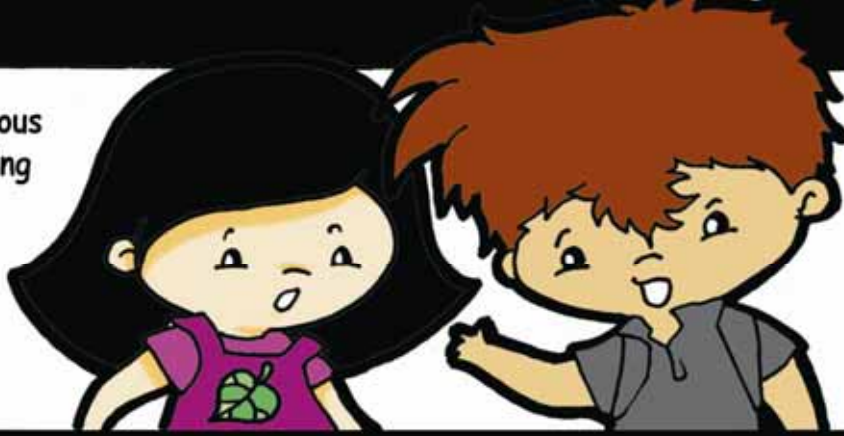
Yup...
Pingita Penguin always
save your data before
shut down
your computer

Thanks,
Pingita Penguin

You are
so cute and funny,
Pingita Penguin



I become curious with your saying about the climate change

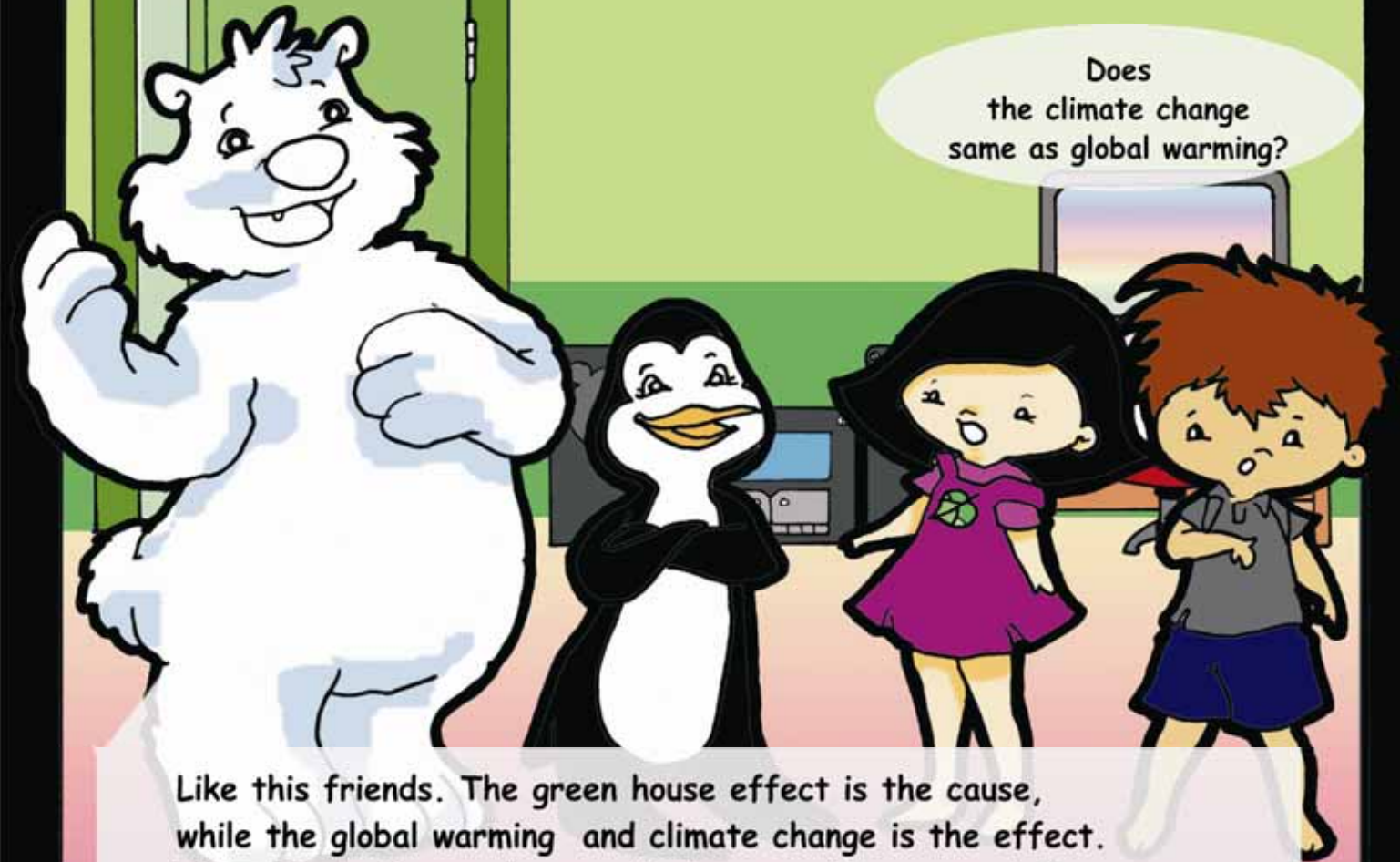


Can you explain it again?

Off course my friends, Gio dan Eva

Does that climate change same as the green house effect?

Does the climate change same as global warming?



