



By Enn Ess

Will Jinjinoo Drown?

A Malar Mugam Adventure

*The Story of How Two Awesome Children and an
Amazing Bird Try Saving an Island from Drowning*

www.malarmugam.com

Dedicated to
All the Planet's Children
In Whose Hands Rests Its Future
And to the Humble Algae
Upon Whose Existence Rests Ours

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INTRODUCTION

Dear wonderful boys and girls,

What a pleasure it is to be saying *Hello* to you all!

And what a pleasure indeed it has been for me to have written this story for you!

I am sure you all love nature – the green plants and trees, beautiful flowers and butterflies, amazing animals, calming breeze, bright sunshine, and of course the magnificent ocean.

This is a story of two children like you. Like you, Malar Mugam and Mihir Mitra, two children aged 12 and 9, love nature and all the wonderful things nature has given us.

Will Jinjinoo Drown? is a story of how Malar Mugam and Mihir Mitra try to save a beautiful island from drowning, with the help of an astonishing bird. Will they succeed in saving it? Well, you should read the story to find out!

It is also a story about how our world is being threatened by climate change and global warming, a result of humans carelessly polluting the earth.

Finally, this story is not like any other story you would have read. Why?

Because you can contribute your own content after reading the story.

Really?

Yes. After reading the story, you can answer interesting questions the two children and the bird have for you. All answers will be published along with your names at the web site www.malarmugam.com, and the really good answers will also get e-stickers sent to your email.

Now, isn't that cool? A story where you too can become involved with the characters, and will even get emails and stickers from them!

I do hope you like the story *Will Jinjinoo Drown?*

Yours always,

ENN ESS

1

Jinjinoo is Drowning

Jinjinoo will soon drown. There was no doubt about it.

You have not heard of Jinjinoo? That should be no surprise.

The island of Jinjinoo, located not far from the Maldives islands, has just 100,000 people.

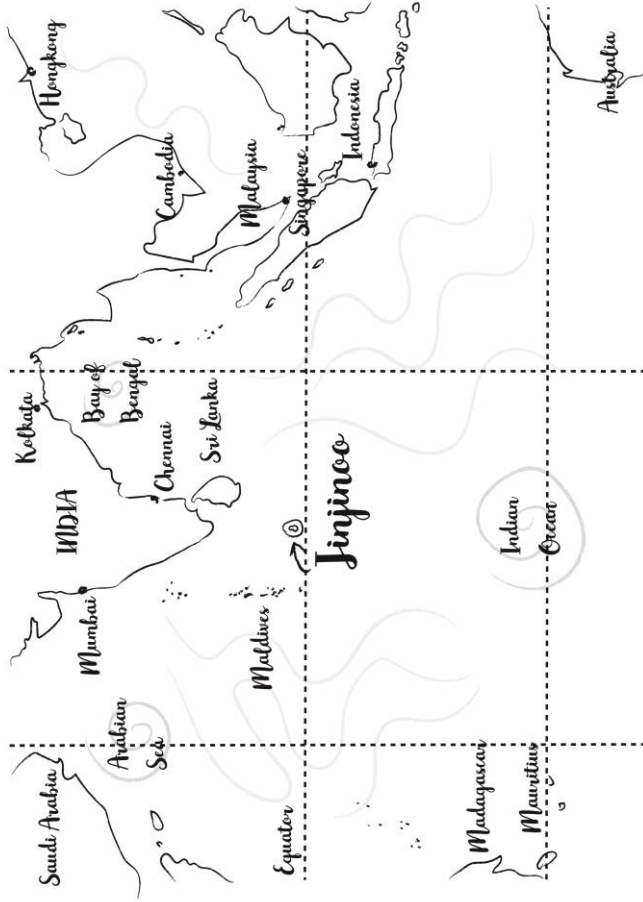
Not too many people know about it because it is a small island.

Located very close to the equator (its southern tip is actually on the equator), the island is about 900 kilometers directly below the southern tip of India, and about 250 kilometers to the right of the Maldives islands.

It is a pity that only very few know about it, because it is such a beautiful island. Every part of its 200 square kilometers is full of natural beauty and exotic biodiversity.

But all these would soon be gone because Jinjinoo will drown soon.

Or at least that was what most scientists thought.



Jinjira's location in the Indian Ocean



Jinjinoo on the world map

2

Beautiful Jinjinoo

Jinjinoo.

Isn't that a cool name?

It is a cool island too.

In the local language Jinjinoo means, "The beautiful, beautiful one". What an apt name for such an awesome island!

An island of just 1,00,000 people, Jinjinoo had been colonized in the past by the British and French. The island became an independent nation in 1969, and since then, has flourished as a popular tourist spot.

The entire island looks like a lush, green park, and has three attractive lagoons to add to its natural splendor. Its many coconut groves and amazing beaches add further to its splendor.

Jinjinoo is a coral island, and is hence home to an amazing variety of corals, interesting sea animals you should learn more about. The ocean around Jinjinoo has many, many different colonies of corals - bubble corals, star corals cup corals...



