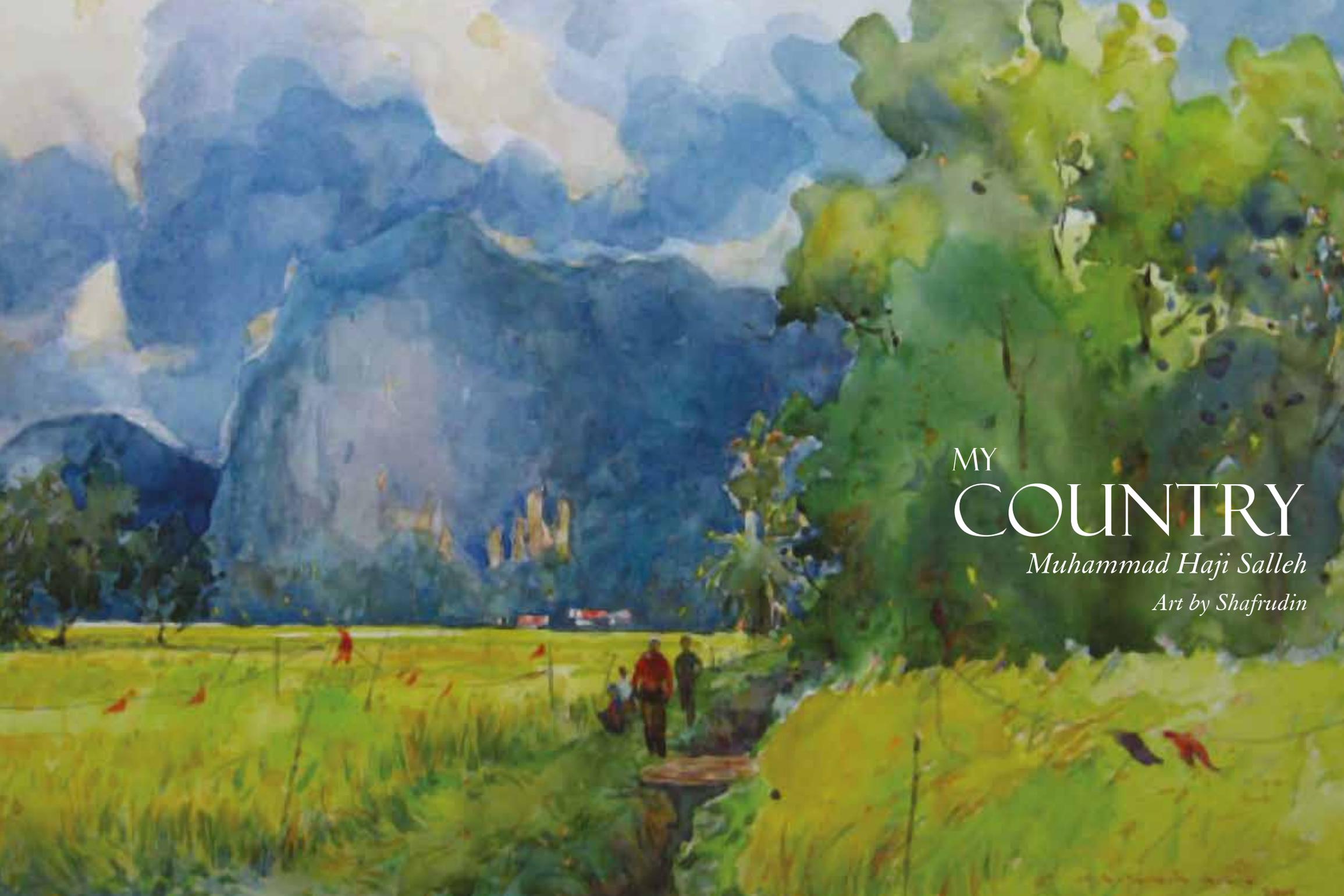


THE
EARTH CARER'S
GUIDE TO
CLIMATE
CHANGE



EDITED BY GEETA DHARMARAJAN



MY
COUNTRY

Muhammad Haji Salleh

Art by Shafrudin

My Country
begins with the high clouds
and ends as waves striking the bows.

My Country
wakes up as a drop of dew
and retires a school of fireflies.

My Country
flows from a drop of rain
and ends as a red estuary.

My Country
stretches on the green of forests
and ends on the yellow carpet of paddy.

My Country
is surrounded by the seas
stopping only at the sun!



RAIN

OF THE WORLD

A Gujarati Folk song

Art by Albert Bierstadt

Pour down, O Rain of the World,
You are the rain of four continents.
The earth, your beloved is waiting for you,
The happy farmers are waiting for you.
The plough bullocks are waiting for you,
Your loved people are waiting for you,

Pour down O Rain of the World
The birds and beasts are waiting for you,
Rivers and trees are all waiting for you,

Pour down, O Dark Clouds, pour down.
And fill the ponds and lakes with water,
Bring happiness and joy to the world.

The background of the entire page is a photograph of the Northern Lights (aurora borealis) in shades of green and blue, dancing across a dark night sky. The lights are reflected on a snowy, undulating landscape in the foreground. The sky is filled with stars, and the overall atmosphere is ethereal and magical.

THE NORTHERN LIGHTS

Kalli Dakos

Art by Johannes Frank

The northern lights
put on a show
in the polar sky.
They pranced,
they danced,
kept us entranced,
a whirlwind up high.
The colours streamed
in blues and greens
with rosy red rays.



They lit the night
with wild light
across the Milky Way.
We couldn't run.
We couldn't play.
We couldn't even speak.
In a daze,
we just gazed
till our legs went weak.
Faraway
we heard the bell,
to call us back inside.
We didn't move.
We were glued,
to the wonders in the sky!

THE BIG OLD ENOKI TREE

There was once a young man. His name was Satsuma. He lived in a garden, that was more beautiful than any that you have ever seen. It had many trees with flowers and buds and fruits. Ponds and little lakes. And a tall and spreading enoki tree.