Like this friends. The green house effect is the cause, while the global warming and climate change is the effect. The effect of green house effect causes the accumulation of heat of the earth atmosphere, which in turn will influence the global system of our earth. It causes the increase of the average temperature of the earth, which is known as global warming



That's all, Gio and Eva.
We'll continue the explanation
later on




Now,
through this Iglo,
you come with us

We'll
take you
to our places
in the poles



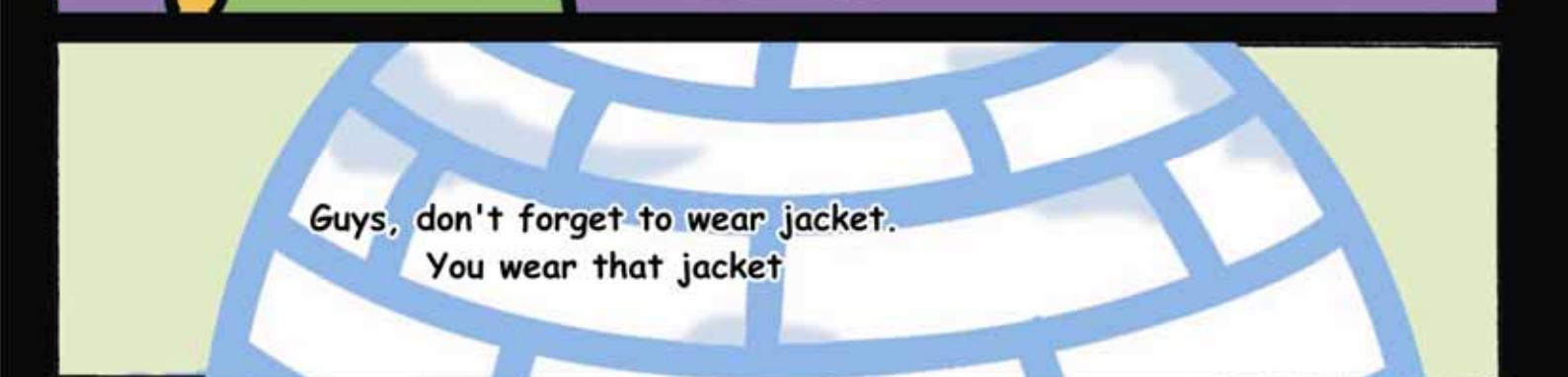
In the poles,
the continued explanation
will be told to you



Uuggghh,
your body is heavy,
Biro Bear

Hey,
what are you doing outside?
Come on
in this Iglo

Quickly, Guys.
Push me in



Guys, don't forget to wear jacket.
You wear that jacket

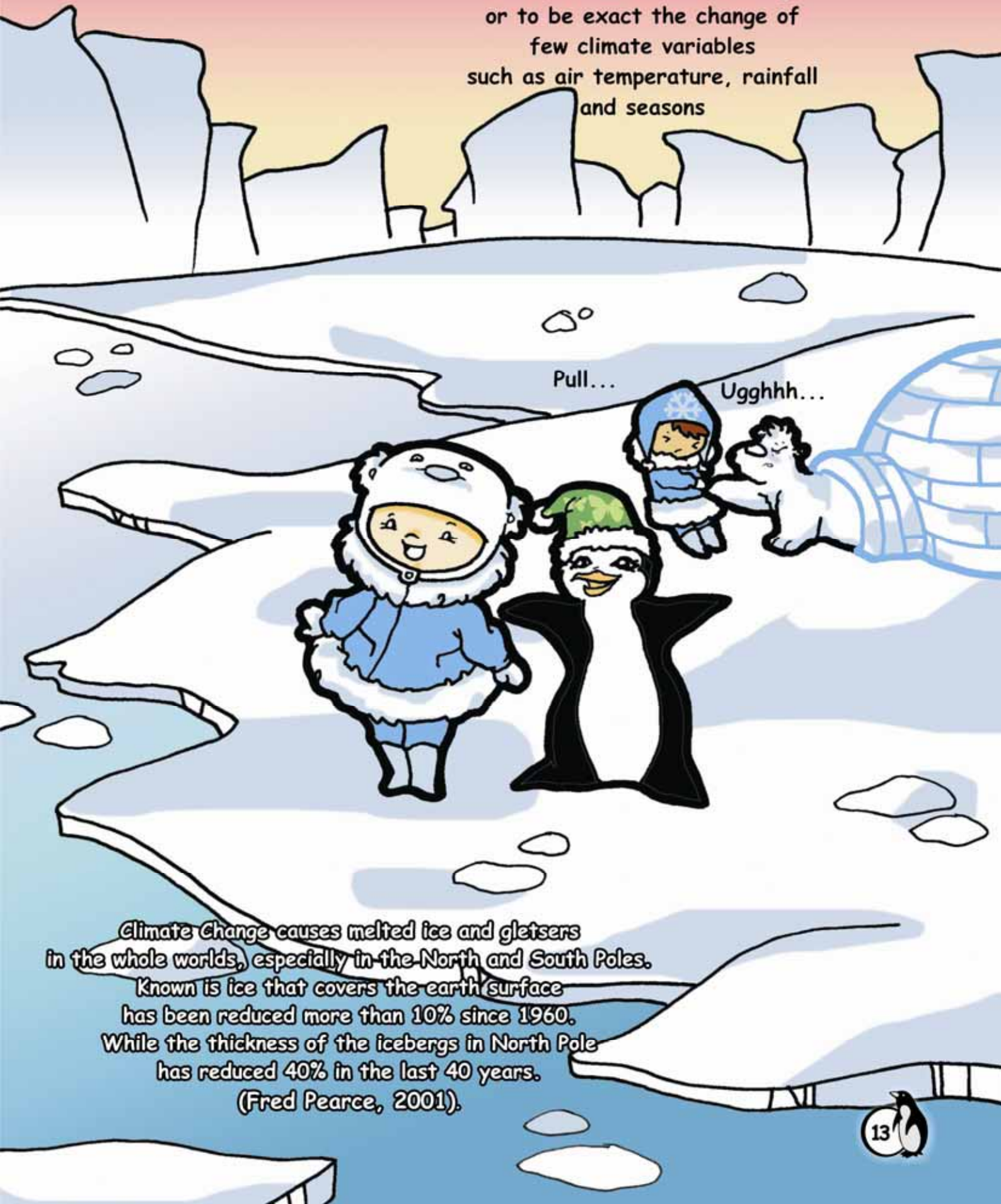


Woahhh....

It's amazing....

Wow...the pole

Now, starting from green house effects continue to be affected by global warming, then it causes Climate Change or to be exact the change of few climate variables such as air temperature, rainfall and seasons



Pull...

Ugghhh...

Climate Change causes melted ice and gletsers in the whole worlds, especially in the North and South Poles.

Known is ice that covers the earth surface has been reduced more than 10% since 1960. While the thickness of the icebergs in North Pole has reduced 40% in the last 40 years.

(Fred Pearce, 2001).





Hey... do you know what the global warming is?



Global warming?
I've heard about that



Global warming?
What is that?



