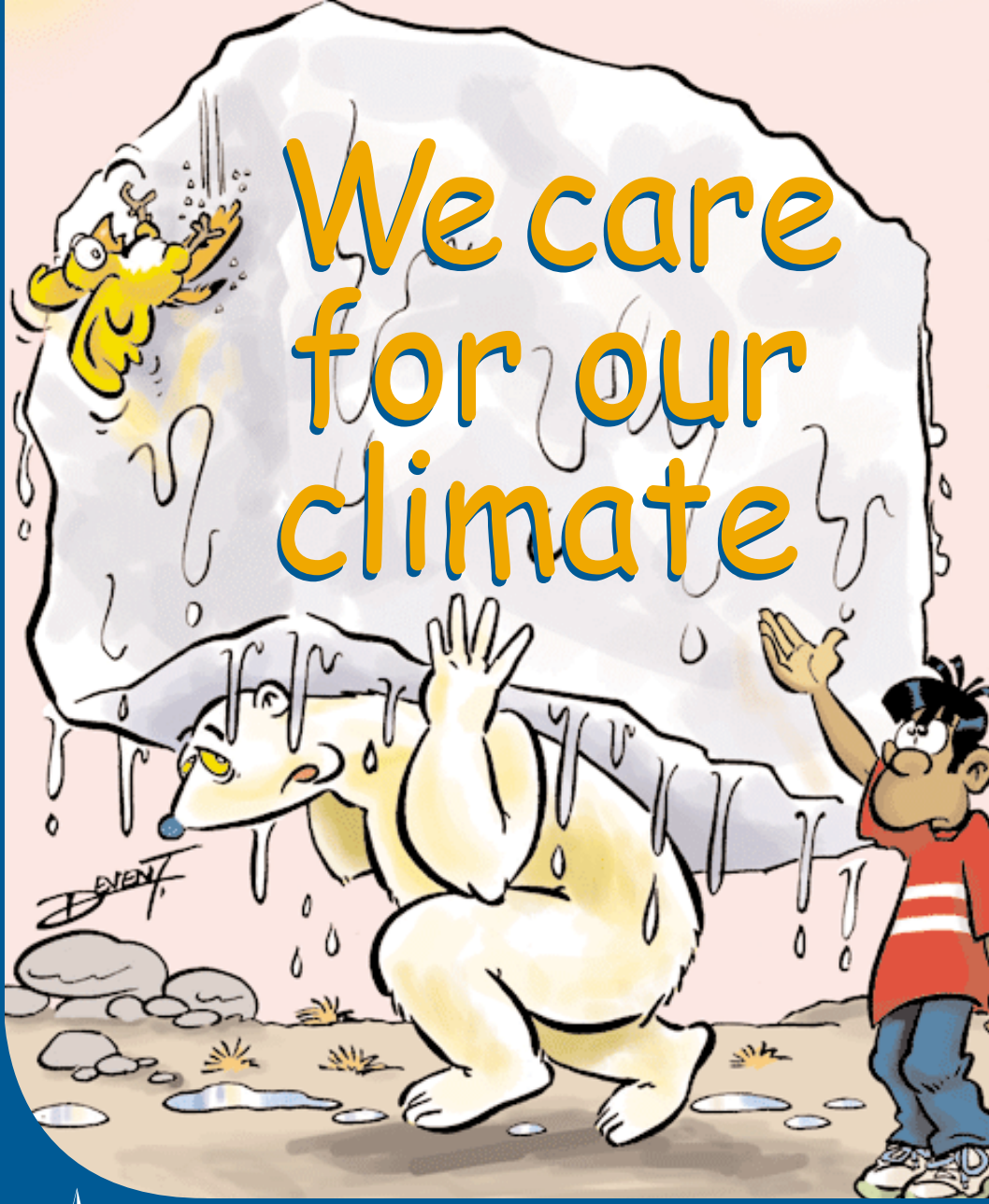
# We care for our climate



World Meteorological Organization

● Weather ● Climate ● Water

WMO-No. 975

© 2004, World Meteorological Organization

ISBN: 92-63-10975-3

NOTE

The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the World Meteorological Organization concerning the legal status of any country, territory, city or area, or of its authorities, or concerning the delimitations of its frontiers or boundaries.

# Introduction

Greenhouse-gas emissions, global warming and climate change are some of the terms that are used frequently in the press, on television and radio, and children ask about their meaning and implications. This booklet aims to answer those questions in a language and style that are readily understandable and attractive to young people.

The arguments presented are interpretations of, or inferences from, some of the findings of the Third Assessment Report of the WMO/UNEP Intergovernmental Panel on Climate Change, or are based on reports prepared by nations around the world.

Thanks go to the author, Mr Y. Boodhoo, president of the WMO Commission for Climatology, and the artist, Mr S. Teeroovengadum, who undertook this original work.

# The story so far

On the small island of Esidarap, located faraway in the middle of the ocean, the climate always used to be fine and the population had a peaceful, plentiful and healthy life in the old days.

But, some years ago, the stars started to disappear under the almost permanent pinkish sky. Scenic sunsets gave way to crimson sky. Fish in the lagoon became rarer. The corals started to change colour. Entire species of birds became extinct. The population could not understand the series of events until WMO started to explain. The Government of Esidarap became aware of several reports explaining the problem underlying climate change and global warming. Then a campaign began to make the people understand and undo the damage as much as possible.

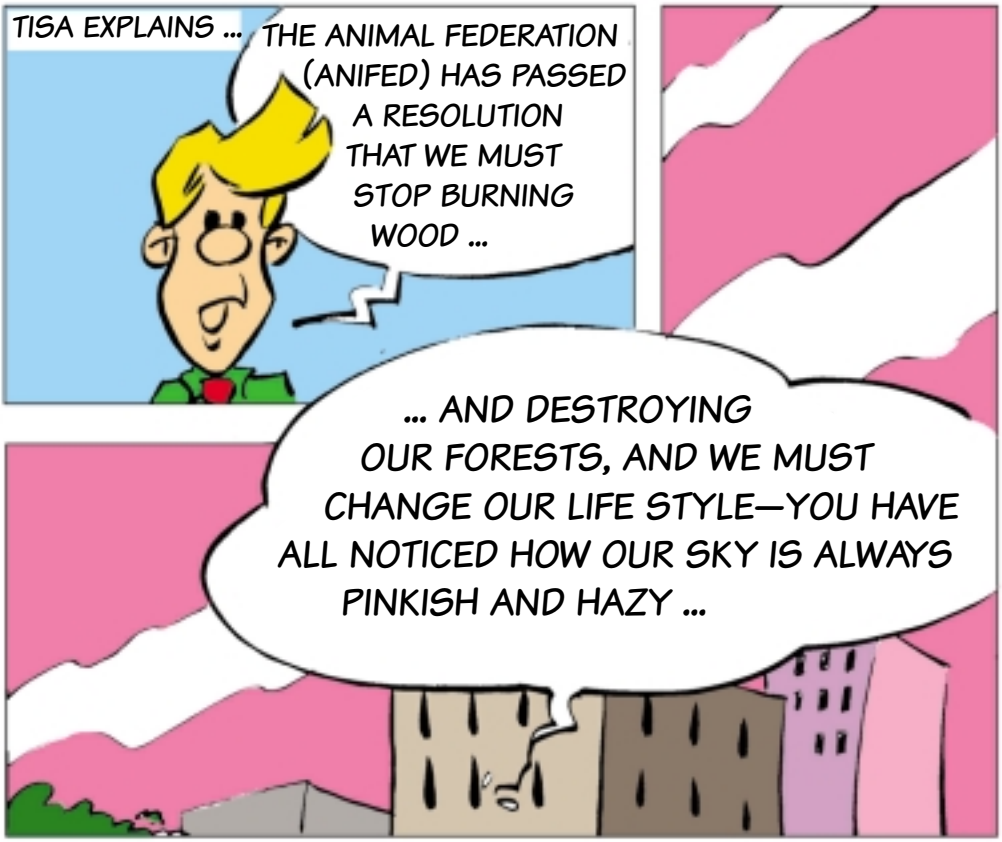
But before we continue our story, let us meet some of our friends: Anivday, a lady from a Non-Governmental Organization, fighting for environmental issues; Tisa, an active young man sent by the Government of Esidarap to convey the message about climate change; and Oreh, an elderly gentleman from the village where the story unfolds.

Tisa

Anivday

Oreh

IN AN ASSEMBLY HALL ...
THE SITUATION IS SERIOUS!!
TIME IS RUNNING OUT! WE NEED TO ACT TO SAVE OUR CLIMATE!
BUT WHY? WHAT HAS HAPPENED TO OUR CLIMATE? HOW CAN WE SAVE IT ... AND FROM WHOM?