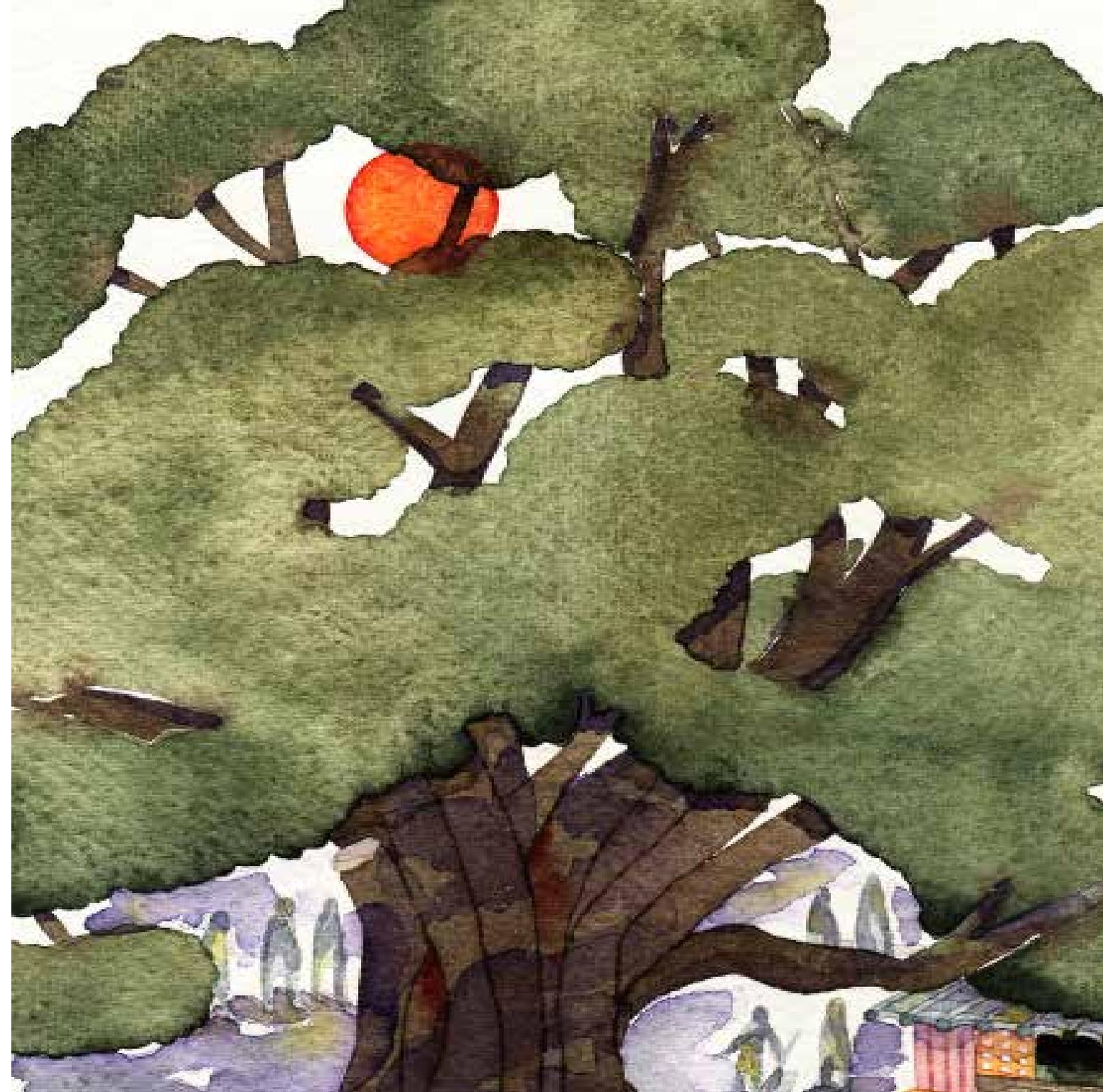
The enoki was a very, very old tree. Some people said it was a thousand years old!

Satsuma was a man with a very bad heart. He said, "I can't see the sun when I wake up in the morning, because of that tree." So he called a lot of men and cut down the tree.

Strangely, that day, Satsuma fell ill. And from that day on, he never came out of his house at all. And there was no one to look after Satsuma's house and garden.

A Japanese Folktale

Art by Rumi Hara



One day, a girl called Tikem saw the tall dark walls of the strange garden that no one ever went to. She boldly walked into the cold, unhappy place. She spoke to the trees. She touched them with loving hands.

Days and years went by. Tikem went to the garden every day. Slowly ... people in the village saw a strange thing. A small enoki tree growing in the place of the old enoki!

Every year, as if by magic, the tree grew. And grew. And grew. Soon the birds and the bees came back. So did the flowers and fruits on the trees in the garden.

Soon, children of the village played happily in the butterfly garden.

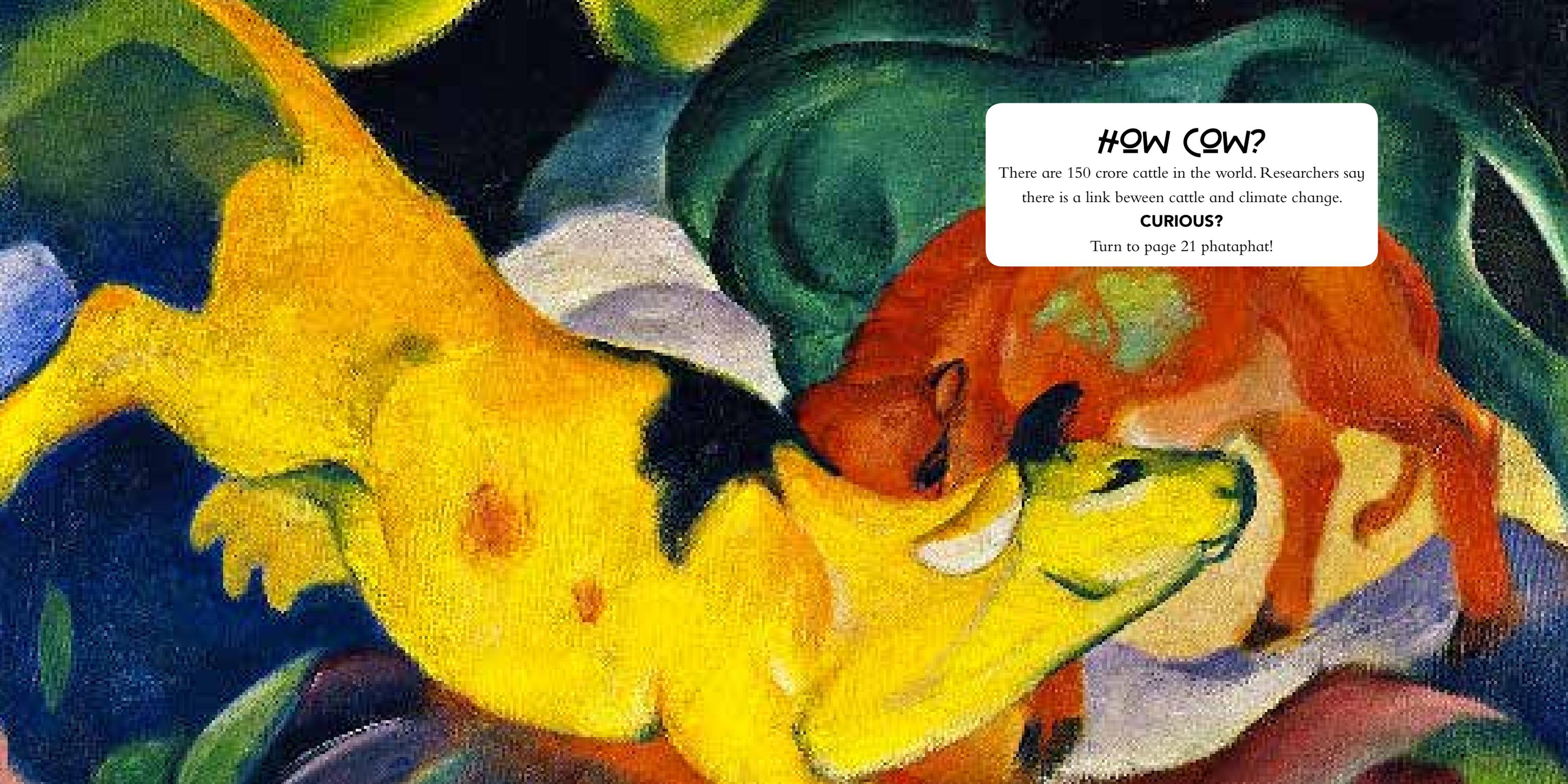
Tikem's smile was like sunshine putting little stars on each branch of each tree.