While talking about the ocean, how can I forget the fish! You will see fish of all kinds of colors, shapes and sizes - strikingly colorful reef fish, eels, rays, starfish and of course, some scary sharks!

As it is an island, a large number of amphibians are also present on Jinjinoo. You can find some really strange frogs and toads, not found anywhere else on earth!

Guess what you will find on its sea shores? Turtles. Yes! Turtle lovers can enjoy seeing different types of turtles on the shores of Jinjinoo. While on the shore, don't forget to

look out for beautiful sea shells you can take home as treasures.

And finally, when you visit Jinjinoo, dear girls and boys, make sure you don't miss for the world the sunrise and sunset over the island! They are breathtaking.

You see, don't you, that Jinjinoo is a really wonderful island.

But what a pity - it will soon drown!

Or... will it?

3

Our World is Warming

I know that by now many of you must be asking - *Why will Jinjinoo drown?*

It will drown because the sea around it has been rising fast.

The sea level around the island had been rising very slowly earlier, but it had started rising faster in the recent few months. Earlier, scientists had estimated it would take 30-50 years before Jinjinoo would drown.

But with the levels rising faster than expected, most scientists concluded that the sea would drown the entire island within two years.

Just two years!

Now, the curious among you will ask the next question: Why is the sea level rising so fast?

According to scientists, the rising sea levels had to do with global warming.

You might have heard about global warming. Wouldn't you like to know a bit more about it?



Our atmosphere has many gases called Greenhouse Gases. While the list is quite long, Carbon di oxide (CO_2) is the greenhouse gas creating the most trouble.

*The curious-est among you will now be asking:
How do greenhouse gases give rise to globe warming?*

It's like this: Imagine a cooker in which you cook food. In this, hot steam is generated but is not allowed to escape. This raises the temperature within the cooker, and gets our food cooked.

Something similar is happening to our world. The greenhouse gases prevent heat from leaving the earth. When heat gets trapped within our atmosphere, it results in a higher temperature all over the world. Such a high temperature the world over is referred to as Global Warming.

If we fail to control Global Warming, we will also get cooked, but in a different way!

In what way?

Guess what happens to the ocean due to higher temperatures? Higher temperatures warm the water in oceans. And what happens to water when it becomes warm? It expands! This is one way in which global warming results in an increase in sea level.

But it is not all. You surely would have heard about glaciers – those massive bodies of ice. Higher temperatures also melt huge glaciers. Large amounts of water melted from these join the ocean, resulting in further increase in sea level.

So, friends, it's like this: **Greenhouse gases → Global warming → Warming of ocean water + Melting of glaciers → Increase in sea levels.**

Now, an increase in sea levels could mean real trouble. Why? When sea levels increase, they start invading the land present along the coast.

Imagine an island that is in this region. What will happen to it? You guessed right: The island will start drowning.

This was precisely what was happening to Jinjinoo.

Jinjinoo, in all likelihood, would become the first island nation in the world to be completely drowned by the sea.

Unless...

4

Where Will We Go?

The people of Jinjinoo were desperate.

Their island nation would drown soon.

They were doing all they could to stop the ocean's advance, but what indeed could they do beyond a certain point! The sea, called *Okama*, which in the local language meant *True God*, was surely not happy with them anymore.

It was only a few years earlier that the first signs of danger were spotted. Those living very close to the beach had water entering their houses, something that had never ever happened. They thought this would be temporary, but it was not.

Soon after, the sea had started to look even more dangerous.

Most of the population had migrated to Jinjinoo many decades earlier. For all of them, Jinjinoo was the only home they knew.



Now, with their island about to drown, they were asking themselves – “Where will we go?”

5

Malar Mugam



Living in South India, Malar Mugam should not have normally known about Jinjinoo - it was over one thousand kilometers from the city of Chennai, where she lived.

But then, Malar should not have known about many other things.

Born in Kanya Kumari, a town that formed the southern-most part of India, and brought up in Chennai, Malar is unlike any other girl you would have met.

Her name itself is unique. Given by her grandfather, a freedom fighter during India's struggle for independence from the British, her name in Tamil language means "Flower Face".

An apt name, for her face always reminded one of a fresh, attractive flower.

Beautiful, curious, talented, passionate and different – that is Malar Mugam for you.

A 12 year old girl was supposed to be interested in other things – in studies, in clothes, in movies, in books...But Malar was interested in nature, birds, the ocean, listening to the wind, and the distant island of Jinjinoo.

You might wonder why a distant island, of all things, interested her. Part of the reason was that the island was full of nature and wildlife.

But there was a more important reason - Mihir lived there.

Mihir?

6

Mihir Mitra



The sweet Mihir, her closest friend, lived in Jinjinoo.

Malar had met Mihir two years earlier, when her family had gone on a short holiday to the beautiful Jinjinoo. While they were there, they visited a friend of their dad who had migrated from India to Jinjinoo many years earlier.