TISA EXPLAINS ...
THE ANIMAL FEDERATION (ANIFED) HAS PASSED A RESOLUTION THAT WE MUST STOP BURNING WOOD ...
... AND DESTROYING OUR FORESTS, AND WE MUST CHANGE OUR LIFE STYLE—YOU HAVE ALL NOTICED HOW OUR SKY IS ALWAYS PINKISH AND HAZY ...

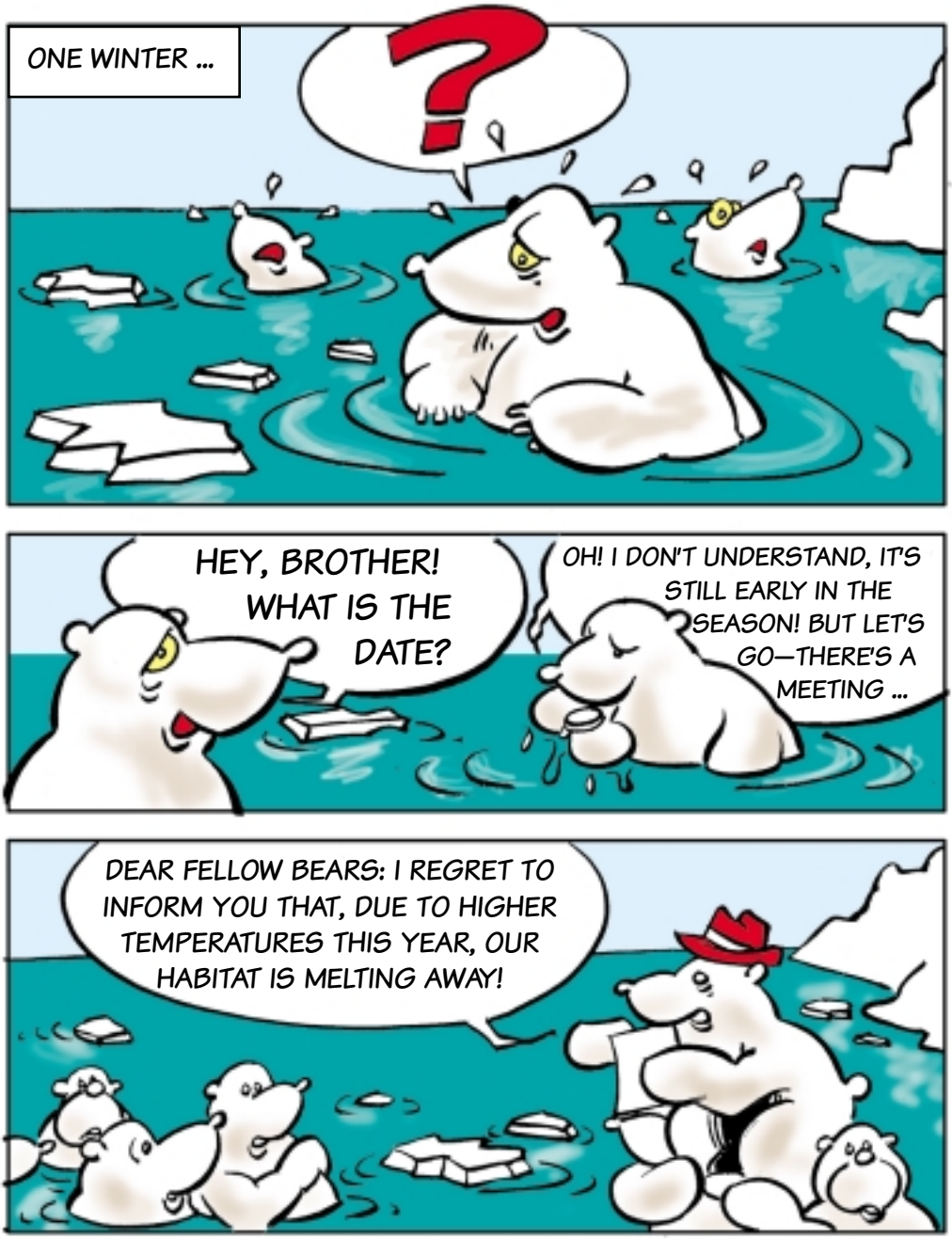
... BUT LET ME TELL YOU HOW IT ALL STARTED. AS YOU KNOW, ANIFED GROUPS ORGANIZATIONS OF ALL LIVING CREATURES, LIKE THE LEAGUE OF BEARS...

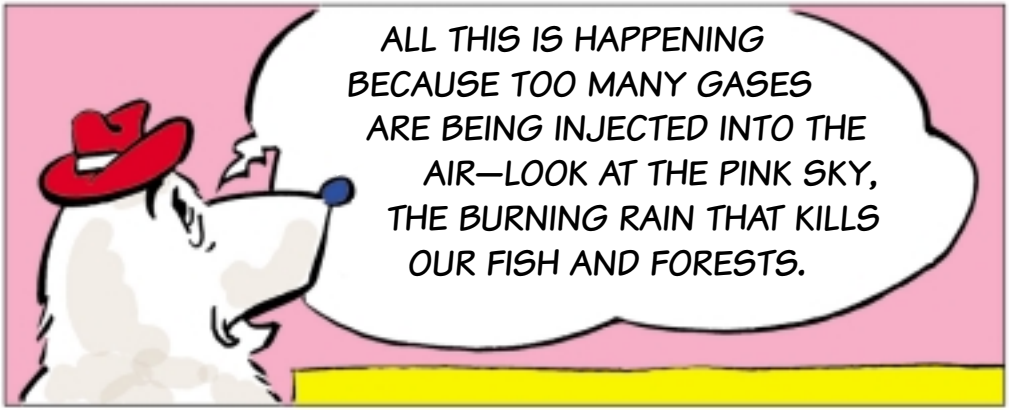
THE LEAGUE OF FISH...

... THE LEAGUE OF BIRDS ...

... AND OTHERS. ALL THE CREATURES HAVE COMPLAINED TO ANIFED ABOUT THEIR WORSENING ENVIRONMENTS AND A RESOLUTION HAS BEEN PASSED, CALLING FOR ACTION!!
ANIFED
ANIFED
CONSIDERING
NOTING
RECOMMEN
URGES ALL

TISA GIVES EXAMPLES ...




ALL THIS IS HAPPENING BECAUSE TOO MANY GASES ARE BEING INJECTED INTO THE AIR—LOOK AT THE PINK SKY, THE BURNING RAIN THAT KILLS OUR FISH AND FORESTS.

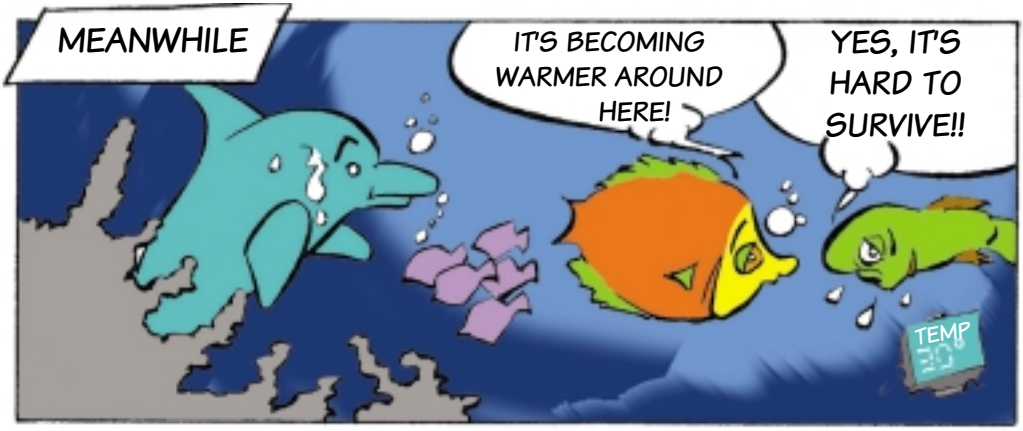
IT IS DIFFICULT TO PRESERVE OUR CULTURE AND REAR THESE TEDDIES WITHOUT ICE!
PLOUF !

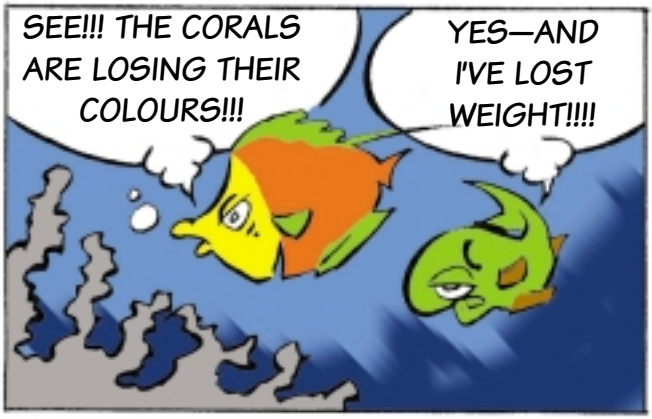
IT'S THOSE INDUSTRIES FAR AWAY!!!