Satsuma saw this. And his heart filled with sadness. How unfair he had been to the old enoki tree. To the children of his village. Even to himself!

Slowly, he walked out of his house into the beautiful garden Tikem had made ... And slowly, he became the boy he once was.

Tikem and Satsuma now together look after their beautiful garden. With the children of the village. The birds. And the flowers. And the little enoki which would live and grow with the village, for a thousand years!





#OW COW?

There are 150 crore cattle in the world. Researchers say there is a link between cattle and climate change.

CURIOUS?

Turn to page 21 phataphat!

Women!

Geeta Dharmarajan

Art by Alison Dunnell

Who brings water to the family, everyday?

For everyone to bathe and wash, to cook
and quench their thirst?

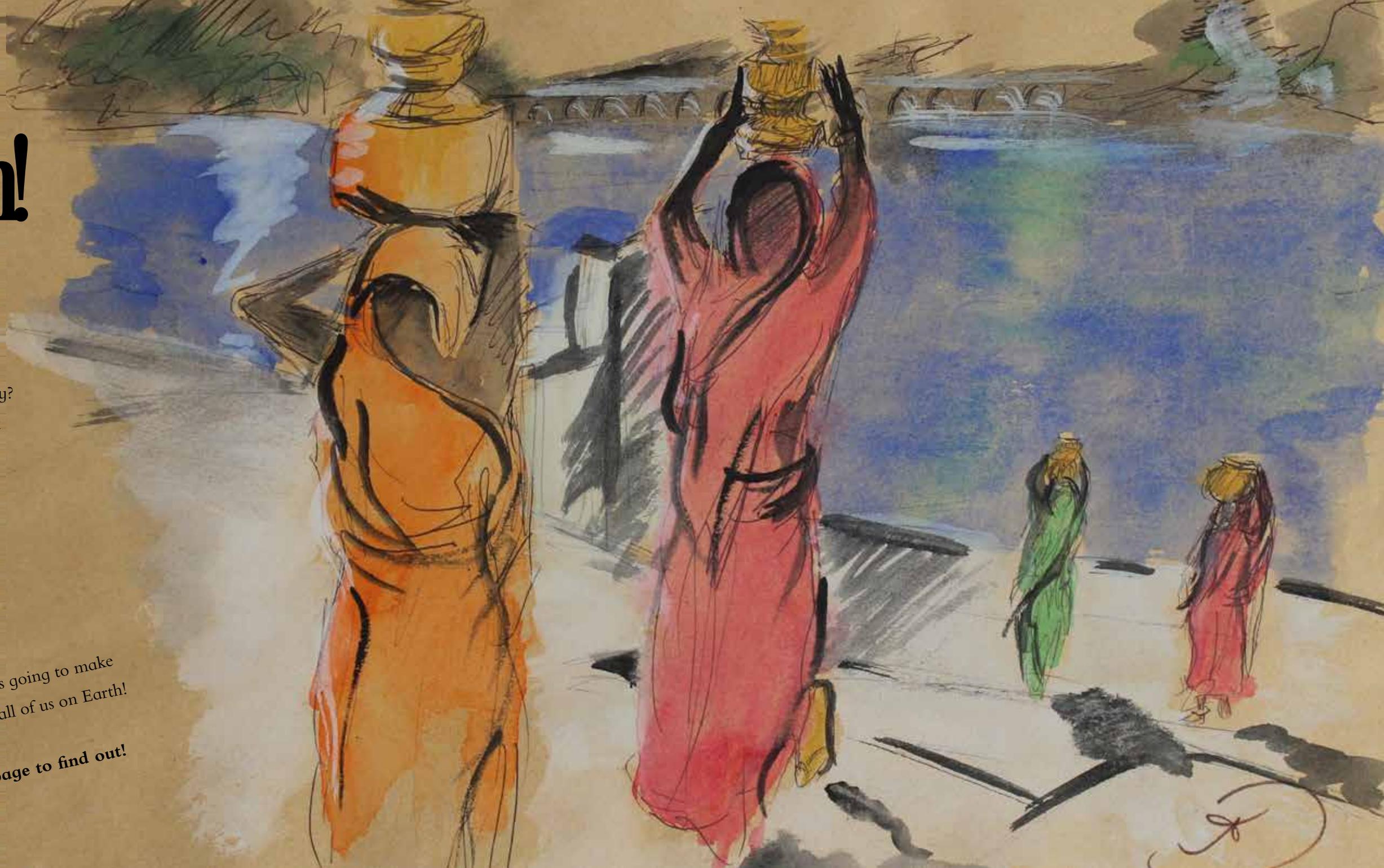
Women and girls, mostly!

Many of them spend many many hours
searching for water. And walking to and
from these distant places where they find
water.

Think!

Water is life! But global climate change is going to make
safe water even more difficult to get for all of us on Earth!
So what is Climate Change?

Turn the page to find out!





PLANET EARTH IS AWESOME!

BUT EARTH WILL NOT BE THE SAME IF WE DON'T DO SOMETHING ...

 The Northern Lights will disappear and the butterflies too, because the climate is changing!

 Countries will lose their animals and plants, because the climate is changing!

 Rain will not pour enough, and we won't have enough water, because the climate is changing!

 And the climate is changing mainly because we as humans don't care!

HOW COW?

People all over the world are working hard to find solutions for climate change.

Some say that rearing cattle for meat is taking up too much land and resources than food crops. So we cut more trees. We produce more CO².

What do you think? Write to tamasha@katha.org with your answer!



I don't want to be thought of as the girl who was shot by the Taliban but the girl who fought for education. This is the cause to which I want to devote my life.

MALALA FOUND HER VOICE! SHE SPOKE UP WHEN SHE WAS NOT ABLE TO GO TO SCHOOL IN PAKISTAN!

FIND YOUR VOICE NOW!

Speak up for Planet Earth! Write a letter to our Prime Minister, asking for a ban on tree cutting to help Mother Earth.

1. Visit <http://www.pmindia.gov.in/>
2. Scroll down. Find this: 
3. Click on this logo. Write **To The Prime Minister.**
4. Or send your handwritten letter to:
The Prime Minister, 7, Race Course Road,
New Delhi - 110011





So what is this terrible thing called

CLIMATE CHANGE

And why should you care?