While the adults were discussing things that interested them, Malar was introduced to the kid of the house – Mihir Mitra.

His name, in Sanskrit, means *Sun's Friend*. True to his name, his face was bright and shining all the time.

Malar liked Mihir the moment she saw him. Almost three years younger than Malar, he was a small, cute boy.

They discovered within a few minutes that they would become the best of friends.

The two liked similar things – nature, flowers, animals, birds, gazing up at the sky at nights, and most important, the sea. Both of them just loved the sea.

After that trip, she and Mihir met once at least every three months – either he made his parents come to Chennai or Malar ensured her parents took her to Jinjinoo.

Both of them just enjoyed each other's company. Together, they liked nothing better than exploring the beauty of Jinjinoo.

Little did they know then what they would soon be doing for the island!

7

Fun on the Beach

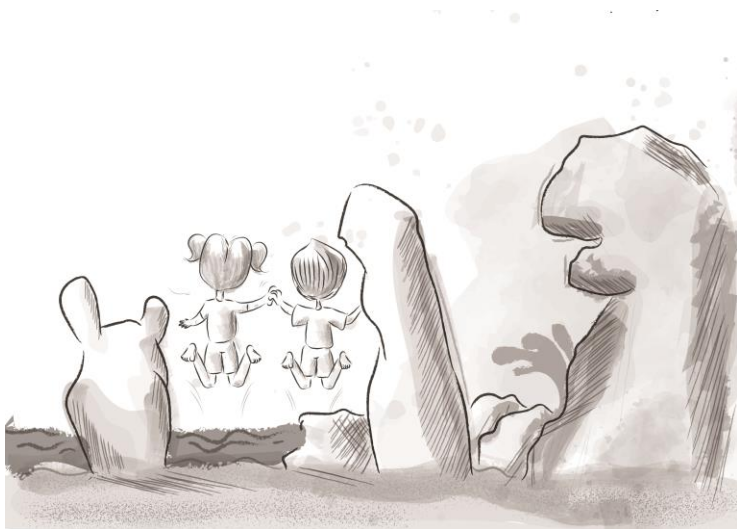
During holidays, one could find Mihir and Malar on the beach even on a hot summer afternoon. For an ordinary visitor, the beach would have been unbearably hot, but these kids knew where to go to cool down in a jiffy!

Oh, what fun Malar and Mihir had on Jinjinoo's beaches. What amazing things they did out there!

They knew every landmark, nook and cave on the beach.

They had climbed every rock, and there was hardly anything on the beach that did not have a name given by them.

The small rock very close to the beach, they called it the Rabbit – it looked really cute. But there were rocks that looked not so nice; take the one they had named the Gorilla – its shape was fearsome and it had some sharp edges. There were hundreds of other things on the beach that had interesting names given by the children.



While on names, how can one forget to mention the thing that had the funniest name of all – the Missy Kissy Jinjinoo. Yes, that was the name, given to a thin, weird looking stone. Its shape resembled a slim, beautiful woman, and its head was drawn forward as if it were kissing someone. It was Mihir who suggested the rather funny name – he felt the figure looked as if a beautiful Miss Jinjinoo was kissing someone.

Missy Kissy Jinjinoo – Malar was laughing the whole day at Mihir’s really cute sense of humour!

While she was in India, whenever Mihir called her from Jinjinoo, she would ask many questions about the various things on the beach.

She would many times ask about the Mongoose, a rather funny looking shrub near a huge rock that she had taken a special liking to. Sometimes, she would enquire about the Taj Mahal, an awesome looking white rock that looked as if it was made of marble, but actually was just a typr of granite.

But beyond all the plants and rocks and other landmarks, she would always ask about a special location on the beach, very dear to both - the Monument Palace.

The Monument Palace?

Oh dear, but aren’t we just getting ahead of ourselves a bit here? You will have to wait a bit longer before you get to know more about the Monument Palace.

Malar and Mihir loved the beach. But even more than the beach, they loved the ocean in front of it, extending it seemed forever.

What indeed is so fascinating about the ocean,
you may ask.

A good question.

8

Magnificence of the Ocean

How little do we know about the ocean!

We live in our cities and towns and think “this is our world.”

But oceans cover over 70% of our earth’s surface.

Even more remarkable, did you know that the oceans contain 97% of all the water in the world?

97%!

But it is not just its size, it is also what is in it that makes the ocean an incredible place.

If only you could go inside the ocean, you would never wish to come back to the boring land again.

What happens inside oceans is too fascinating to explain in words, but one must try.

How many different plants have you seen in your life? How many different animals have you seen?

A few dozen? Perhaps a hundred?

The ocean contains tens of thousands of times that many different plants and animals.

The ocean contains over 1 million species of plants and animals - that would be 1,000,000 different types of plants and animals.

Repeat that: The ocean contains more than 1,000,000 different species of plants and animals.

Wow. Wow!

What a remarkable variety of plants you can find in the ocean! Corals of all colors, amazing looking anemones, majestic kelps that can form a forest under water, plants that look like whips, like wheels, like umbrellas, and more!