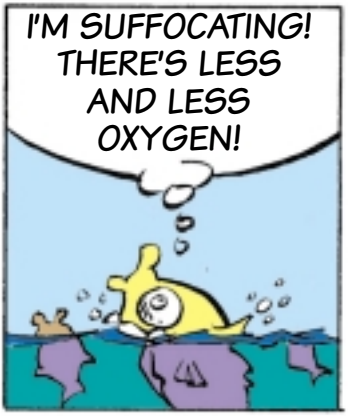
CHIEF! LAST SUMMER I WAS SHOCKED BY THE EXHAUST OF PASSING CARS.
VROOOM !!
CHIEF! WE'VE HAD ENOUGH!
YES! LET ME HAVE YOUR APPROVAL FOR THAT!
ALL BEARS STRONGLY CALL FOR ACTION TO RESTORE THEIR HABITAT.
IN THE KINGDOM OF THE LIONS...
ANOTHER ONE HAS LEFT US ...

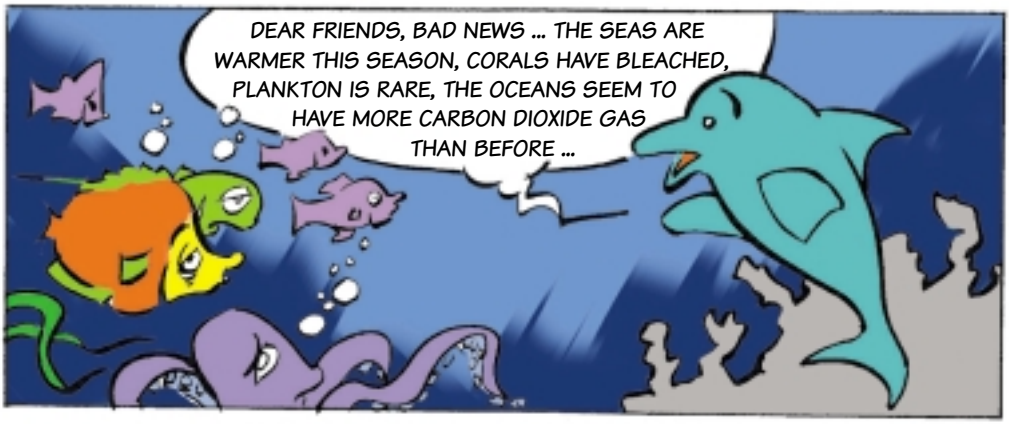
THE POST LION ARRIVES
MAJESTY, GREETINGS FROM MY CHIEF, HE REGRETS TO INFORM YOU OF SOME NEW DISEASES THAT ARE RUINING OUR HEALTH.
SEE FOR YOURSELF MESSENGER ... THE SAME FATE HAS BEFALLEN US ...
WHAT'S THAT?
DRING!
DRING!
SOUNDS LIKE A CELLPHONE RINGING??
OH, YES!!!! IT'S MINE ...
HELLO?
YES...YES...OH, I'M SORRY TO HEAR THAT!!

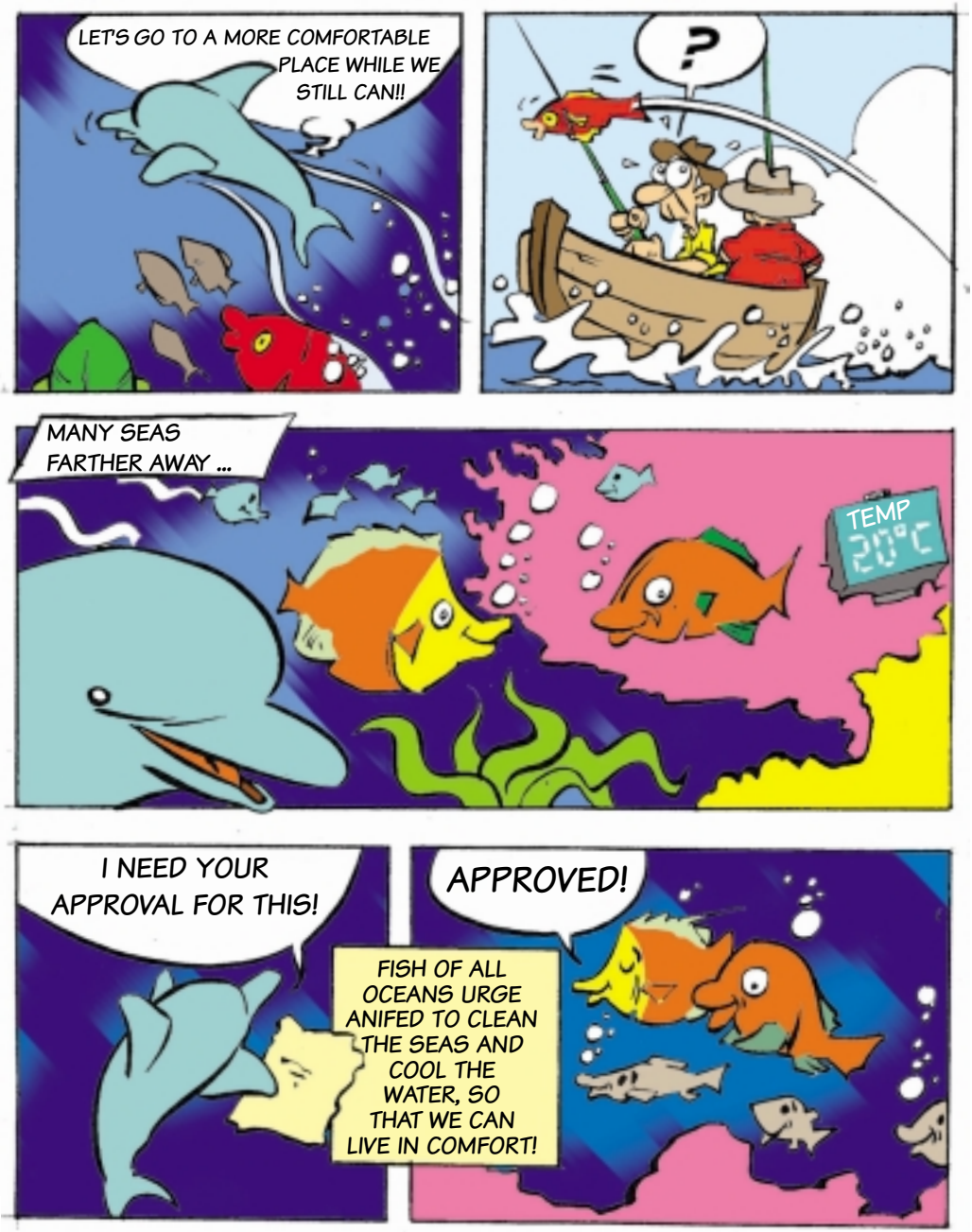
THE LION KING EXPLAINS ...
MY DEAR FELLOWS, SOME BAD NEWS HAS JUST ARRIVED FROM THE EAST ...
OTHER KINGDOMS REPORT AN INCREASE OF KILLER FLIES— EVEN DURING WINTER...
I NEED YOUR APPROVAL FOR THIS RESOLUTION!
LIONS OF ALL LANDS STRONGLY URGE ANIFED TO PROTECT OUR HABITAT!!