Guha Dharmarajan

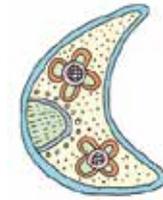


Before we talk about climate change let us talk about the moon.

Did you know that the temperatures on the moon can get very very cold. Or really boiling hot! The temperature can range between -173°C and 127°C ?



Remember water freezes at 0°C and boils at 100°C .



Scientists call air, atmosphere.

The moon has no atmosphere. So the surface of the moon that is facing the sun gets very hot and the surface away from the sun gets very cold.

The earth has an atmosphere. This atmosphere keeps the earth from getting too hot or too cold by acting like a “greenhouse.”



So why doesn't the earth get so cold or hot?

The answer is: **air.**

Yes, the thing you can't see but must breathe to live. The thing that carries Amma's voice calling you home for dinner. And the thing that carries the smell of hot chapatis to your nose!

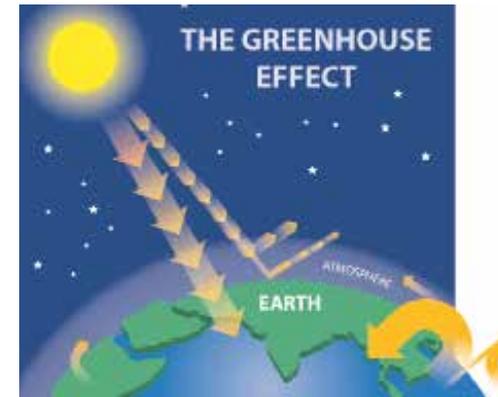
Air is important for us to live.

So why is air so important for the Earth's temperature?

The reason is that air can trap heat. It is a good insulator. If you live in a cold area you would use a razai. The razai is a good insulator. When we fluff up the cotton before winter, the cotton traps air. So, the fluffier the cotton, the more air gets trapped. And the warmer the razai will keep you.



Infographics & art by Charbak Dipta



What is a greenhouse?

A greenhouse is a special house for plants. It has glass walls and a glass roof. People in cold countries grow vegetables and flowers in them.

Why? Because the sun shines through the glass and keeps the inside air warm, even during winter. And because of the glass, the heat cannot escape. So during the day, it gets warmer and warmer inside a greenhouse. And stays warm at night too.

The earth's atmosphere works like a greenhouse.

Gases like carbon dioxide act like the “roof” of the greenhouse. During the day the sun shines through the atmosphere. The Earth's layer traps some of the heat, like your razai, and the surface warms up. At night, Earth's surface cools, and the heat escapes back into the atmosphere. This is what keeps our Earth nice and cozy!





TOO COLD

TOO HOT

Too hot? Too cold?

As you can imagine, there is a fine balance between trapping too little heat (in which case the earth will be too cold for us to live in) and trapping too much heat (in which case the earth will get too hot to live in).

Today, scientists are concerned about the atmosphere trapping too much heat. Why? Because many things that we humans do, lead to increasing the CO₂ in the atmosphere.



CO₂ and other greenhouse gases trap heat in Earth's atmosphere

Is CO₂ bad?

Carbon dioxide can absorb and release a lot of heat while oxygen is very poor at this job. That is why CO₂ is called a "greenhouse gas."

Carbon dioxide is a natural part of the earth's atmosphere. As you know from your science lesson, it is an important need for life on Earth.



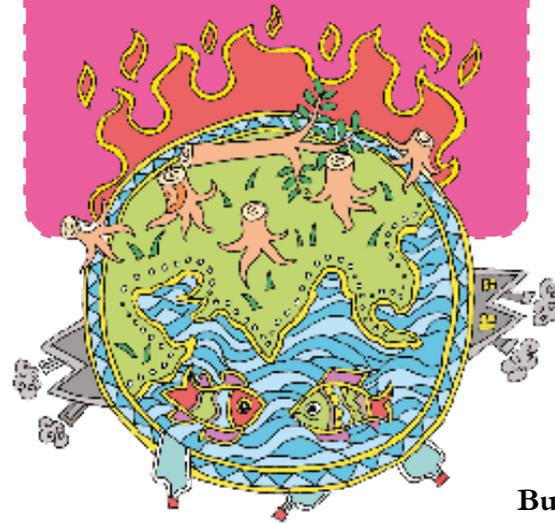
But scientists are very worried because we humans are releasing more CO₂ than is good for our planet.

As more and more CO₂ is released, it helps the atmosphere hold more and more heat.

This effect is called **Global Warming**.



WE PRODUCE MORE CO₂ THAN IS GOOD FOR US, WHEN WE ...



Cut down trees: Trees absorb and remove CO₂ from the air. When we cut down forests, we rob Earth of a way to absorb CO₂. Burning trees also releases CO₂.

AND WHEN WE DON'T REDUCE. REUSE. RECYCLE.

Burn fossil fuels: Fossil fuels are the remains of plants or animals that have stayed very deep under the ground for thousands of years. Oil, coal, petrol, diesel, natural gas are forms of fossil fuel. When we burn fossil fuels we release CO₂.

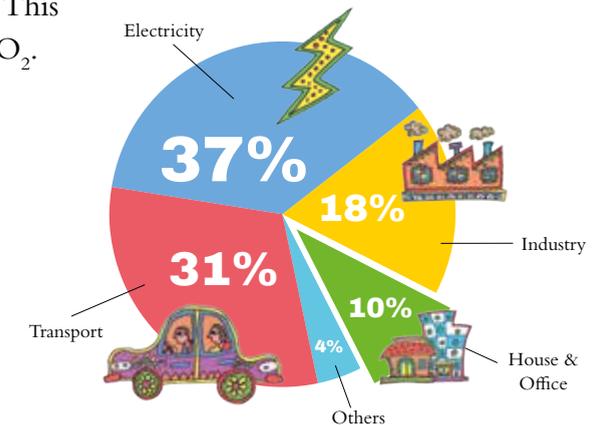


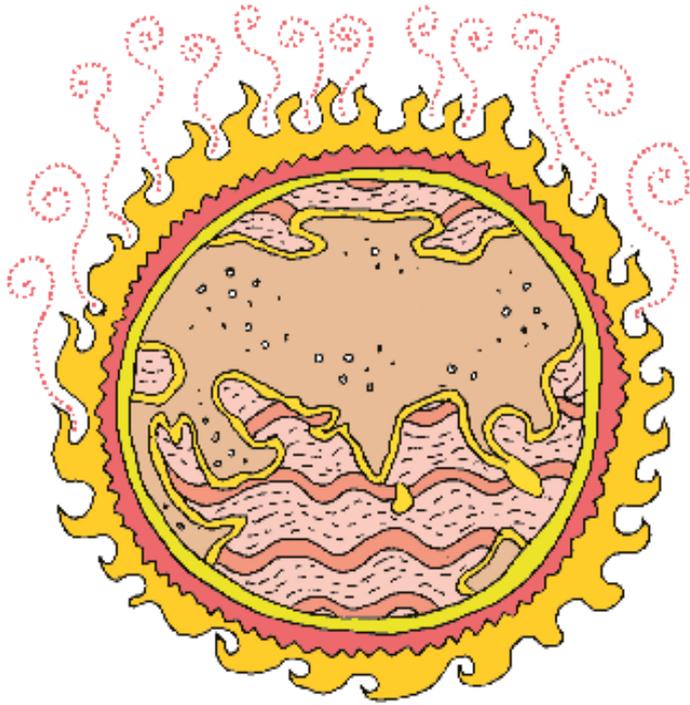
Use electricity: We make electricity mainly with fossil fuels today, for example, through burning coal.