The animals of the ocean are no less wonderful. Some of these animals seem to come from another world.

Don't believe me? Let me ask you these:

Do you know of the *mimic octopus*, so called because it can mimic at least fifteen different species of animals!

What about *Tardigrades*, weird looking water bears? Or the pink colored *see-through fantasia*?



And the fish. Apart from the customary sharks and squids, there are some really amazing fish you will see in oceans around the world – the *Mantis Shrimp* for instance is super colorful and has twelve color receptors in its eyes; or the weird *blob fish* that looks like a gelatinous, gooey blob!

You have to see these to believe that these creatures actually exist.

Malar and Mihir were lucky kids indeed. The fact that both their parents had earlier been

naval engineers meant that the ocean had been a part of their lives ever since their birth.

While many of us might have never been on a ship, these two kids had gone on a number of trips on the oceans – on small boats, on large cruises and once even on a seaplane that actually landed on water and then took off. Just imagine the thrill!

Was it any wonder at all that the ocean fascinated both Malar and Mihir!

Now, this awesome ocean was about to drown the island they loved. The children found it difficult to believe the ocean could be so unfair.

If only they knew what was to unfold soon!

9

A Strange Bird

Other than the ocean, what really made Malar and Mihir great friends was their passion for animals and birds.

Birds in particular.

Yes, birds fascinated them.

What wonderful things, birds were.

They were light, many of them were cute, were chirpy, but most amazing, they could fly.

They could FLY.

FLY!

Malar and Mihir found it odd that people were not astonished by something that could fly on its own.

Sure, humans could fly too. But they needed a machine for that – an airplane, a helicopter, or at the very least, a balloon.

Has a man or woman ever flown on his or her own, just using their own body parts?

But birds do that all the time. Now, what could be more astonishing than that!

How can we consider the incredible birds as something ordinary, as if flying on their own is a simple thing!

When Malar exclaimed about this to her dad, he just said “We humans have lost the ability to be astonished by the right things.”

A wise man, was Malar’s dad.

Jinjinoo, not surprisingly, was home to a number of interesting birds. A good many explorations that Malar and Mihir did were to identify new birds.

It was during one of those occasions, while they were exploring the beach and running around in the adjacent coconut groves, that they found flying between trees a strange looking bird.

It was a kind of bird that they had not seen earlier.

It looked weird, but it also looked colorful and majestic.

Mihir whispered, “Malar, I think it is a kind of Penguin.”

“Penguin!” exclaimed Malar “Mihir, how could you think it is a penguin! Look at its colour, look at its neck. Besides, penguins cannot fly!”

“Then what is it?” asked Mihir innocently.
When it came to wisdom, he always bowed to Malar’s.

“I think it is a kind of, kind of, oh what is that rather strange and rare bird I had read about once....?”

She was searching every corner of her mind, and finally, she got it.

“It is,” she said almost as if she was addressing a divine creation, “it is impossible, but it is a Kaboki.”

Kaboki?

10

The Bird is Amazing

“A Kaboki,” repeated Mihir. Even an ardent bird lover like him had never heard of a Kaboki.

“It is the strangest looking bird I have seen,” he exclaimed.

The two kids just kept looking at the bird, absolutely overawed and transported to a new world.

But once they came to their senses, the duo smiled at the bird, as was their habit when they saw any new bird or animal.

And an astonishing thing happened. The bird did something that resembled – a smile.

It could not be possible. Even for Malar, who routinely believed in the fantastic, birds smiling back at you was a strange sight.

But it surely looked as if the bird was smiling back!

Mihir noticed it too – “Did you see,” he whispered in his cute voice, “the bird is smiling at us.”



It could not be.

Would the bird stop at just smiling or would it do more?

It was perhaps this curiosity that made Malar to stretch out her hand to the bird.

When Malar or Mihir did the same to other birds, most just watched lamely. A few got scared and flew away.

But this bird did something that was just as incredible as its smile a few moments earlier.

It extended its right paw to shake Malar's outstretched palm.

It was almost as if the bird was human.

Cool!

And then the bird just flew off.

After this brief first meeting, both the kids felt that while the bird looked strange and did some cool things, it was just a...bird.

Very soon they had to change their opinion.

They came to see that the bird could swim in the ocean, it could do somersaults, and it could even dance to a variety of tunes!

The bird was unafraid of many things that usually scare birds – it could look directly at a snake, it just kicked without a care the usual bird-scarers, and not even the loudest of noises could bother it!

It could not talk, but it quickly understood how to communicate with the kids using just its chirps, and the different parts of its body. The kids had never seen any bird do all these different types of communications.

And once, the children saw that the bird was able to solve a jigsaw puzzle faster than they could. Have you ever seen a bird solve a jigsaw puzzle? Bet you have not!

After all these remarkable performances,
Malar and Mihir were forced to admit that it
was not just a strange bird.

It was an AMAZING bird.