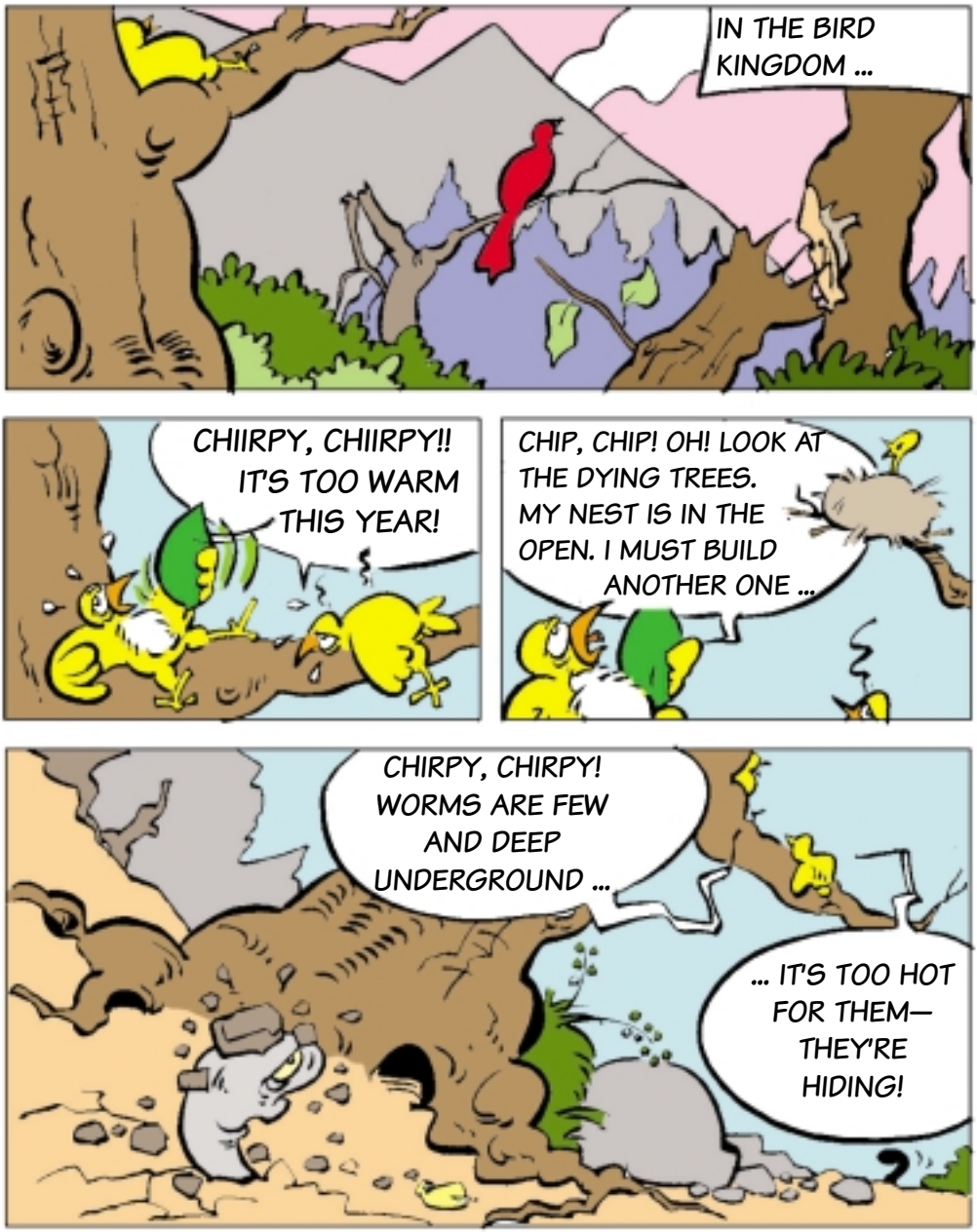

MEANWHILE
IT'S BECOMING WARMER AROUND HERE!
YES, IT'S HARD TO SURVIVE!!
TEMP
20°


SEE!!! THE CORALS ARE LOSING THEIR COLOURS!!!
YES—AND I'VE LOST WEIGHT!!!!

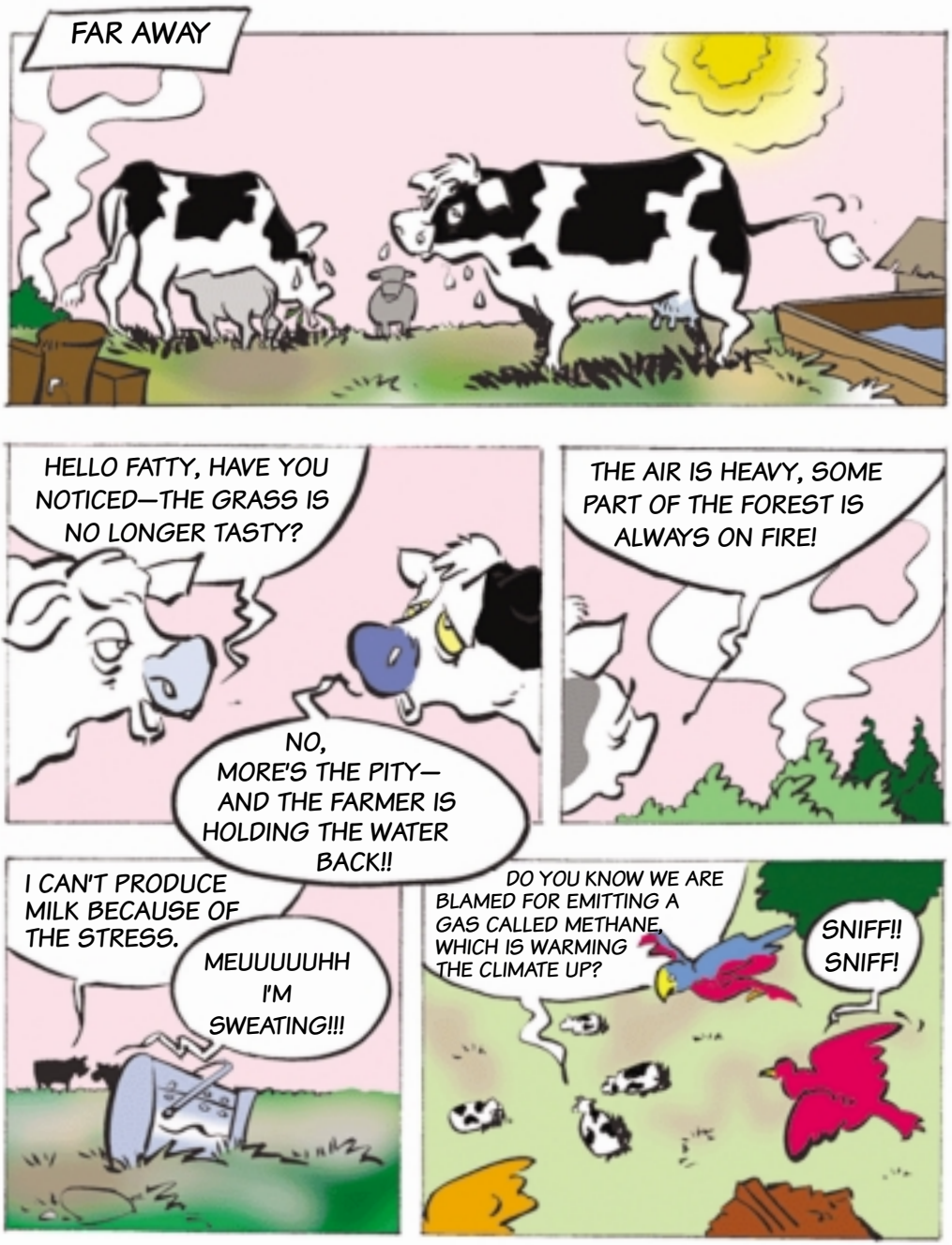

I'M SUFFOCATING! THERE'S LESS AND LESS OXYGEN!

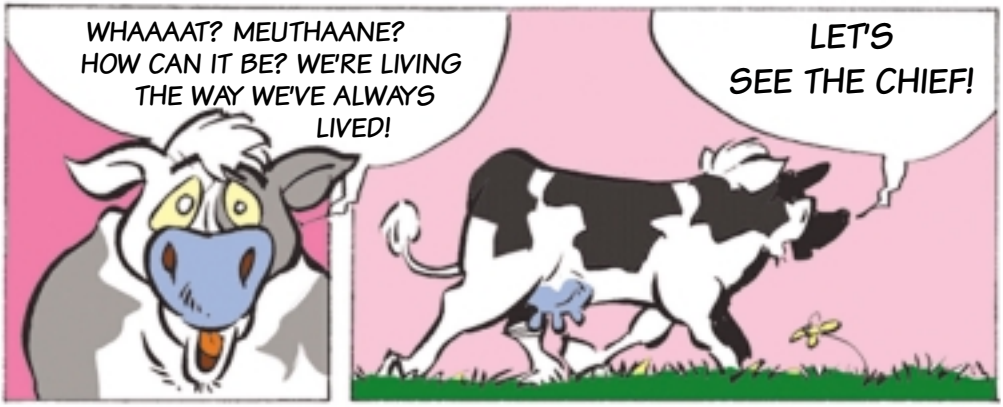

DEAR FRIENDS, BAD NEWS ... THE SEAS ARE WARMER THIS SEASON, CORALS HAVE BLEACHED, PLANKTON IS RARE, THE OCEANS SEEM TO HAVE MORE CARBON DIOXIDE GAS THAN BEFORE ...