Over Use Motorbikes, cars, large ships, aeroplanes, rockets which release CO₂.



Build: The cement, iron or steel. These industries need a HUGE amount of heat energy to convert raw materials into construction products. This produces a LOT of CO₂.





Is global warming the same as climate change?

Remember that the term global warming means that scientists expect that the temperature on Earth will gradually keep increasing as the years go by. It will be so slow, that we may not even notice it.

And when global warming keeps happening as humans produce more and more CO₂, weather patterns change a lot, making climate change across the world.

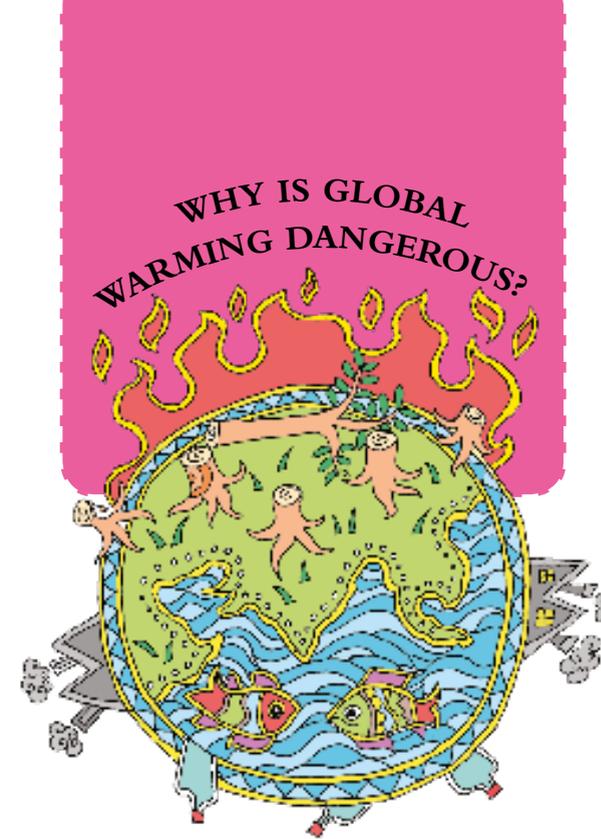
And as the world gets warmer, more of the ice in the Arctic and Antarctic will melt.

Where will all this water go?

Into our oceans leading to rise in sea levels.

So, if you live on the coast, scientists think houses and lands will get swallowed up by the sea. And people will die, unless we can breathe under water! The United Nations estimates that nearly 40 crore Indians will be at risk from sea level rise over the next 30 years.

Climate change can have many other effects on humans and animals.



I am sure you are already seeing some effects of climate change, in your hometown. It has a major effect on crops and weather.

Health. Sickness, deaths from water borne diseases, from heat waves or cold waves, and those caused by rats and other rodents will increase. Mosquitoes and other insects will increase. Diseases like malaria will become common. And you know they are life-threatening!



Plants & Animals will die
Many animals and plants and farmer's crops around the world may not be able to adapt to the climatic change and can die or lose their homes. And when trees and



animals die, we human beings will follow. We need them to live!



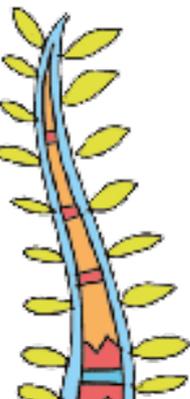
Sea levels rise. We could have more storms. Floods. Drought. Hurricanes and tsunamis. Some parts of the Earth will get less rain. Others will get much more.



Agriculture. Experts say that in places like India, we may not be able to produce much grains or crops. Livestock may die due to heat and drought.



And where it is going to be wetter and colder, there would be more floods and tsunamis. And so they may not be able to grow much food either.



Is our climate changing now?

Yes! India needs the monsoons for agriculture. And even now we see how undependable the monsoons are. And monsoons will get more unpredictable as climate change worsens.

But the effects of global warming will be seen as summers grow hotter. Winters get colder. There will be too much rain and floods. Or too little rain. And parched earth and droughts.

This is why scientists today use the term “Climate Change” to describe what is happening to the earth due to human activities.

Global warming is a serious problem. but you can do little things to be an earth-carer. Start today!

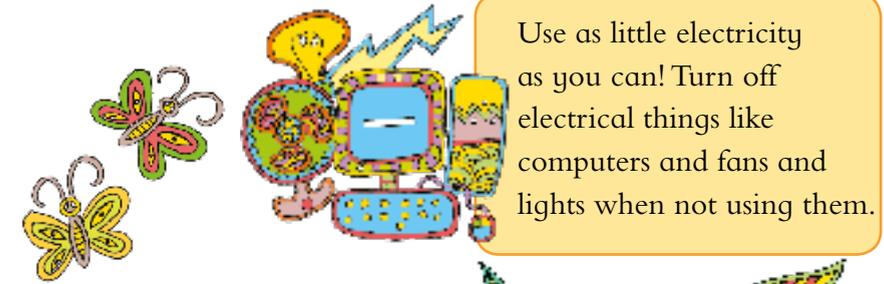
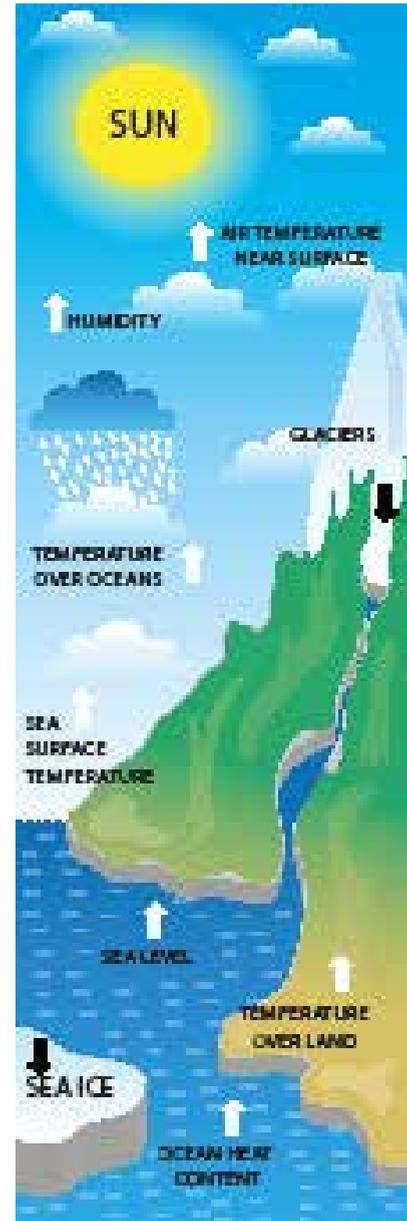


THINK: Are you already seeing the effects of climate change in your home town?