...the hot weather caught in the atmosphere that are repeating can cause the earth temperature getting increased and warmer and can cause the warm of the whole earth surface

The sun shine absorbed through the atmosphere

The heat from the earth surface is released to the atmosphere

Some of the heat from the earth surface carried out by the atmosphere and some of them are absorbed and reflected back by the green house gas. So it will be heating the earth

The sun shine is heating it up

Gases that have the green house effects are various, one of them is CO₂, which holds the highest percentage in the earth atmosphere



In the process,
climate change happens very slow,
so the effect will not come up now.
But, the effect of climate change
will directly close to the next generations.
Then, when climate change happens,
there is not any efforts
return to the conditions before



This tells us that
the climate change is a serious threat
for the continuation of human life
and the universe.

The effect of climate change
does not only happen
in one place or state,
but in the whole world



Beside the melting ice in the poles, climate change also causes the weather shifting

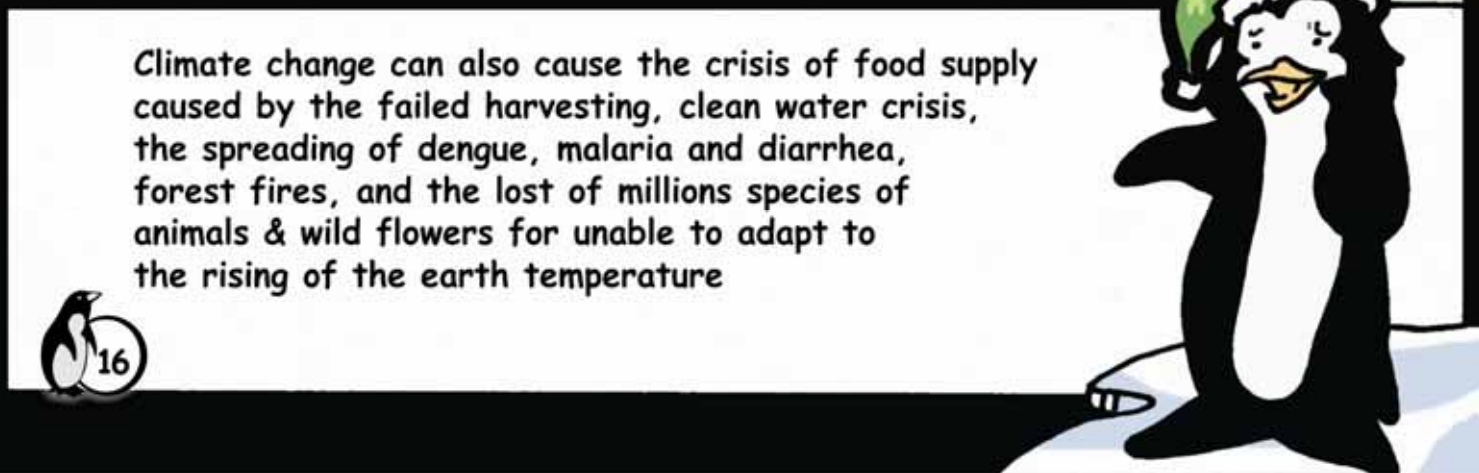


Dry season will longer than ever, so it can cause some phenomena that we can feel now

Longer dry season, draught and deserting dried place



Meanwhile, the rain season will coming shortly with the tendencies of rain drops is higher than usual rain. Rain pattern like this can cause flood and erosion



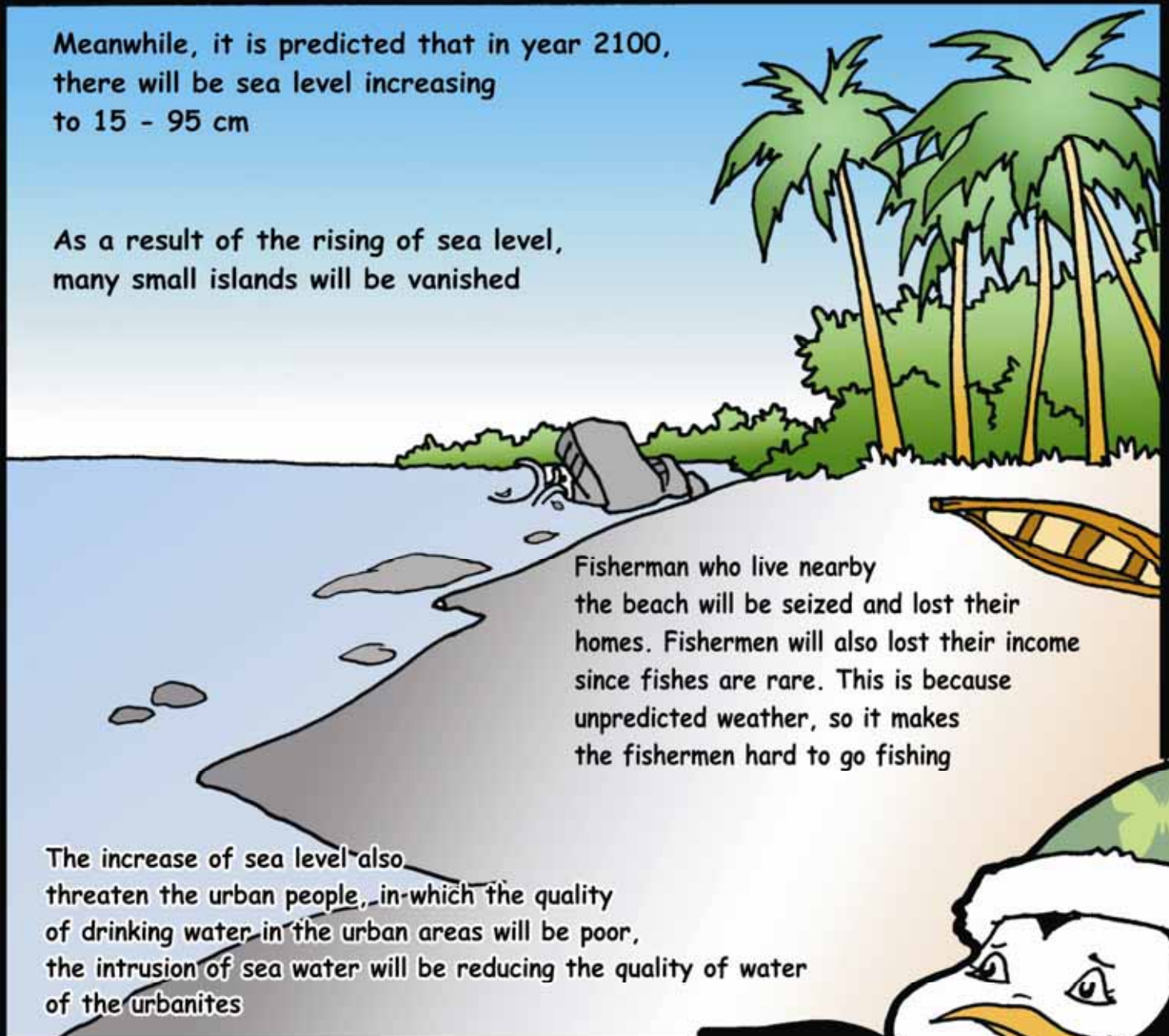
Climate change can also cause the crisis of food supply caused by the failed harvesting, clean water crisis, the spreading of dengue, malaria and diarrhea, forest fires, and the lost of millions species of animals & wild flowers for unable to adapt to the rising of the earth temperature