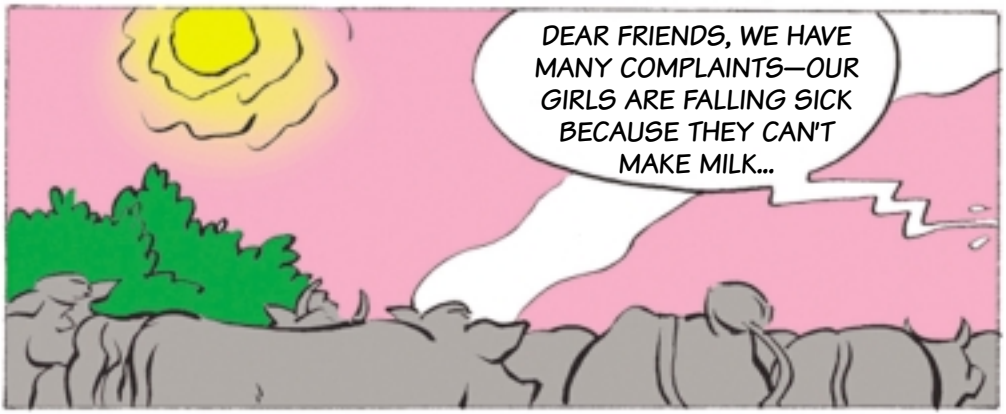

LET'S GO TO A MORE COMFORTABLE PLACE WHILE WE STILL CAN!!
?
MANY SEAS FARTHER AWAY ...
TEMP
20°C
I NEED YOUR APPROVAL FOR THIS!
APPROVED!
FISH OF ALL OCEANS URGE ANIFED TO CLEAN THE SEAS AND COOL THE WATER, SO THAT WE CAN LIVE IN COMFORT!


IN THE BIRD KINGDOM ...
CHIIRPY, CHIIRPY!! IT'S TOO WARM THIS YEAR!
CHIP, CHIP! OH! LOOK AT THE DYING TREES. MY NEST IS IN THE OPEN. I MUST BUILD ANOTHER ONE ...
CHIRPY, CHIRPY! WORMS ARE FEW AND DEEP UNDERGROUND ...
... IT'S TOO HOT FOR THEM— THEY'RE HIDING!

CHIIIRIIP!
CHIIIRIIP!!!
(HELP!)
OUR QUEEN HAS CALLED FOR A MEETING.
YES, I'M AS ANXIOUS AS YOU. I'VE RECEIVED SIMILAR DISTURBING NEWS!
WE DON'T WANT TO DISAPPEAR LIKE THE DODO. OUR MONKEY FRIENDS ARE ALSO SUFFERING. WE'RE SENDING A PETITION TO ANIFED, CALLING FOR STEPS TO RESTORE OUR FOREST.


FAR AWAY
HELLO FATTY, HAVE YOU NOTICED—THE GRASS IS NO LONGER TASTY?
NO, MORE'S THE PITY— AND THE FARMER IS HOLDING THE WATER BACK!!
THE AIR IS HEAVY, SOME PART OF THE FOREST IS ALWAYS ON FIRE!
I CAN'T PRODUCE MILK BECAUSE OF THE STRESS.
MEUUUUUHH I'M SWEATING!!!
DO YOU KNOW WE ARE BLAMED FOR EMITTING A GAS CALLED METHANE, WHICH IS WARMING THE CLIMATE UP?
SNIFF!! SNIFF!

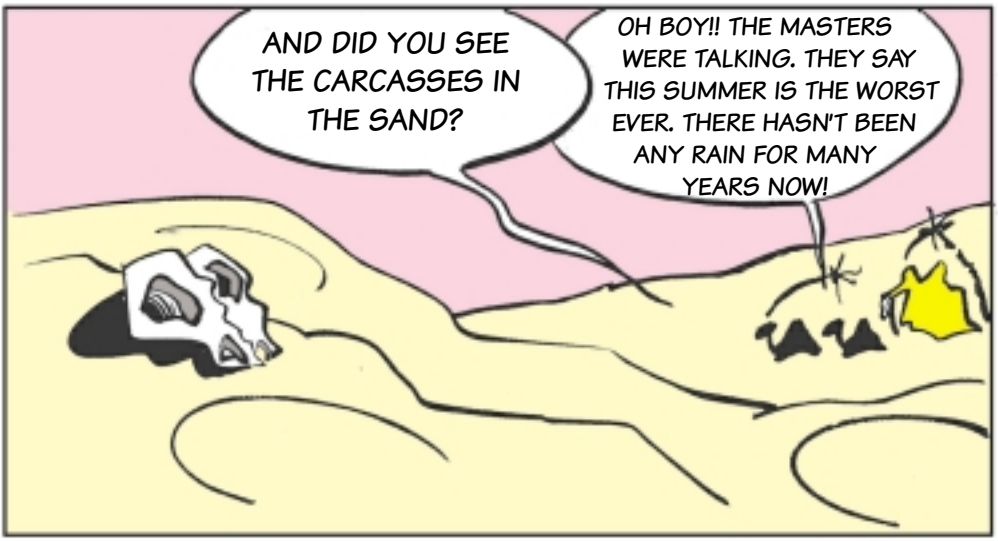

WHAAAAT? MEUTHAANE? HOW CAN IT BE? WE'RE LIVING THE WAY WE'VE ALWAYS LIVED!
LET'S SEE THE CHIEF!


DEAR FRIENDS, WE HAVE MANY COMPLAINTS—OUR GIRLS ARE FALLING SICK BECAUSE THEY CAN'T MAKE MILK...

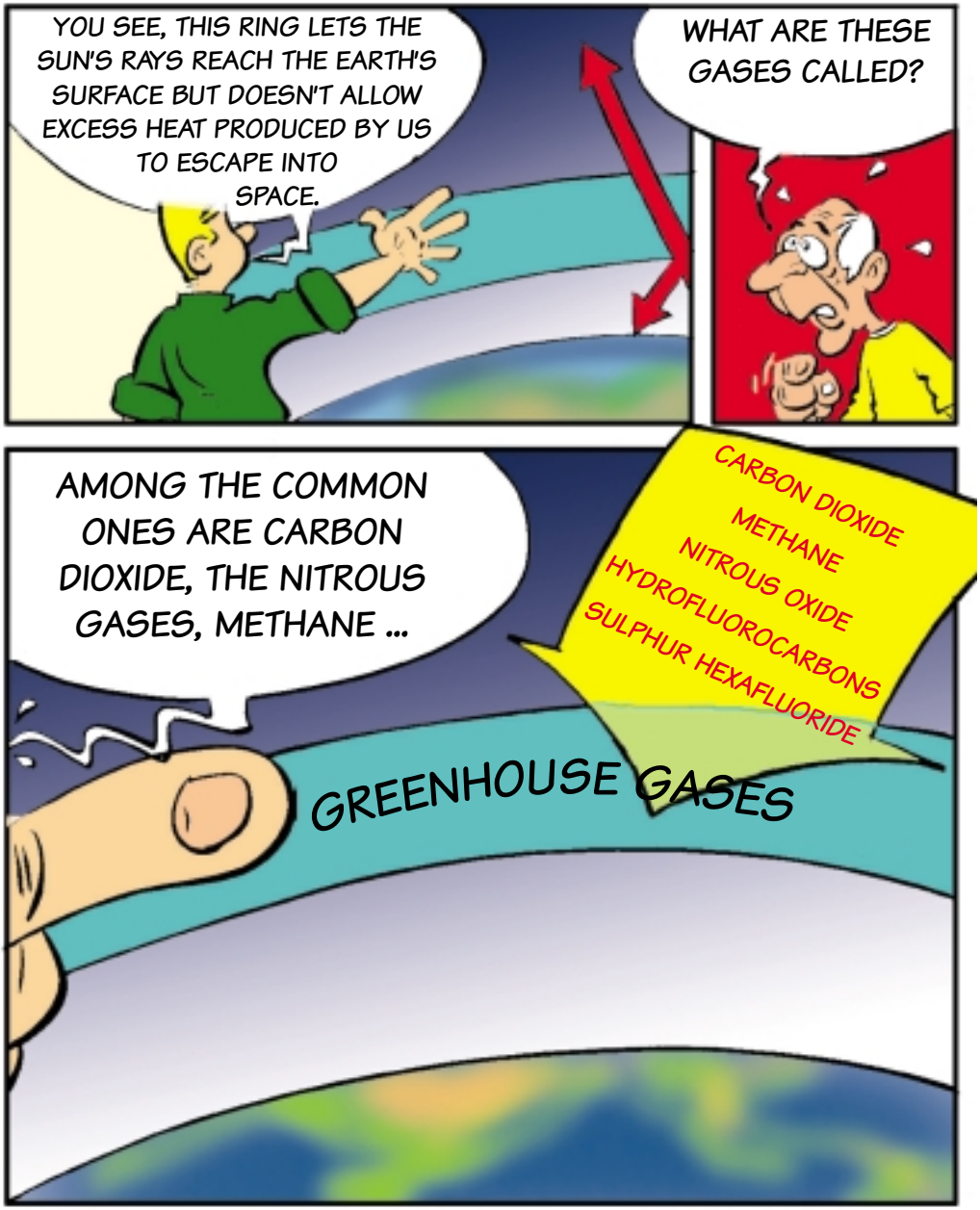
SO LISTEN TO ME!!