ASK: Your grandmother. Does she think that the climate has got more variable now than when she was a child?

DISCUSS: What can we do as Earth-carers?

See opposite page for some great ideas!



Use as little electricity as you can! Turn off electrical things like computers and fans and lights when not using them.



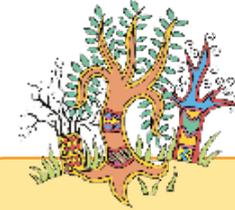
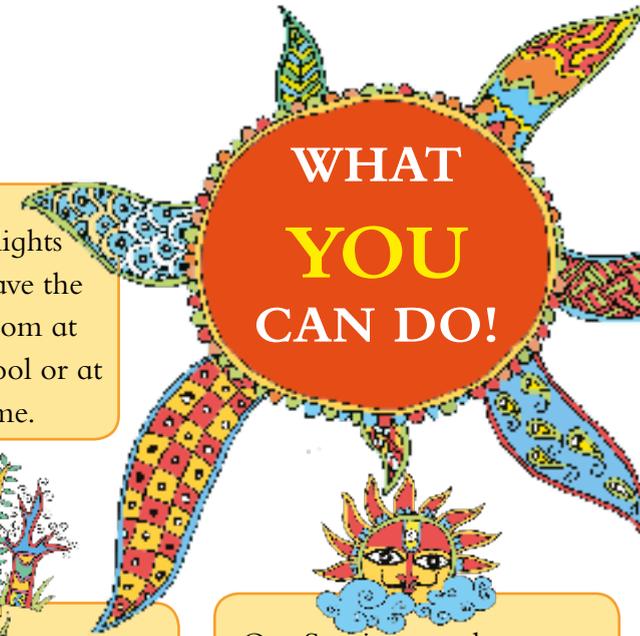
Use a bicycle for short distances. And you get exercise too:)



Turn off the lights when you leave the room. Any room at home, in school or at a friend's home.



Drive your car less. Take the school bus when you can. Or walk!



And most importantly! Plant trees! This is a great way to reduce greenhouse gases. Trees absorb carbon dioxide, a greenhouse gas, from the air.



Our Sun is a good source of energy. Use solar energy whenever you can. Governments have schemes where they help you get cheaper solar panels. Check with your local government.



Use glass bottles, and cloth or paper bags. These can be used again. Or recycled. Please do not use plastic bottles or bags.

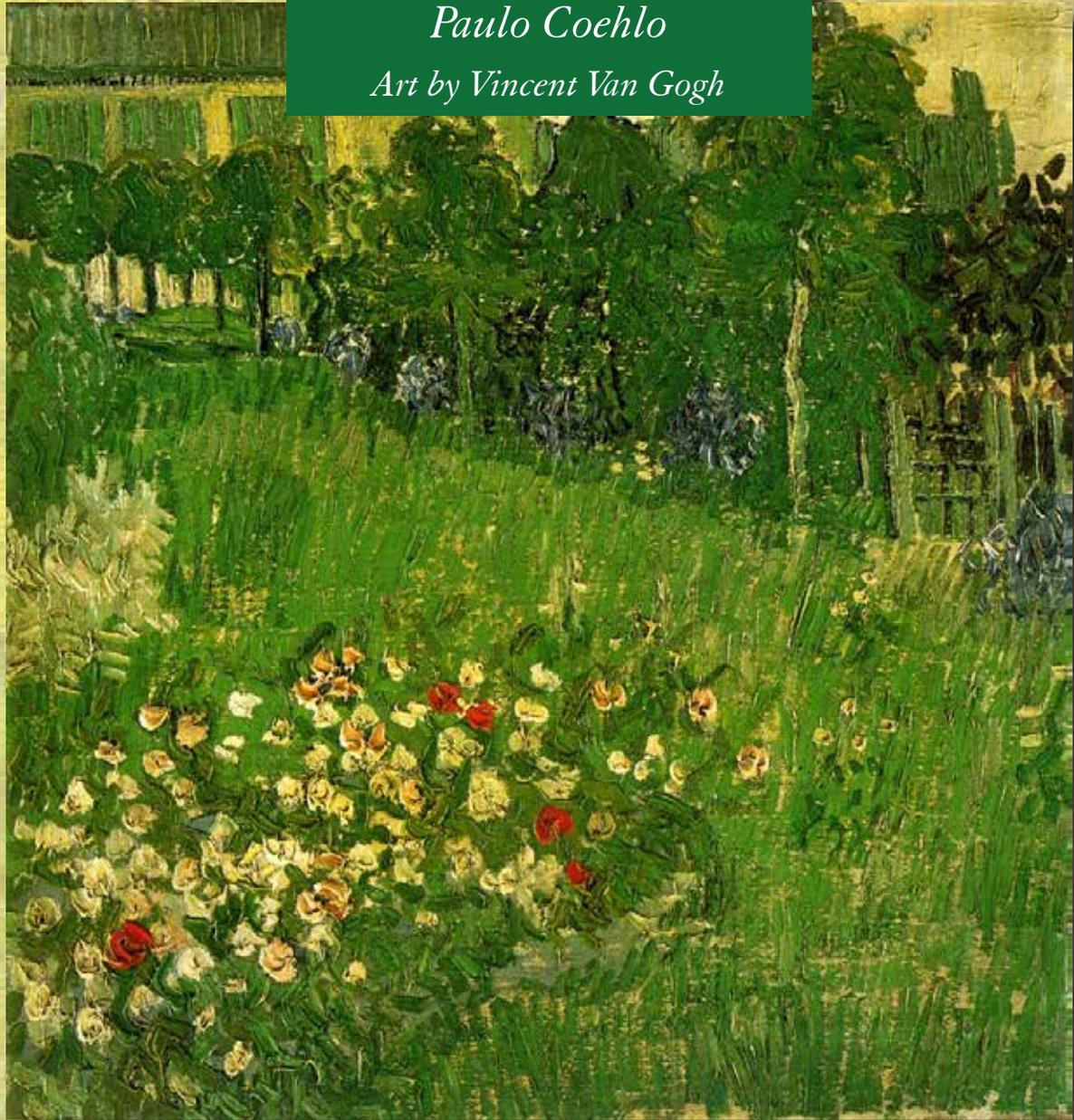
Global warming is the greatest environmental challenge of the 21st century. So ... let us be kind to Mother Earth!



The Cracked Pitcher

Paulo Coelho

Art by Vincent Van Gogh



An Indian legend tells of a man who used to carry water every day to his village, using two large pitchers tied on either end of a piece of wood, which he placed across his shoulders.

One of the pitchers was older than the other and was full of small cracks; every time the man came back along the path to his house, half of the water was lost.

For two years, the man made the same journey. The younger pitcher was always very proud of the way it did its work and was sure that it was up to the task for which it had been created, while the other pitcher was mortally ashamed that it could carry out only half its task, even though it knew that the cracks were the result of long years of work.