The other impact of climate change is the rising of sea level. According to the IPCC (Intergovernmental Panel on Climate Change) or the world expert panel for climate change, in the last 100 years, the sea levels has been increasing to 10 - 25 cm



Meanwhile, it is predicted that in year 2100, there will be sea level increasing to 15 - 95 cm

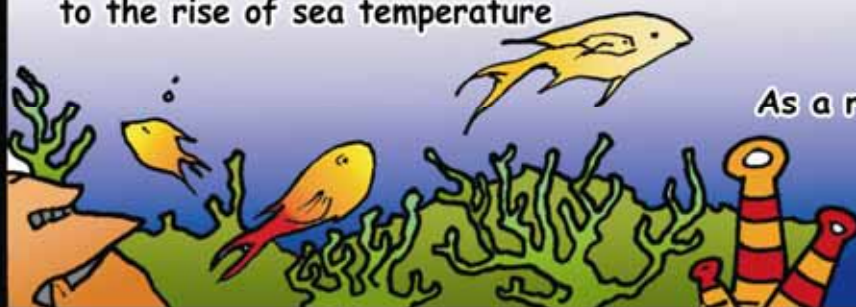
As a result of the rising of sea level, many small islands will be vanished



Fisherman who live nearby the beach will be seized and lost their homes. Fishermen will also lost their income since fishes are rare. This is because unpredicted weather, so it makes the fishermen hard to go fishing

The increase of sea level also threaten the urban people, in-which the quality of drinking water in the urban areas will be poor, the intrusion of sea water will be reducing the quality of water of the urbanites

Algae, which is the food for corals can not be adapted to the rise of sea temperature

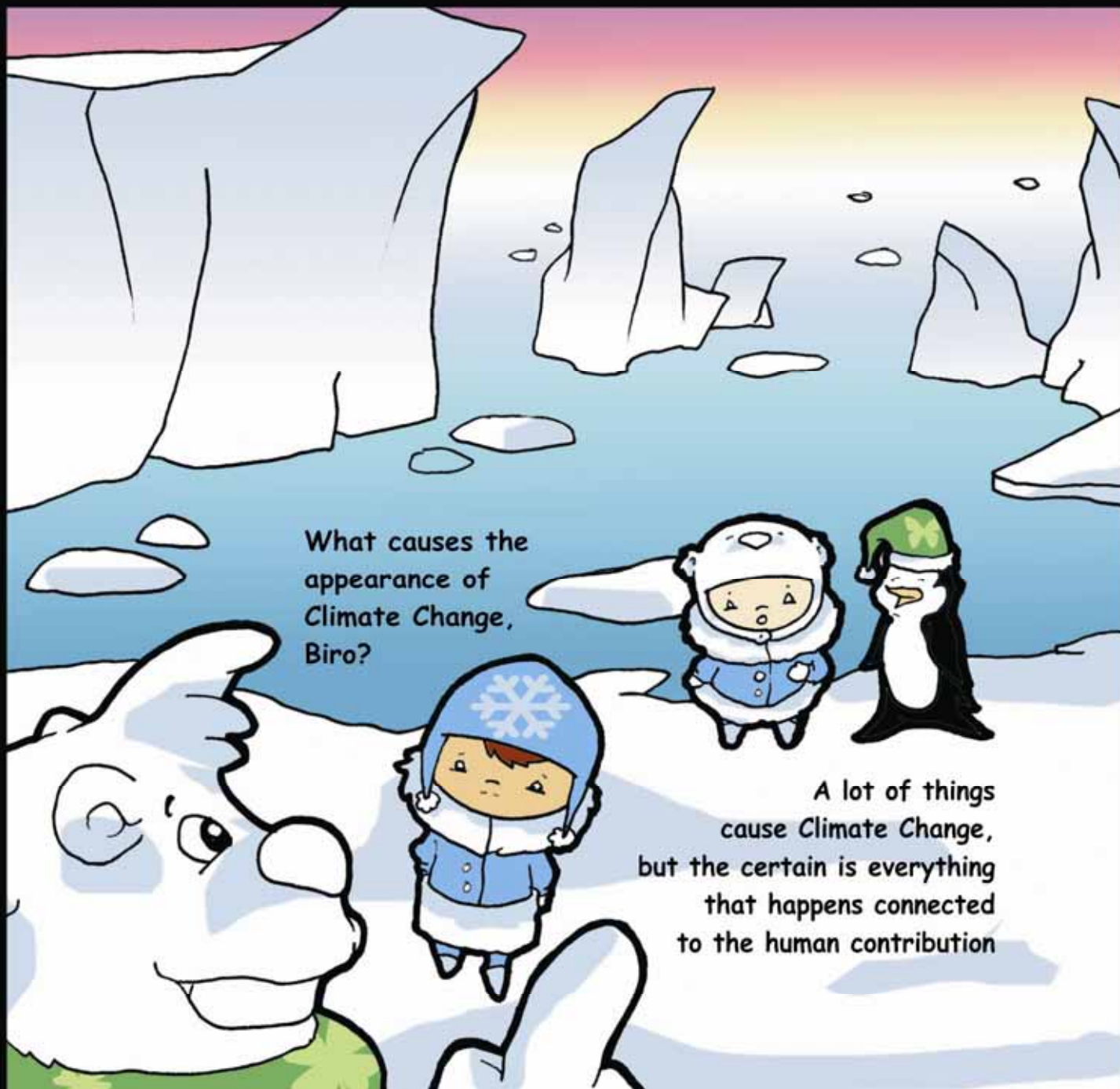


As a result, the corals will change colour to white then disappeared



Whatever the efforts that are done,
climate change will still happen.
This is because green house gas
that produced through human daily activities
continues to rise rapidly
at all angles of the world





What causes the appearance of Climate Change, Biro?