11

The Bird Gets a Name

It was the fourth time they were with the bird that Mihir whispered to Malar, in an almost secretive voice, “We should give the bird a name”.

Indeed, thought Malar. How come the idea had never occurred to her!

Of course the bird needed a name. They had given names to things that were far less important! The Rabbit, the Mouse, the Taj Mahal, how many times they had given names to real-nothings.

Here was the most amazing bird they had ever seen, but they had not bothered to give it a name.

Now, what should it be?

After whispering a few interesting names amongst themselves, they decided to entrust the task to – the bird itself. Who knew, such an amazing bird perhaps already had a name.

It was Mihir who undertook this interesting task. He put his little hand around the bird’s

neck and asked in his cute voice – “What’s your name, friend?”

He said it as if it was the most natural thing to do – ask a bird its name.

By now, they were used to witnessing surprising actions from the bird, so the bird’s reaction to Mihir’s question did not astonish them at all. It suddenly flew up and down in a rather hurried manner, and the whole action created an interesting noise – it sounded like *Swoosha*.

So, was that the bird’s name? Swoosha?

“Swoosha?” said Mihir enquiringly to the bird.

No, indicated the bird.

It flew off once more and flew down in a slightly different way.

There was again a sound but it sounded a bit different this time round – it sounded like *Hirosha*.

“Hirosha?” enquired Mihir. The bird nodded its head slowly left to right and at the same time lifted one of its paws.

Mihir understood – he was close.

He tried again – “Hiroshu?”

The bird flew up and circled the two kids in a delightful manner.

So that was its name – Hiroshu.

What a name!

12

Meetings with Hiroshu

Very soon, Hiroshu became the third member of their small group – the three were now the closest of friends.

The more they knew Hiroshu, the more amazed they were by it.

It knew many, many things – some of them birds are not exactly supposed to know!

It knew, for instance, how to walk like a human. It showed them, and it was really amusing.

It knew how to build a nest out of stuff like paper, plastic, metals and other things like human shoes and sandals – something Malar and Mihir had not seen any other bird do.

It could act like many different animals, and could mimic their sounds.



It could not talk like a human could, but that hardly mattered – it could make a wide variety of chirping noises, and also could make many different movements. It was a very intelligent bird that used its eyes, paws, beak and wings to communicate almost everything that a human being can.

Over a short period of time, Malar and Mihir perfectly understood every chirp of the bird and its every movement.

They had learnt the language of the bird!

During their meetings, they discussed many things. Mostly however, they talked about nature and its beauty.

Like any bird, Hiroshu loved nature – the trees, the ocean, the flowers, and of course all the birds and animals. You see, Hiroshu had a great opportunity to see all these – it was a bird that could fly anywhere it wished at no cost!

How much the two children learnt about nature from Hiroshu!

Hiroshu had flown over many parts of the world. It explained the wonder of the Amazon rainforests, about the fascinating pyramids in Egypt, about the great Mongolian desert.

Hiroshu also told them how it felt to be to be on the slopes of Mount Everest, about the beauty of Bali, the vastness of Australia, and the splendor of the Alps.

While Mihir and Malar had heard about these, knowing about them from Hiroshu was an altogether different experience. Take for instance, the Niagara Falls. While both Malar and Mihir had seen it in pictures and movies, it was a really different experience for them to learn about the grand waterfall from someone

who had seen it from right above the landmark.

Once, it told them how it felt when it looked down from the top of the Eiffel Tower in Paris. It told them how everything - people, cars, buildings - looked small and of unimportant.

Every time they had a meeting with Hiroshu, Malar and Mihir went back learning a lot more about something they knew little of.

They just enjoyed all that they learnt, as much as they loved being with the strange bird.

Mihir was especially fond of these meetings with Hiroshu. Every time Hiroshu finished telling them about something, he would jump up and hug Hiroshu.

Hiroshu too cherished these meetings and looked forward to one every time the two children gathered at the coconut grove!

Very soon, a most important meeting will take place at this very grove.

13

Ocean – Villain or Hero?

While Hiroshu considered the two children as really intelligent, its opinion of humans in general was very low.

It doubted that humans were the most intelligent species on the planet.

What annoyed Hiroshu the most about humans was the manner in which humans were polluting and destroying nature all over the world.

Hiroshu asked the children, “How can you consider those who do such stupid things as anything but...stupid!”

Malar and Mihir did not fully agree with Hiroshu that most humans were stupid. They felt there were many who loved nature and were keen to protect it. They even had some long debates on this with Hiroshu.

But Hiroshu was not convinced. Many times, it used to point to the ocean in front of them and claim - ”Look at the trash and plastic in the waters. Humans have not left even the ocean alone!”

And sometimes, it would moan sadly, “Why can’t humans live happily with what they need, instead of destroying everything for their greed?”

What can anyone say to that! Even Malar, who was almost never at a loss for words, found it difficult to give a satisfactory answer.

While the two kids did not agree with Hiroshu on a few things, all three were absolutely united in their admiration for something else - the ocean.