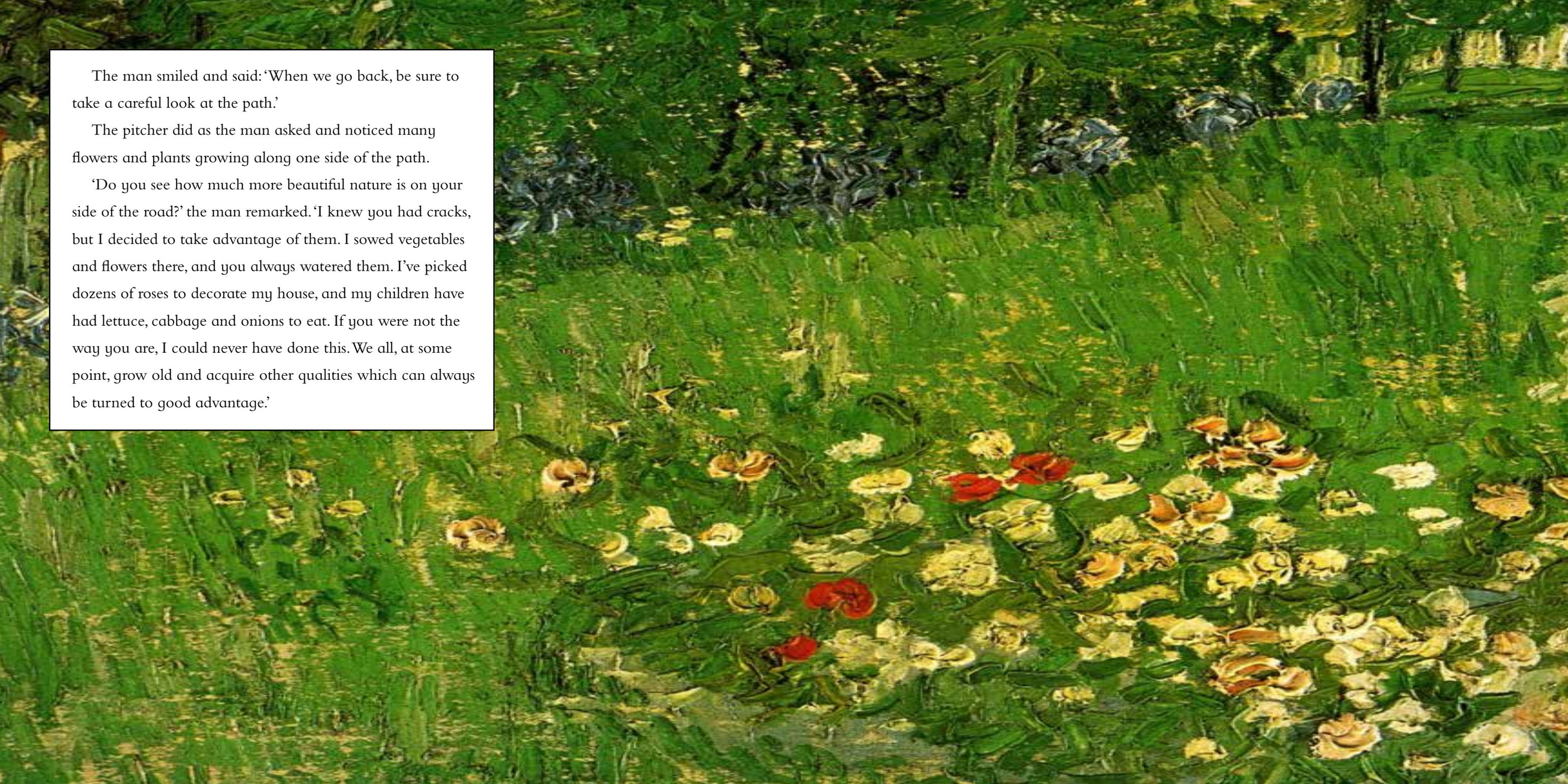
So ashamed was the old pitcher that, one day, while the man was preparing to fill it up with water from the well, it decided to speak to him.

‘I wish to apologise because, due to my age, you only manage to take home half the water you fill me with, and thus quench only half the thirst awaiting you in your house.’

The man smiled and said: 'When we go back, be sure to take a careful look at the path.'

The pitcher did as the man asked and noticed many flowers and plants growing along one side of the path.

'Do you see how much more beautiful nature is on your side of the road?' the man remarked. 'I knew you had cracks, but I decided to take advantage of them. I sowed vegetables and flowers there, and you always watered them. I've picked dozens of roses to decorate my house, and my children have had lettuce, cabbage and onions to eat. If you were not the way you are, I could never have done this. We all, at some point, grow old and acquire other qualities which can always be turned to good advantage.'





If I can
STOP

Emily Dickinson
Art by Falguni Gokhale

If I can stop one heart from breaking,
I shall not live in vain;
If I can ease one life the aching,
Or cool one pain,
Or help one fainting robin
Unto his nest again,
I shall not live in vain.





A PAGE FOR YOU TO COLOUR

Out Of This World Experiences
JUST FOR YOU:))

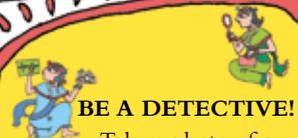
THINK

If you were to put
up a play for forest dwellers--
birds, animals, trees, what
would you tell them about
global climate change??



BE A DETECTIVE!

Take a photo of a
sound that could have
been heard 1,000
years ago.



DISCUSS

Sit with your friends
to discuss the best way
to save Earth just where
you live.

ACT!

Now ... Choose an animal
character to think like.
Make a mask for yourself of this
character or anything else. You could
be a squirrel, an ant or a tree!



And go on an adventure!

REMEMBER!

When you put on the
mask, you must think and
feel like the character you
are playing!