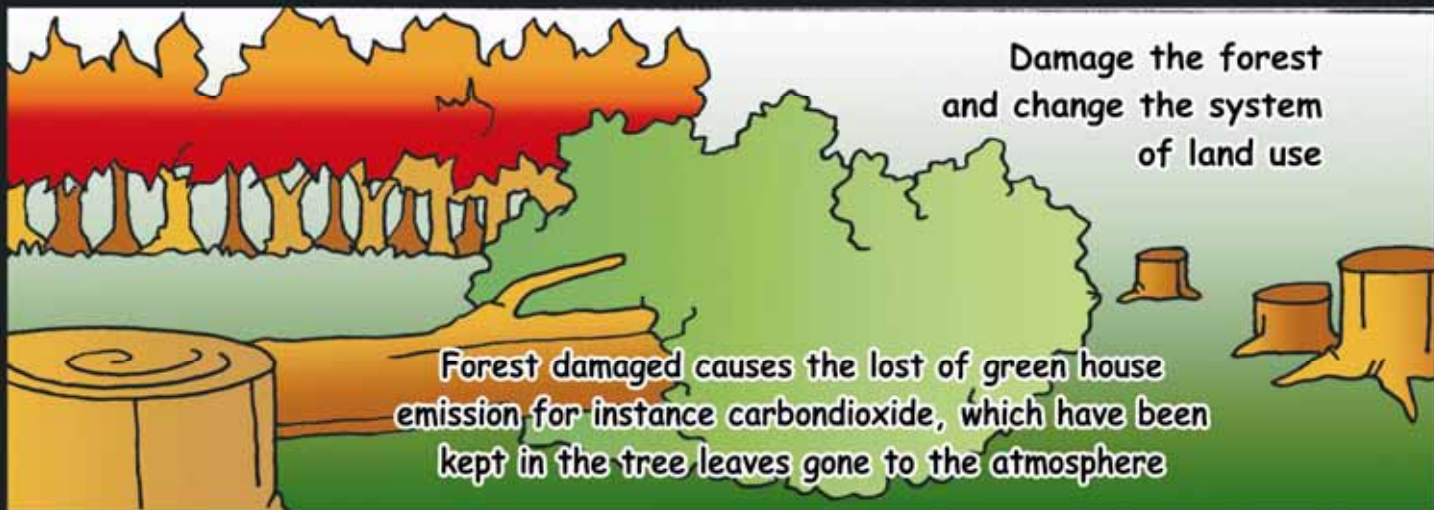
A lot of things cause Climate Change, but the certain is everything that happens connected to the human contribution

El Nino, which in Spanish means little boy, is a certain phenomenon rise of the temperature of the sea level in the east and center of Pacific Ocean tropical region. Scientist stated that climate change has a strong impact towards the coming of El Nino. The conditions of the hot atmosphere causes the coming of El Nino will be often and stronger than the usual





Human activities is the major cause of climate change. The human activities such as.....

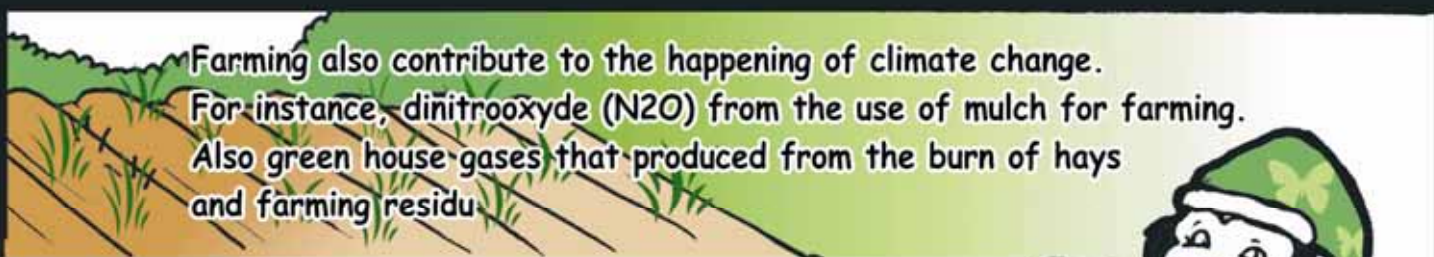


Damage the forest and change the system of land use

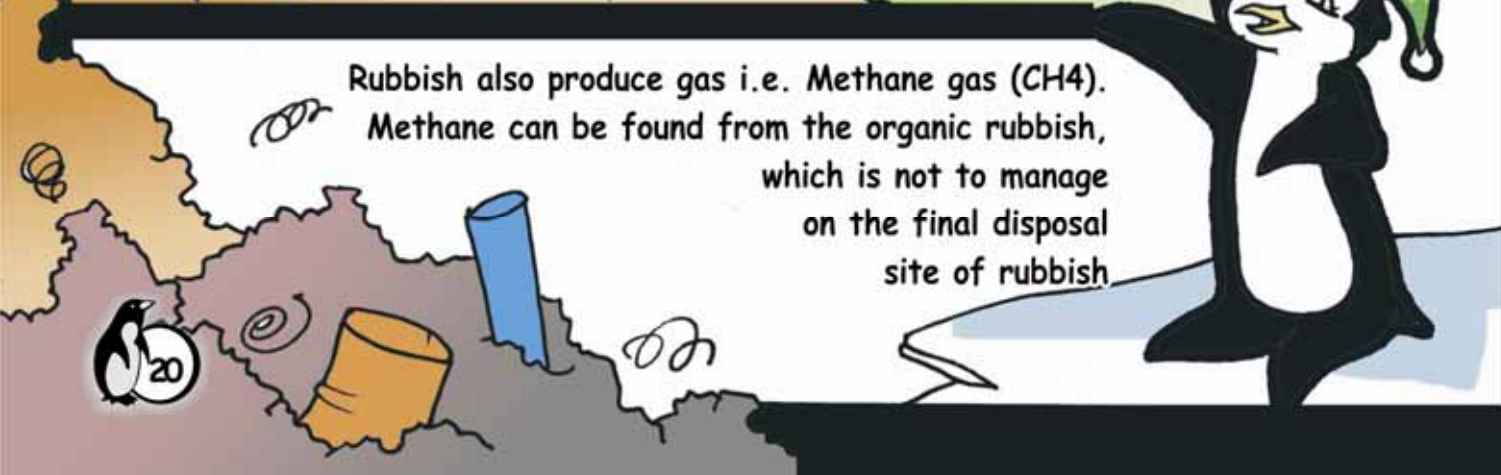
Forest damaged causes the lost of green house emission for instance carbondioxide, which have been kept in the tree leaves gone to the atmosphere