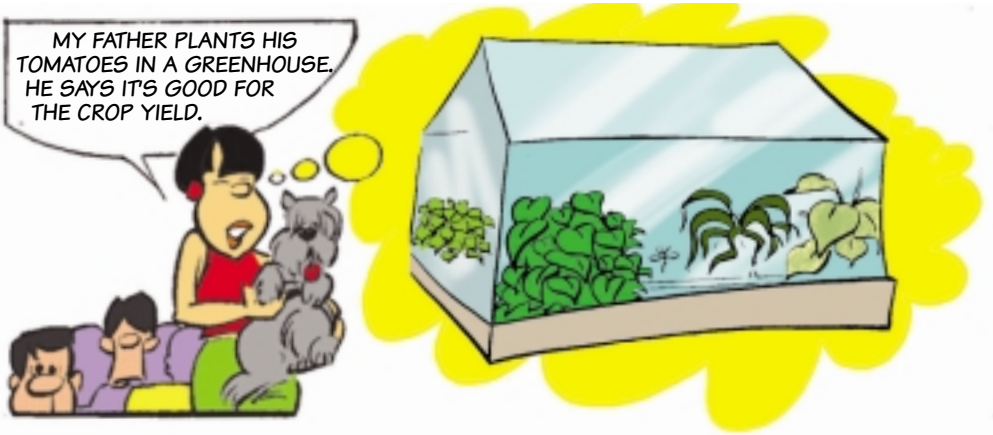
WE CALL FOR THE PROTECTION OF OUR FOREST AND THE GREEN GRASS!!

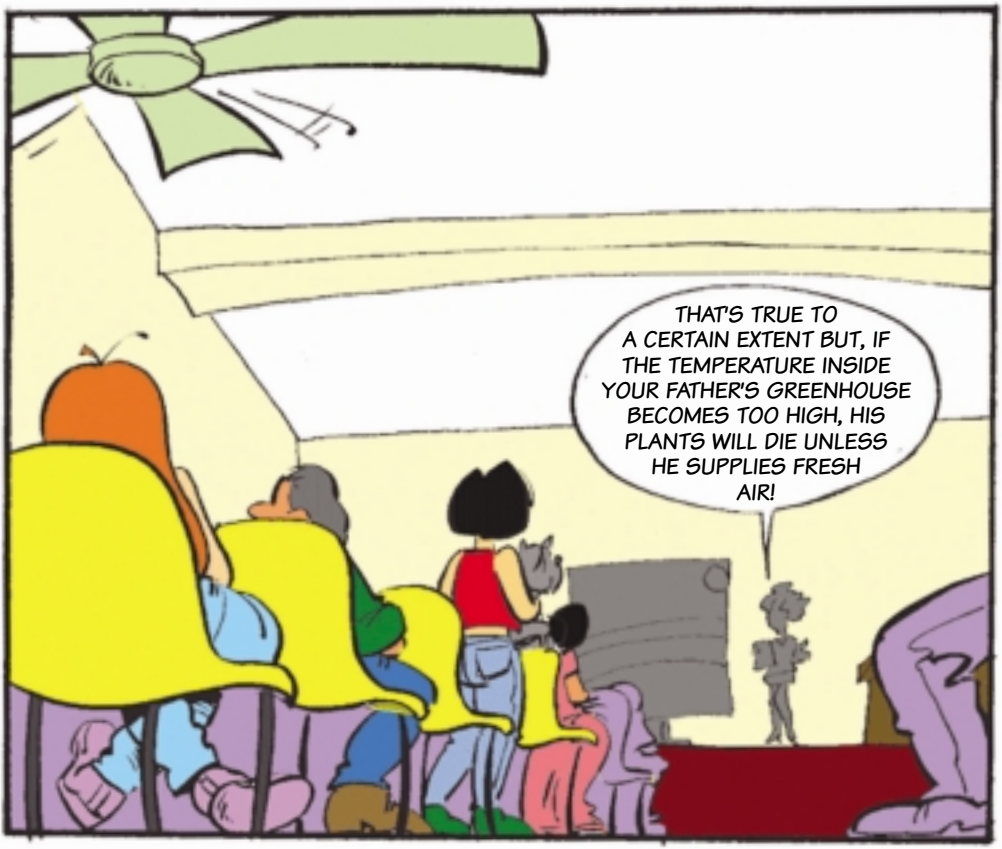
IN THE DESERT
WE HAVEN'T HAD A DROP OF WATER TO DRINK FOR A LONG TIME!
I DON'T UNDERSTAND! ALL THE WELLS ON THE WAY HERE WERE DRY!!

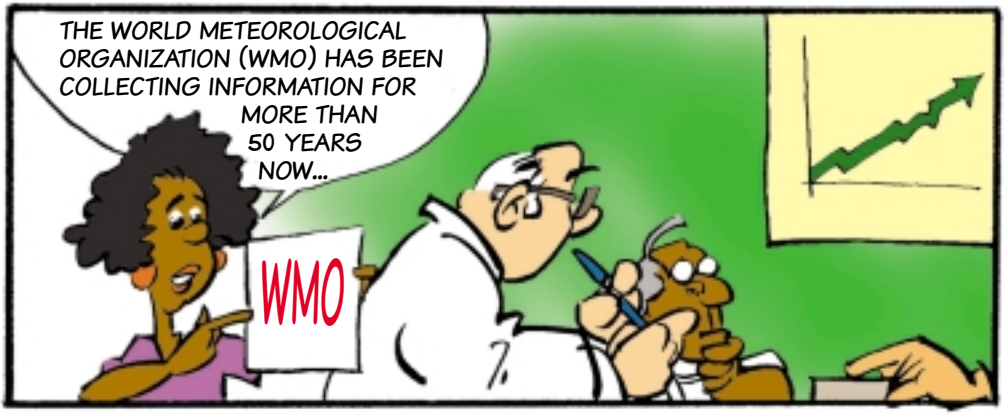

AND DID YOU SEE THE CARCASSES IN THE SAND?
OH BOY!! THE MASTERS WERE TALKING. THEY SAY THIS SUMMER IS THE WORST EVER. THERE HASN'T BEEN ANY RAIN FOR MANY YEARS NOW!

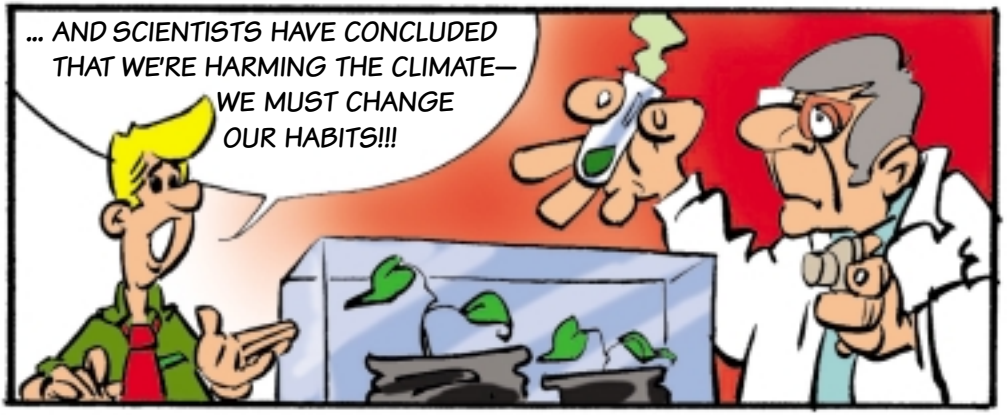
BACK IN THE ASSEMBLY HALL ...
YOU KNOW, IT'S HARD TO BELIEVE THAT WE CAN CHANGE THE EARTH'S CLIMATE— BUT WE ARE!
THE GREENHOUSE RING AROUND THE EARTH IS STRONGER AND MAY BE HAVING HARMFUL EFFECTS ...
WHAT IS THIS GREENHOUSE EFFECT?
THIS RING IS FULL OF GASES FROM OUR INDUSTRIES AND IT IS BECOMING DENSER ...
SUN
GREENHOUSE GASES