Albert Bierstadt was a German-American painter best known for his lavish, sweeping landscapes of the American West. To paint the scenes, Bierstadt joined several journeys of the Westward Expansion. Though not the first artist to record these sites, Bierstadt was the foremost painter of these scenes for the remainder of the 19th century. | **Alison Dunnell** is an artist, photographer and teacher who travels the world recording images of people and life in sketchbooks, canvases and online. Never without her camera or a sketchbook and pen, she uses day-to-day experiences and travel journals as inspiration for her artworks. | **Charbak Dipta** is a visual artist, comic book writer and a singer. He has an M.A. in Philosophy, and likes to watch world cinema and travel across continents. | Known as a prolific private poet, **Emily Dickinson's** poetry was heavily influenced by the Metaphysical poets of seventeenth-century England, which encouraged a Calvinist, orthodox, and conservative approach to Christianity. While Dickinson was extremely ingenious as a poet and regularly enclosed poems in letters to friends, she was not publicly recognized during her lifetime. The first volume of her work was published posthumously in 1890 and the last in 1955. She died in Amherst in 1886. | **Falguni Gokhale** is an artist by passion and a visual communication designer, from National Institute of Design, by profession. She is the owner at Design Directions. | **Geeta Dharmarajan** loves writing for children. She has authored over forty books for children. She received the Padma Shri in 2012 for her work in literature and education. | **Dr. Guha Dharmarajan** is a Research Scientist at University of Georgia's Savannah River Ecology Laboratory, and lives with his cat, Maximus, in Aiken, South Carolina, USA. He is a Disease Ecologist, and has worked on elephants, mosquitoes, ticks and raccoons. He is also a trained vet. He loves animals and enjoys reading. Apart from having written academic articles for international journals, he has written popular articles for *The Statesman* (op-ed: "The Good Earth") and the *Rock Street Journal* ("Jazz and Conservation") | **Johannes Frank** is a self-taught photographer. He works as a graphic designer and sales manager in a sign company. Currently residing at Hafnarfjordur near Reykjavik in Iceland, he feels photography allows him to connect with nature and recharge his inner battery. Growing up in the West Fjords, a very harsh area, highly influenced his photography. | "A poem can change a child, and a child can change the world," says **Kalli Dakos** who is known for her poetry books on schools. As a former teacher and reading specialist she regularly visits schools to teach poetry workshops. She lives in Ontario, Canada. | **Malala Yousafzai** is a Pakistani activist for female education and the youngest Nobel Prize laureate. She is known for human rights advocacy, especially the education of women and children in her native Swat Valley, Pakistan, where the local Taliban had at times banned girls from attending school. Following her recovery from an attack from Taliban, Yousafzai became a prominent activist for the right to education. In 2012, she was the recipient of Pakistan's first National Youth Peace Prize and the 2013 Sakharov Prize. | **Prof. Dr. Muhammad Haji Salleh** is Malaysia's best-known bilingual writer and has twelve volumes of poetry published since his commencement as a writer in 1963, one of which he wrote originally in English and the remaining in Malay/Bahasa Malaysia. He was awarded the National Literary Award in 1991 and the SEA Writer Award in 1997. | **Paulo Coelho de Souza** is a Brazilian lyricist and novelist. He is best known for his novel *The Alchemist*. Coelho also worked as an actor, journalist, and theatre director before pursuing his writing career. He is extremely active on social media and posts up to three times a week on his blog named *Paulo Coelho*. | **Van Gogh** is a Dutch Post-Impressionist painter who remains one of the most popular. His unique and easy to spot style inspired generations of artists as he was the first to abandon realistic painting. In his early works during the mid-1880s, Van Gogh focused on peasants and their daily lives in his native Holland with a restricted earthy palette of browns and greys. He produced about 900 paintings and 1100 drawings. A large collection is currently held in the Van Gogh Museum in Amsterdam.



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The CoolMoonBooks are specially made with love and care by the Katha team, for 5-12 year olds, to enjoy reading in English for fun and meaning!

They are part of our UntextBook Initiative, to bring the joy of reading to children who do not speak English at home.

Take your child from wordless books to books with 1200 words. 13 Thinkbooks in each level. Five levels of handpicked literature.

Stories and poems from 3,500 years of literary history. And the best of art -- from MF Hussain to van Gogh to fab photographers.

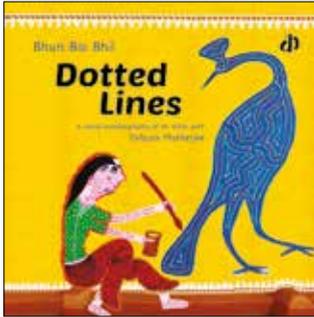
Read with your child. Colour her world with imagination
Culturelinking.

Join the 300 Million Movement! Let us make our children proud! To join: 300m@katha.org
To volunteer: editors@katha.org

I Love Reading Library is a unique series of books that brings new and diffident readers into reading fluently. With high-quality content and design to match the learning needs of children who are at different reading levels, it brings together the finest literary creations and art works from India and the world. Our books manifest Geeta Dharmarajan's StoryPedagogy™ – a unique pedagogical model, which promotes the joy of reading amongst first generation readers and takes the child into the fascinating world of BIG Ideas and TA-DAA! (Think, Ask, Discuss, Act, and take Action).

Katha's Holistic Early Learning (KHEL!) Lab offers workshops to teachers in government, non-profit and private schools. These are F2F (Face-to-Face) workshops supported by online sessions leading to a "Reading Teacher's Certificate" for teachers, school administrators and volunteers.
To know more, write to us at 300m@katha.org.

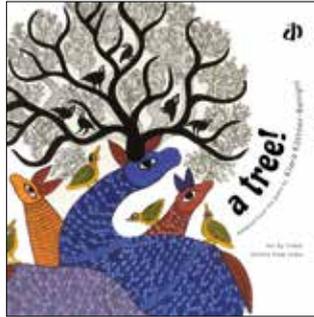
OTHER BOOKS FROM THE SERIES



DOTTED LINES

Bhuri Bai Bhil
Debjani Mukherjee

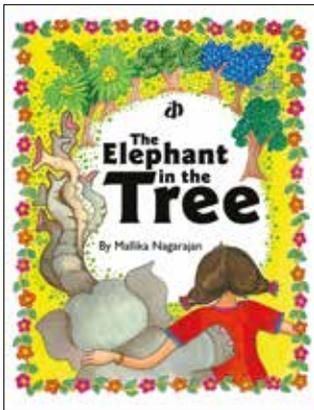
Learn all about the Bhil tribal people of Madhya Pradesh, earth-caring artists and storytellers. Awesome art brings to life a heartwarming story of a Bhil girl as she becomes an artist, seeing her own world with new creativity.



A TREE

Klara Köttner-Benigni
Art by Tribal Artists from India

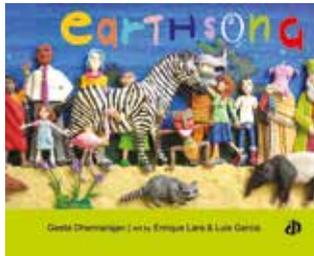
One poet and twelve tribal storytellers, some of India's most loved illustrators! They encourage you to - Think. Ask questions. Discuss and then swing into ACTION as an Earth-Carer! All books in this series carry a StoryPedagogy™ page for you to TA-DAA! away with your young readers!



THE ELEPHANT IN THE TREE

Mallika Nagarajan

With its quirky characters, unusual use of language and skilful blending of fantasy and reality, this is a lovely story of Mahi who finds a seven-trunked elephant in the tree and journeys with him into a new world that will change her life forever.



EARTHSONG

Geeta Dharmarajan
Enrique Lara & Luis Garcia

A lyrical tribute to Earth and its amazing diversity, by an award-winning writer; with fun facts, information and superb, out-of-this-world artwork by Enrique Lara & Luis Garcia.

"[Katha books] ... teach our kids about the world they live in, the changes it is undergoing every day and what we can do from our end to save the world."

– Kidsstoppress

"The heart of the book is not in what humans have destroyed but what they can still do."

– Down to Earth

"Nudging young readers to think beyond their immediate world."

– Kidskintha



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