For all three of them, the ocean was not just a body of water. It was a living thing, bubbling and more alive than any living being they had known.

But with Jinjinoo likely to drown, the ocean they so admired was considered by many as a villain.

Or, will it become a hero?

14

The Monument Palace

While wandering on the beach, Malar and Mihir had, a few years earlier, identified an isolated spot, not far from the waves and water.

For some reason, no one ever visited this spot.

Malar and Mihir used to sit here, and over time, they started building small monuments out of pebbles, sand, cloth, paper, rubber and whatever else they could find on the beach or whatever the sea washed ashore.

These monuments were always dedicated to something belonging to nature. One day, it was for the sun, another day, for the trees, yet another day for the sky, and so on.

The first few times they built these, they felt that the “monument” would not exist the next time they were back. They assumed the monuments would be destroyed by the wind, rain, a giant wave, by a wandering dog or by some thoughtless human!

But surprise, surprise! The monuments were unaffected. One possible reason was that they had built them in a smart way. But they soon realized the real reason why these monuments were safe – these were naturally protected against rain and wind owing to the unique location and some rocks around the place.



So amazingly, all the monuments they had built thus far were preserved! The first monument they built to the sun two years earlier was still there – a simple arrangement of pebbles, sand, some sturdy sticks and a piece of cloth.

After that, they had built monuments to over a dozen things they liked – birds of course,

trees, flowers, and finally and most important, a monument to the ocean.

Of all the monuments they built, it was the monument to the ocean that they liked the most. Whether or not they had time for other monuments, they made sure they made some minor addition to this monument every time they gathered there.

What should they call this special place? They debated on this for quite some time before they settled on a name they both liked.

They decided to call this isolated spot full of simple monuments the “Monument Palace”.

A very grand name indeed for a small piece of land next to a craggy rock, but to the two children, no real palace would have been more important.

15

Will the Ocean Drown the Monument Palace?



Mihir called Malar one day from his dad’s phone – “Malar, something bad is going to happen to our monuments.”

“Bad?” Malar’s mind was racing – what could that be?

Mihir spoke slowly, but with a lot of tension in his cute voice “The ocean will soon drown our Monument Palace”

“It can’t be true,” thought Malar. Their monuments can’t be destroyed by, of all things, the ocean!

For an ordinary person, these monuments looked like what they actually were – crude things made by children. But that was not how Mihir and Malar looked at them.

These were, for the two children, some of the things they cherished most in their lives.

“Isn’t there something we could do?” Malar asked searchingly.

“I have been thinking hard since morning Malar, when I saw the sea waters very close to our monuments. But I do not see a way! We can perhaps move them and keep them elsewhere, not near the ocean...” his voice trailed.

“But that kills the whole idea. These monuments are our offerings to the sea. They have to be close to it.”

“Exactly Malar. Which is why I do not know what to do. This morning, I stood near our monuments and for half an hour kept

repeating the prayers for the sea god. But the sea is not listening. Our god is simply not listening.”

Malar could imagine Mihir – cute, passionate Mihir - standing on the beach and solemnly uttering prayers. It almost made her cry.

Why was this happening to them? Why was the sea, one of their best friends, behaving like this?

The ocean could have whispered what it was angry about when they talked to it last time. Instead, it was destroying everything. It would soon destroy the monuments that its admirers had built, including the monument to itself!

This event cleared the very last doubts in Malar’s mind – if the ocean was so angry that it might drown the Monument Palace, it will surely drown Jinjinoo itself very soon.

It will, of course, unless someone did something about it.

16

Sea Level Rises Further

It was an important meeting that Malar, Mihir and Hiroshu were having at their usual meeting place – the coconut grove.

Once again, Malar was doing most of the talking. Mihir did the usual whispering in the middle, and Hiroshu, as it always did, listened with great patience.

“There is really no doubt Hiroshu. Look at the waters. They have reached the coconut grove, and look at this wave, it is almost washing our feet! Six months back, the water was nowhere near here.”

“And the water is even going to destroy our monuments,” Mihir’s voice was desperate.

All three looked at each other in agreement and fear.

Malar continued. “You know what, I read up on global warming and its effects on sea water levels. All the scientific reports say that it would take at least a few decades for sea levels to rise high enough to drown an island like ours. But in our case, the sea has risen much

faster - by may be a few centimeters in just the past two months.”

“Why is it so bad for us? Is it something other than global warming?” whispered Mihir.

“It could be. Or perhaps it is just global warming but it is having a much larger effect on the oceans in this region, for some reason,” reasoned Malar.

Malar’s guess was right – global warming was having a larger effect on the ocean in the region near Jinjinoo, making the sea levels rise much faster there.

Hiroshu seemed to be thinking hard. And then it asked slowly, “Can we do something to stop the sea from drowning Jinjinoo?”

The children were surprised by this sudden question.

“Hiroshu, who do you mean by ‘we’?” Mihir asked, confused.

“The three of us,” Hiroshu said.

“We three!” It was Malar’s turn to be confused. “What can we three do? We are but two children and a bird.”