The over use of energy, especially fossil fuel, can also become the major cause of global climate change



Farming also contribute to the happening of climate change. For instance, diinitrooxyde (N_2O) from the use of mulch for farming. Also green house gases that produced from the burn of hays and farming residu



Rubbish also produce gas i.e. Methane gas (CH_4). Methane can be found from the organic rubbish, which is not to manage on the final disposal site of rubbish

Now, with all that...
we can do
MITIGATION



What is **MITIGATION**?

MITIGATION is
an act to anticipate the continuation of climate change.
By reducing the effect of green house, so the flow of
global warming could be slowed down and also
could to slow down the climate change



What can
we-do now to lower
the rising temperature
of the earth?

At home

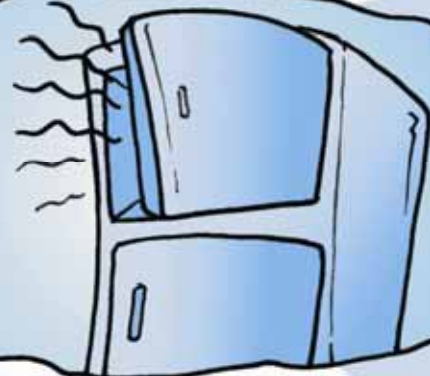
Get used not to burn rubbish.
Separate any organic and non-organic rubbish.
Compost all organic rubbish



Use plants and flowers as your ute at home and make land around visible like forest.
If there is no yard, you can use flowers in pots.



Don't let the freezer door open too long, so it doesn't waste electricity.
Set coolness energy in fridge within medium temperature



Turn off AC, TV, lamps and other electrical things if not in use at home.
Change all electric use to something that saves electricity



Recycle any used paper & cans and the others non-organic rubbish.
Give or sell the collected non-organic rubbish to the non-organic rubbish collector.
Use any products that made of recycle materials

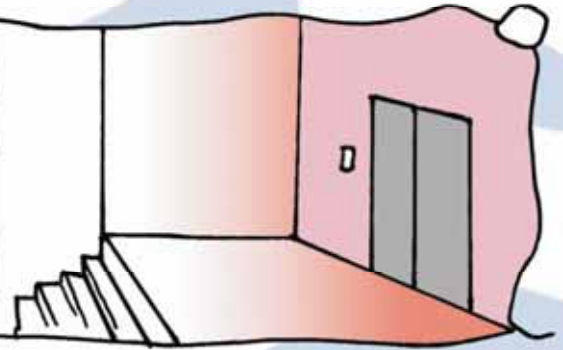


At the office

Hotel be loved
use corridor light particle
flame based on
censor heat human body.
Or at least
use any lamp
that saves electricity



Avoid to use lifts
or escalator
to get up/down
not more than 2 floors.
Get used to use stairs
because it's healthier and
saves electricity



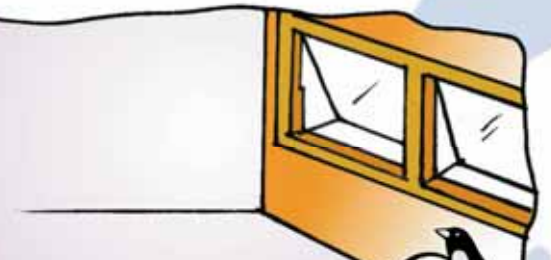
Use both sides of the paper properly
and reuse any used paper. It saves
the trees and energy



Get used to plugging off laptop cables
or turn off computers when not in
use at times



Use buildings that are designed with windows
that can open wide, so it minimizes the use
of AC and electricity light



On the road



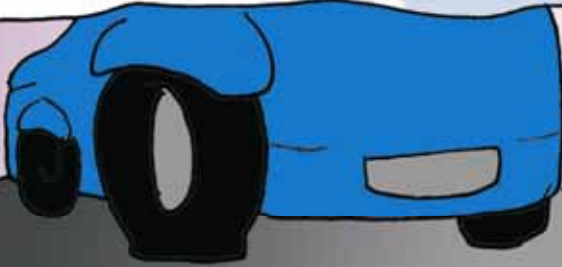
For short distance,
try not to use car and
motorcycle, instead
walking
or cycling



Try to occupy
the car as the maximal
of its passengers
capacity



Check the tire pressure of vehicle
in a regular base.
The accurate tire pressure decreases
wasting the fuels



Park the car for two days every week.
This looks simple, but if many people,
even million ones do it,
so the effect will be significant



Get used to use public transportation
and vehicle that uses eco friendly fuel,
such as gas and biofuel for decreasing
green house gas



Others



Practise being fond of planting trees to the community



Cutting down the trees has to be followed with planting tree seeds in the same species and number of seeds



Practise bringing shopping bags by yourself from home to stop using shopping bags made from plastic that is used once



Avoid to change the function of forest become houses, agriculture field and others.

Keep remember, Oxygen that human needs is just only produced by trees.

As many as trees means more Oxygen supply for human to breath



Try to recycle non-organic rubbish.

If you can't recycle yourself, the non-organic rubbish that collected can be sold or given to the non-organic rubbish collector.

So, the collector will recycle non-organic rubbish to the factory



With those easy ways,
we already helped to prevent
the global warming

Besides that,
we also have to do adaptation
to climate change
that is happening now

Adaptation???

What do you mean???