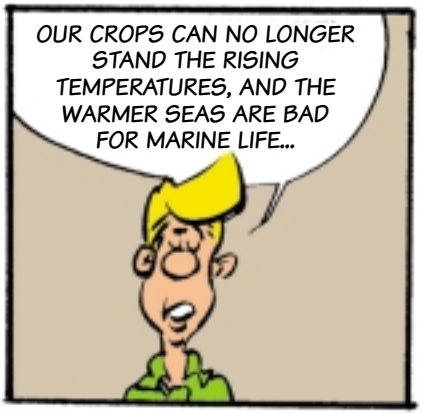

YOU SEE, THIS RING LETS THE SUN'S RAYS REACH THE EARTH'S SURFACE BUT DOESN'T ALLOW EXCESS HEAT PRODUCED BY US TO ESCAPE INTO SPACE.
WHAT ARE THESE GASES CALLED?
AMONG THE COMMON ONES ARE CARBON DIOXIDE, THE NITROUS GASES, METHANE ...
CARBON DIOXIDE
METHANE
NITROUS OXIDE
HYDROFLUOROCARBONS
SULPHUR HEXAFLUORIDE
GREENHOUSE GASES


MY FATHER PLANTS HIS TOMATOES IN A GREENHOUSE. HE SAYS IT'S GOOD FOR THE CROP YIELD.

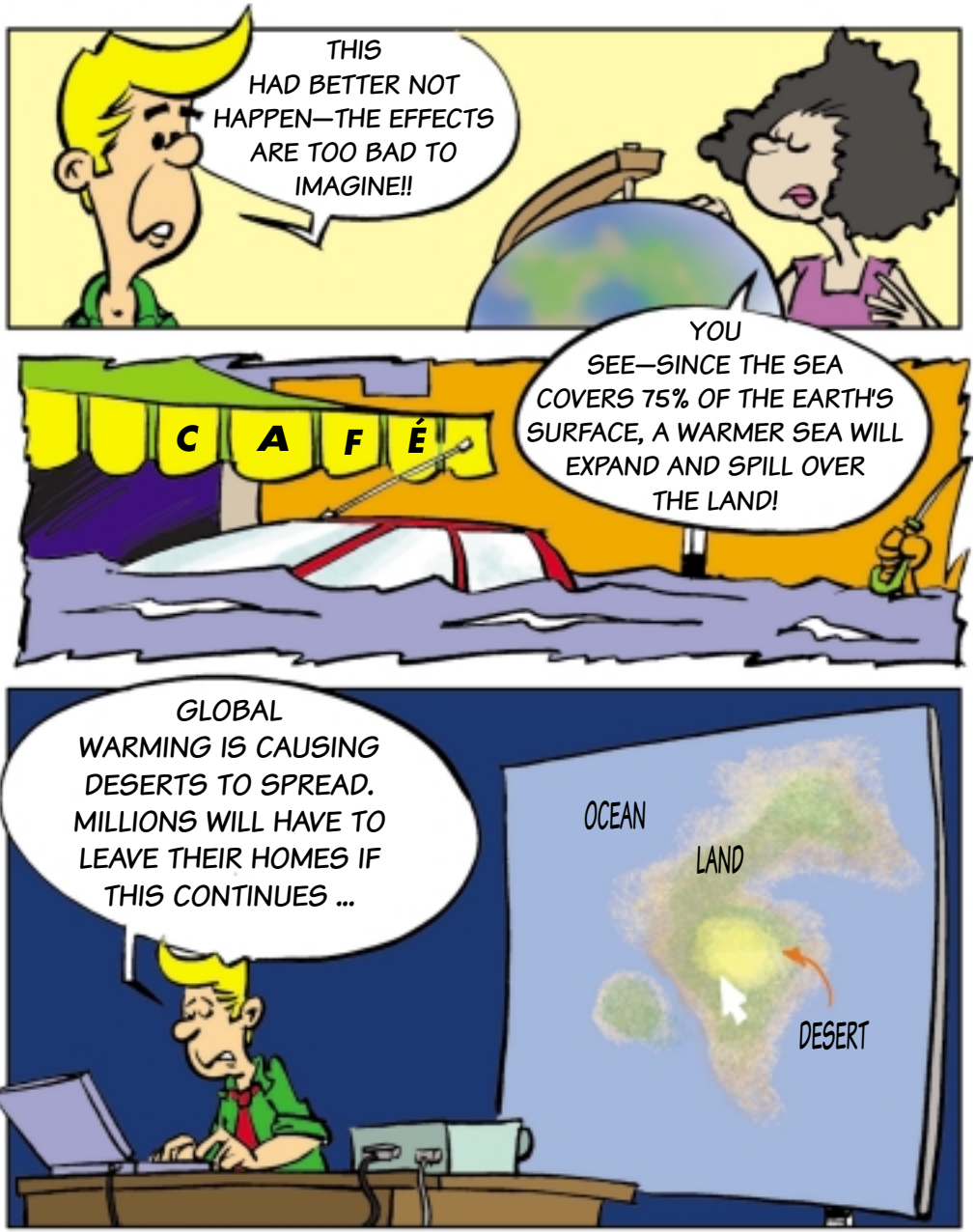

THAT'S TRUE TO A CERTAIN EXTENT BUT, IF THE TEMPERATURE INSIDE YOUR FATHER'S GREENHOUSE BECOMES TOO HIGH, HIS PLANTS WILL DIE UNLESS HE SUPPLIES FRESH AIR!


THE WORLD METEOROLOGICAL ORGANIZATION (WMO) HAS BEEN COLLECTING INFORMATION FOR MORE THAN 50 YEARS NOW...
WMO


... AND SCIENTISTS HAVE CONCLUDED THAT WE'RE HARMING THE CLIMATE— WE MUST CHANGE OUR HABITS!!!


OUR CROPS CAN NO LONGER STAND THE RISING TEMPERATURES, AND THE WARMER SEAS ARE BAD FOR MARINE LIFE...

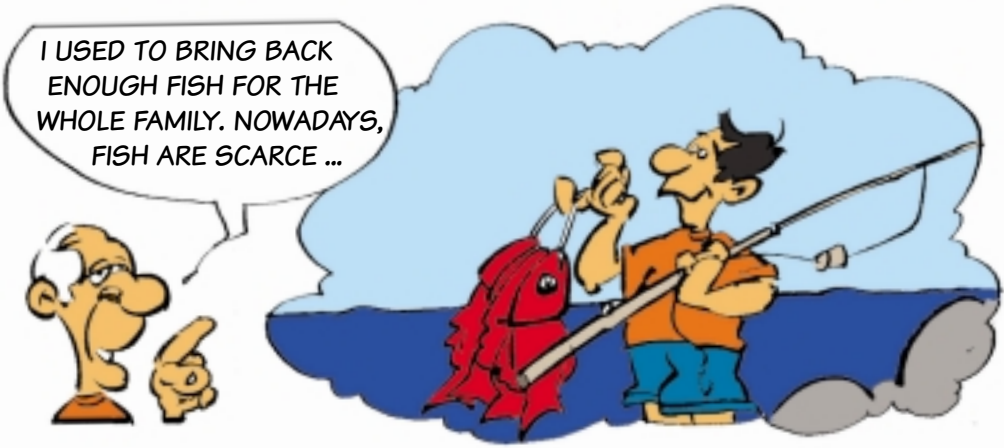
OH!! BUT ISN'T IT NICE TO SWIM IN THE WARM SEA!!!?


THIS HAD BETTER NOT HAPPEN—THE EFFECTS ARE TOO BAD TO IMAGINE!!
YOU SEE—SINCE THE SEA COVERS 75% OF THE EARTH'S SURFACE, A WARMER SEA WILL EXPAND AND SPILL OVER THE LAND!
C A F É
GLOBAL WARMING IS CAUSING DESERTS TO SPREAD. MILLIONS WILL HAVE TO LEAVE THEIR HOMES IF THIS CONTINUES ...
OCEAN
LAND
DESERT

... AND THIS WILL INCREASE HARDSHIP FURTHER !!!

NOW I UNDERSTAND!! SO MUCH HAS CHANGED AROUND HERE. THE SKY USED TO BE ...

CLEAR BLUE DURING THE DAY AND FULL OF STARS AT NIGHT.


I USED TO BRING BACK ENOUGH FISH FOR THE WHOLE FAMILY. NOWADAYS, FISH ARE SCARCE ...