Hiroshu was slowly nodding its head. The children were not sure what it was thinking.

17

The Countdown Begins

The world woke up to the alarming news.

All major newspapers carried it in their headlines – *Jinjinoo will drown within the next six months.*

Around the world, top scientists, politicians, and many other important people were shocked.

Just six months! This was even sooner than the two years that the scientists had only recently estimated.

The beautiful island would be no more in just six months.

And the world did not have a plan to stop it from drowning.

To many climate experts around the world, the countdown was not just for Jinjinoo, but it could be for many other islands too.

Some newspapers had already started asking this: ***Jinjinoo Now. Which island will be next?***

People were asking themselves, “If sea levels could rise so dramatically at Jinjino, could it rise fast in our regions too?”

There was fear worldwide.

The world has over 100,000 islands if one counted every small island.

There are over 500 islands that are quite large.

Some of the most powerful countries such as Japan and United Kingdom are islands.

And it was not just islands that were at risk. There were hundreds of large cities located on the sea shore. They too could be in danger soon!

All the world’s powerful countries have large cities on the sea shore.

USA has many large coastal cities – New York, New Orleans, Boston, Miami, San Francisco...

China has Guangzhou and Shenzhen.

India has Mumbai, Chennai, Cochin, Kolkata...

Japan has pretty much every large city near the sea shore – it is an island!

And there are many other famous cities worldwide that are coastal cities.

“Would this soon be their fate too?” many around the world were wondering.

Until that day, very few in the world had heard of this small island.

But overnight, the entire world wanted to know all about Jinjino.

18

The World Protests

When the world saw, through pictures and videos, what a beautiful island Jinjinoo was and what it contained, there was real shock and sadness.

Because it was not just a beautiful island that the world would lose.

With the drowning of Jinjinoo, the world will forever lose some of the most exotic species of animals and plants that the island was home to.

While there were talks of evacuating all the humans, the government would not be able to do the same for animals and other wildlife – they will all drown with the island.

Animal lovers in many countries were seen crying as scientists and other wildlife experts showcased the amazing types of animals, insects and reptiles, some of them found only on Jinjinoo.

All these will drown.

Everyone around the world – from small school children to old men and women – was discussing Jinjinoo.

All of them wanted someone to find a way to save the wonderful island.

And when they were told that the world leaders were doing nothing to save it, there was widespread anger.

In every possible forum – newspapers, TV shows, Internet forums – people were asking the same question. “What are the powerful countries doing to prevent Jinjinoo from drowning?”



There were massive protests in many cities in the world accusing the world's political leaders of turning a blind eye to this disaster.

Will the global bigwigs do something?

19

World Leaders Meet

It was getting difficult for the leaders of the top countries to sit idly and wait for Jinjinoo to drown.

They had to try something.

The leaders of the top 25 countries in the world quickly gathered in Paris, along with the Prime Minister of Jinjinoo.

In addition to the political leaders, some of the world's top scientists had assembled too.

The discussions were hectic.

Isaac Maton, the world's topmost scientist researching climate change and global warming was blunt – the choices were few and difficult.

The sea levels were rising mainly because of global warming, which in turn was caused by high amounts of CO₂ in the atmosphere. The only way to bring down the sea levels near Jinjinoo will be to significantly decrease the CO₂ levels in the atmosphere.



“But,” said Isaac, “there is no proven technology that could absorb billions of tons of CO₂ quickly enough”.

The US president was not very happy with this.

“There must be a way. I mean, can’t you suck the CO₂ from the air using some super giant vacuum pumps or something?”

Isaac listened patiently to this rather impossible idea, but was polite enough not to say what he thought about it.

The Indian prime minister was equally dramatic.

“There are herbs suggested in our ancient books that quickly purify the air. Can something be tried on these lines?”

Isaac had in fact heard about some of those herbs. He also was convinced those herbs could purify air of harmful substances, but not absorb CO₂ from the atmosphere any faster than other plants.

The French President was wiser: “Isn’t there some chemical reaction that can be performed on a large scale so that large amounts of CO₂ are captured and made into a harmless and even useful material, such as calcium carbonate?”

Isaac was definitely impressed by the French President. “One of the few intelligent politicians in the world,” he mumbled to himself. “The combination is so rare these days – politics and intelligence.”

But even the French leader’s suggestion, while an intelligent one, was not possible in the short time they had. Any such large chemical reactor for capturing the extra CO₂ in the atmosphere to turn it into a less harmful substance would be a ten year project, not a

two or three month project. And there could be many dangerous side effects to such large scale use of chemical reactions worldwide.

Isaac said so in as few words as possible.

The Chinese President was walking to and fro. “So what do you suggest Mr Maton?” He was used to having quick and direct answers, the Chinese Premier.

But what was Isaac to do? There were no easy answers to such a massive and complicated problem.

He felt it was necessary to break the truth to everyone – the sooner they knew it the better!

He voiced it politely.

”Respected ladies and gentlemen, I hate to say this, but...” he paused, and continued slowly...