Climate Change
is signed with the increasing temperature
in the earth and the raise of the sea water level
caused by the melted ice in the poles.
To decrease the impacts,
anticipate all the risks, and reduce the fees
that has to be paid for climate change,
there is not other chance except be ready
for ourselves and start
to do adaptation



For long trip, going to sea,
or farming

Get the information
about the weather predictions
before do the activity



Don't ever dig the soil
in the slope area
to prevent the landslide



Plant trees frequently and
avoid to cut the trees especially in hills area.
This way to prevent the landslide,
to absorb CarbonDioxyde
and to increase the Oxygen supply



Don't throw rubbish in waterways
to prevent the flood.
Socialize healthy life by throwing rubbish
into its place



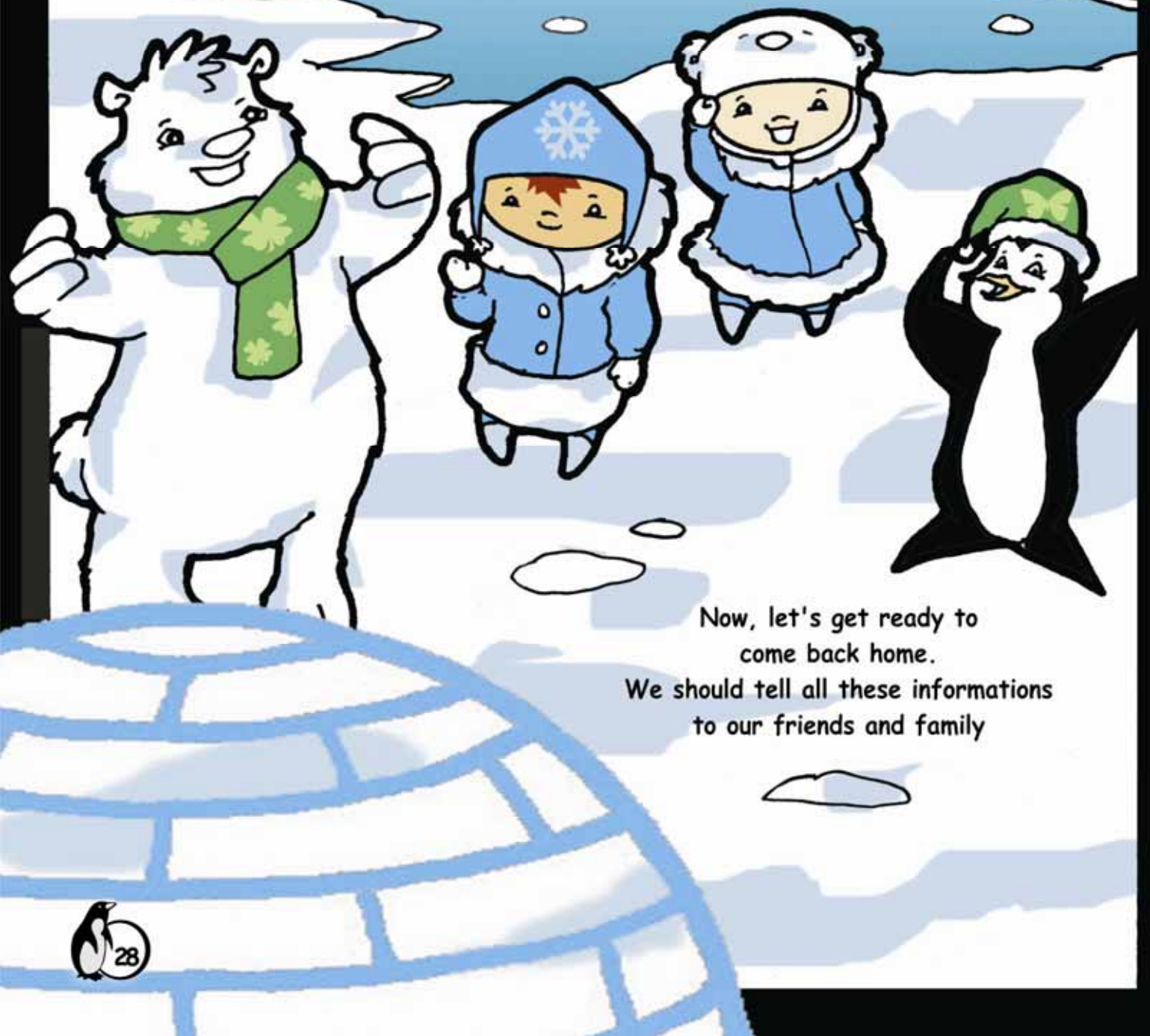
Make a pond/pool
to accommodate the rain water.
We can use water
that is collected in the pond/pool
for water supply
in the dry season

Yeah, now I understand it, Biro Bear

We will do the best
to save this beloved
earth

How about it?

You guys know what you got to do
to prevent climate change, right?



Now, let's get ready to
come back home.

We should tell all these informations
to our friends and family



Come on...
pull me ... pull harder
guys

Ughhghhhh

He he he ... he

One... two...
three...
pull ...huh!



BUUUUUUU

Ouw,
get up soon,
you are crushing me, Biro
My body feels
really bad

I am so
sorry, Eva

Ouwww,
my foot hurts
badly

Finally,
we are back home,
guys

Now,
we all know how
important being environmental friendly
to save our beloved
earth

The climate change
has already happened,
don't let it getting worst
our beloved earth