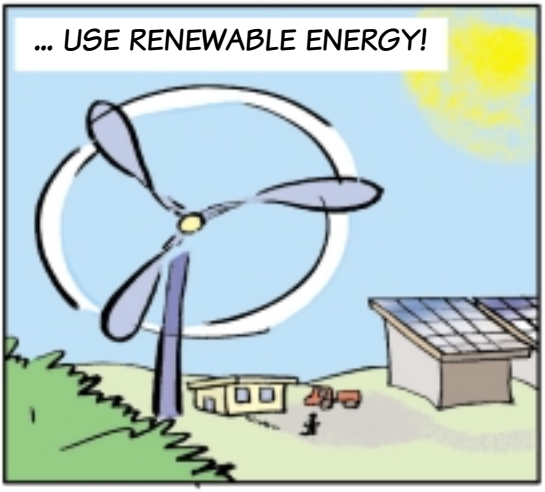
YOU CAN SEE FOR YOURSELVES THAT THINGS HAVE CHANGED. IF WE DON'T ACT, THE SITUATION WILL GET WORSE! WE MAY BE PLAGUED BY DISEASES!!!
HARMFUL RAYS FROM THE SUN WILL REACH US IN GREATER AMOUNTS AND BURN OUR SKIN AND AFFECT OUR EYES!!

GLOBAL WARMING MAY CAUSE MORE FREQUENT HEAT WAVES WHICH ARE BAD FOR BOTH OUR OLD FOLKS AND CHILDREN!
WITH WARMER SEAS, STORMS ARE LIKELY TO BE FIERCER AND MORE DIFFICULT TO PREDICT!
IT'S SCARY!
I'M FRIGHTENED
WHO CAN HELP?
WHAT SHOULD WE DO?

WE CAN DO SEVERAL THINGS!
PLANT TREES!!
TREES ABSORB CARBON DIOXIDE, THEY KEEP THE AIR CLEAN AND PROVIDE RELIEF FROM THE SUN.
AND WE WON'T ALLOW OUR LIVESTOCK TO EAT THE YOUNG TREES!
?
?
LET'S WALK OR USE OUR BIKES—IT SAVES FUEL AND IS GOOD FOR OUR HEALTH!

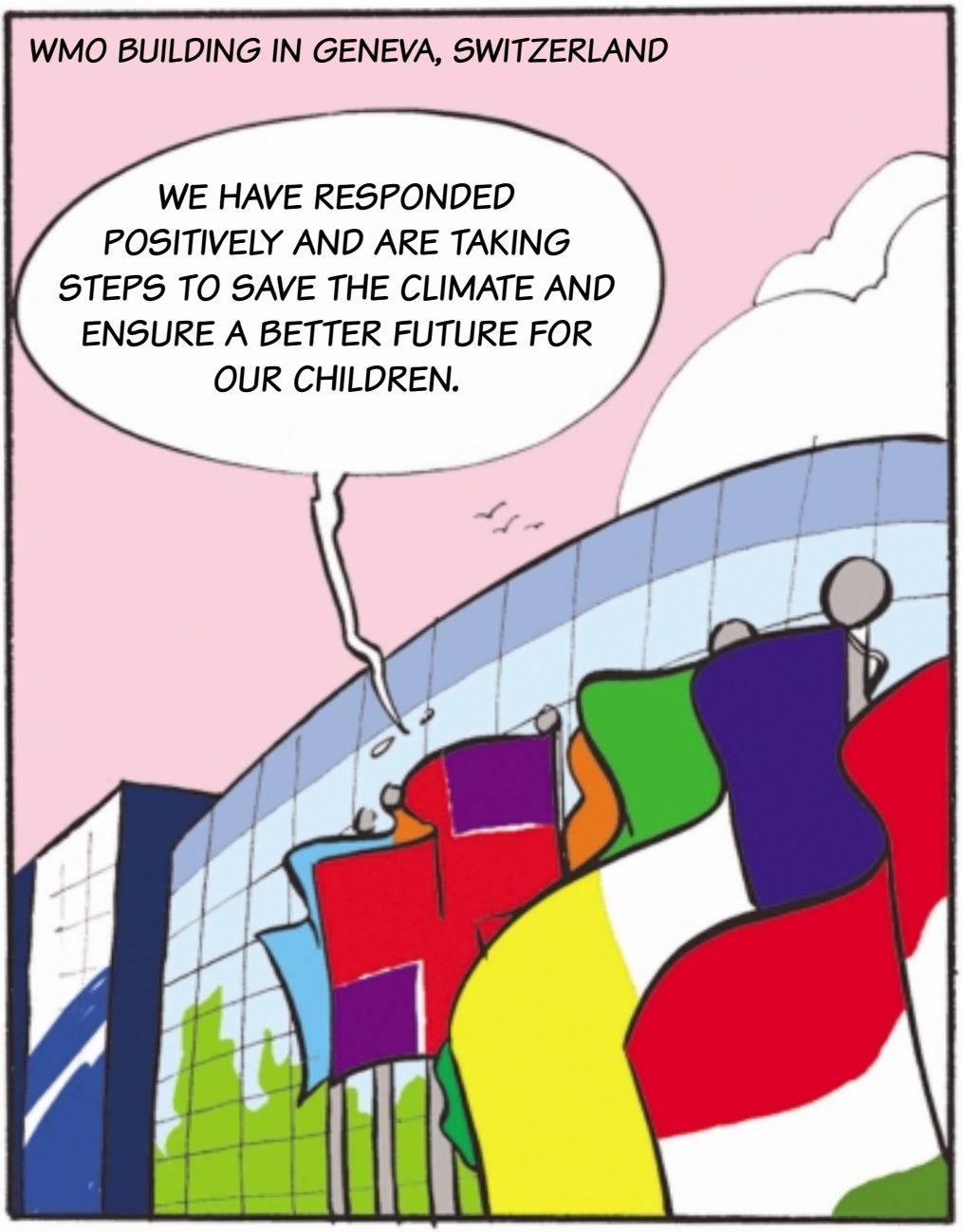
USE MANUAL GRASSMOWERS!

LET'S SORT OUT OUR TRASH FOR RECYCLING ...
PLASTIC
CANS
PAPER


... USE RENEWABLE ENERGY!

TALK TO YOUR FAMILIES AND FRIENDS ABOUT THE ENVIRONMENT AND GLOBAL WARMING...
WE CARE FOR OUR CLIMATE
OREH, ANIVDAY AND IMEON: WILL YOU COME WITH ME AND SPREAD THE MESSAGE?!!
LET'S TAKE CARE OF OUR TREES AND RIVERS ...

IN MEETINGS
LET'S KEEP OUR AIR, WATER AND ENVIRONMENT CLEAN ...
IN SCHOOLS
THE WORLD IS YOURS— TAKE CARE OF IT NOW!!!
WMO


WMO BUILDING IN GENEVA, SWITZERLAND
WE HAVE RESPONDED POSITIVELY AND ARE TAKING STEPS TO SAVE THE CLIMATE AND ENSURE A BETTER FUTURE FOR OUR CHILDREN.

# How you can help reduce the amount of carbon dioxide ($CO_2$) we produce

| Action for saving energy | $CO_2$ reduction per household (kilogram per year) |
|---|---|
| Use a push mower instead of a power mower | 40 |
| Buy products packaged in reusable or recyclable containers | 110 |
| Install low-flow shower heads in order to use less hot water | 150 |
| Replace standard light bulbs with energy-efficient fluorescent bulbs | 250 |
| Wash laundry in warm or cold water, not hot water | 250 |
| Install a solar heater system to provide hot water | 360 |
| Recycle all of your home's waste newsprint, cardboard, glass and metal | 400 |
| Leave the car at home two days a week (walk, cycle, take public transport) | 750 |
| Insulate walls and ceilings (both against heat and cold, depending on the climate) | 2000 |
| Plant trees around your home and paint the roof in a light colour in a hot climate and dark in a cold climate | 2500 |

# Other ideas!

With the help of your teachers and parents, add to the list on page 33 any other actions which, in your opinion, will contribute to improve the health of the environment and the climate.

| Action for saving energy | $CO_2$ reduction per household (kilogram per year) |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

The Island of Esidarap lies in a world warmer than ours. The children there come to realize that there are fewer fish left to fish, the corals are losing their colour and that there are fewer stars visible in the night sky. They hear that, in other places around the world, the cows are giving less milk and some animals are threatened by disease and lack of food and water. The children learn how certain changes in their day-to-day lives can help reduce carbon-dioxide emissions and global warming and are encouraged to find more.

*For information about WMO, please contact:*
Communications and Public Affairs Office
World Meteorological Organization

7*bis*, avenue de la Paix
Case postale No. 2300
CH-1211 Geneva 2
Switzerland
Tel: + 41 22 730 83 15
Fax: + 41 22 730 80 27
E-mail: cpa@wmo.int
Web: http://www.wmo.int

**WMO-No. 975**