Let's together,
we prevent the flows
of earth heating

For our better future,
the earth and the universe

Gossips of Wild Animals

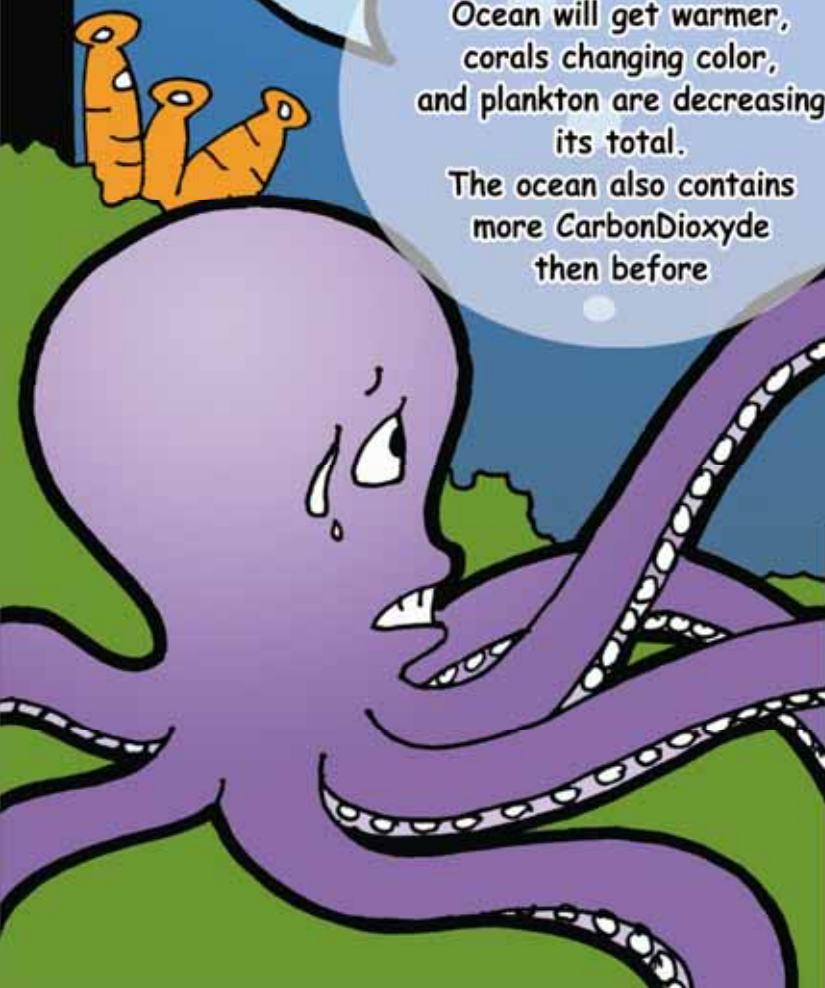
Yeah, you are right.
We feel a weakness
and can't stand it

Conditions of
the ocean each day
gets hotter
and hotter

Look!!!
Corals is starting to turn
white and fade.
It won't be long
before he dies

My friends,
there is bad news.
Ocean will get warmer,
corals changing color,
and plankton are decreasing
its total.
The ocean also contains
more CarbonDioxyde
then before

Help....
I'm helpless.
I need Oxygen
to breath



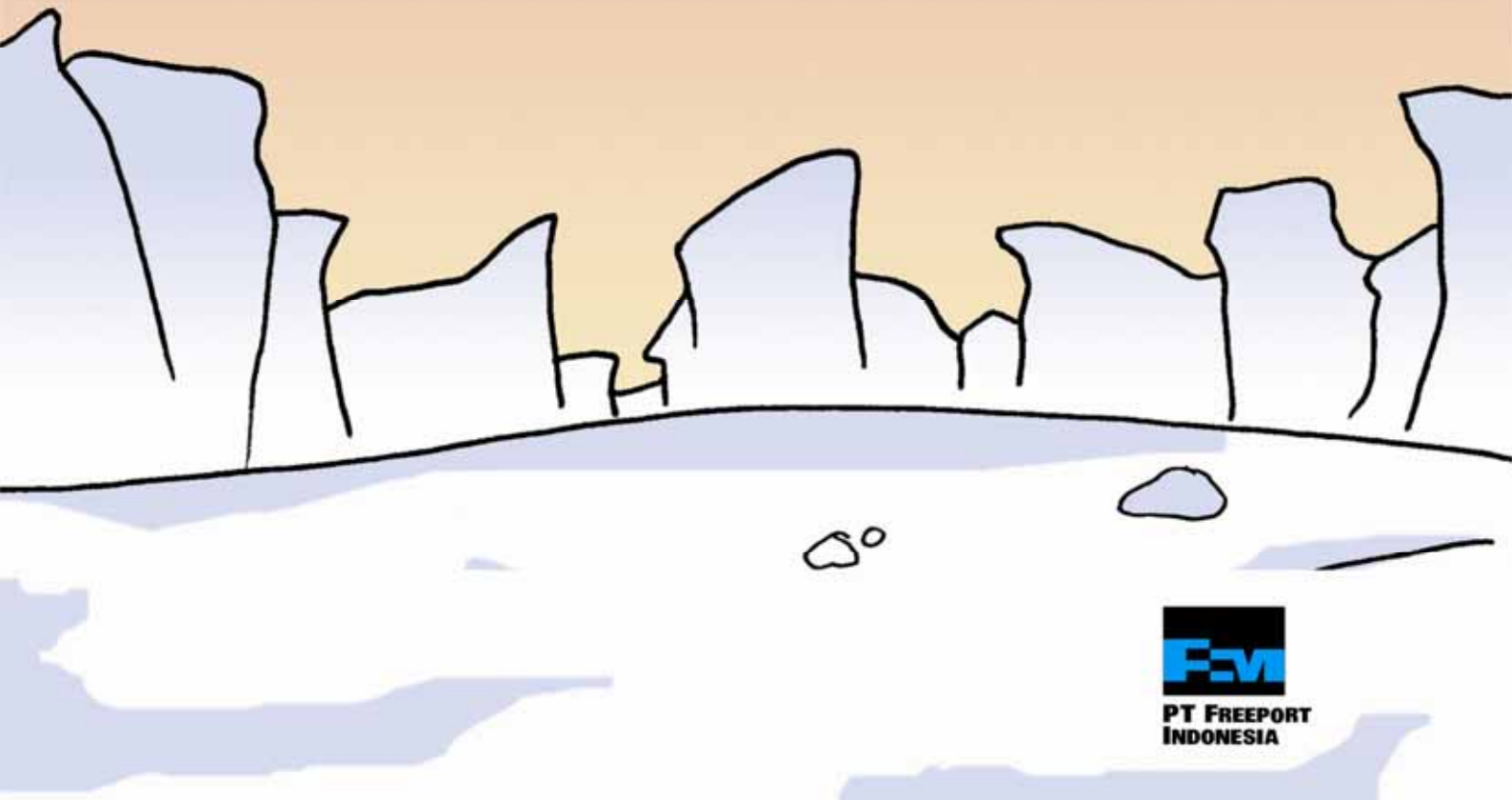


Tunas Hijau

Long summer,
dryness,
high rainfall,
big flood,
ice melted in the poles

.....

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