“With our current scientific knowledge and expertise, we know of no foolproof way to prevent Jinjinoo from drowning.”

20

Isaac Has a Plan

So, the world's top climate scientist was saying there was no hope.

Sitting in the middle and listening to this rather depressing conclusion was the prime minister of Jinjinoo.

At last he spoke up: “So, friends, should I ask the entire population of my beautiful island to evacuate right away?”

The world's leaders were shocked by this direct question, but they were even less prepared for the next one.

They were all just staring at him, when he continued, “But even if we evacuate, where can we go?”

Suddenly, the world's leaders realized that this was something they had not thought about. Where will a hundred thousand people go, all of a sudden? Which country will take them in?

While there was absolute silence in the room after this rather difficult question, Isaac spoke in a low voice.

“Well, I feel I should let all of you know about something.”

All the leaders were looking at him tensely.

Isaac continued, “While there is no proven method to absorb so much CO₂ in such a short duration, there is one idea that might just about work.”

It was as if a large caravan of thirsty people travelling for days without water in a punishing desert had suddenly seen something resembling an oasis.

“You have an idea that will work?” asked the Jinjinoo leader, with enormous hope.

“Well, it just might,” said the top scientist.
“There’s some science to support it, though there are many challenges”

The Jinjinoo leader was excited, “Do tell us more about this idea. What is it about?”

“Some magical idea?” The Indian prime minister really believed in magic.

“Something to do with nuclear fusion?” The American President always thought of big ideas, even if they were not relevant to the discussion on hand.

All eyes were staring at Isaac with the same question in their minds: “What is his idea all about?”

“Well,” Isaac spoke slowly, “If at all there is a chance for us to save Jinjino, it will have to be done by...”, he looked around the room and said...

“Algae”



21

Is Algae the Solution?

“Algae, of all blooming things,” thundered the American president. “Surely you are not joking Mr. Maton?”

The American president was used to doing things in a big and dramatic manner. The gooey looking algae somehow did not seem to fit in his grand scheme of things.

Algae indeed. Comical!

The Indian prime minister seemed a bit more satisfied, “I knew it all along; it would have to do with some magical plant.” He was a powerful man, the Indian prime minister, and no one dared to point out to him that there was nothing magical about algae; they were present all over the world.

“Algae, algae, algae...” the Japanese Prime Minister was getting excited. “We have a lot of that around our country. We can surely help in this”.

The Russian president, not very different from his American counterpart, was somewhat sarcastic, “These algae, Mr. Maton, surely you

are not suggesting we carry them around in hundreds of airplanes so they suck the CO₂ out of our air?”

Isaac was used to politicians. He did not respond to the Russian president’s comment.

It was however important he gave some details about his idea, so he continued, “Ladies and gentlemen, allow me to tell you why I and a team of scientists feel that algae could be the solution. Firstly, for this discussion, you can consider algae to be similar to plants, though technically they belong to a different category. Like plants, algae absorb CO₂ when they grow – for every kilogram of algae grown, about 1.8 kilogram of CO₂ is taken out from the atmosphere.

“But algae are also quite different from normal plants in many aspects. Algae grow fast, much faster than most plants. Unlike most plants, algae can grow in a whole lot of places – in the sea, in waste water, on ponds – pretty much anywhere where there’s water. Finally, many species of algae need only minimal amounts of fertilizers to grow – they absorb most of what they need from their surroundings.

Isaac stopped, and looked around. He was hoping his explanation was simple enough to

be clear to non-scientists, and concluded, “What all these imply is that it is possible, at least in theory, to cultivate a massive amount of algae quickly enough to absorb a few billion tons of CO₂.

He paused once again for a moment, and concluded, “In fact, this is not possible with any other plant except algae.”

Put simply, Jinjinoo’s survival depended on algae.

22

No Algae. No Us

While many big and powerful men (and women) around the world did not think much of the little algae, some small and simple folks had high regards for them.

Malar was one of them.

Malar knew something about algae. While most people around her just wrinkled their faces on seeing the gooey algae in their neighborhood, Malar liked them.

Liked them! Why would anyone like algae, aren't they just scum?

Malar did not think so. And in fact, it is not so.

There are tens of thousands of species of algae, and what you see as scum in your ponds or puddles are just a few of those species.

Different types of algae are useful for all sorts of things. Some species of algae are used as food in countries like Japan. Other algae can be used to make medicines and health foods. Some types of algae are used to treat waste

water, and a few species can be used even to make diesel, petrol or plastics!

Beyond all these, there is something much more important that algae does. Many people in the world do not know this, but Malar did!

The curious girl she is, Malar had got interested in algae as a fourth grade student and had looked it up. What she read astonished her.

Algae supplied over half the oxygen in the atmosphere.

Repeat this to yourself: Algae supplies most of the oxygen that we humans need to live!

So. Malar told herself, we are alive because of algae!

That sounded fantastic and amusing to her friends, and even teachers.

“The pond scum keeps us alive? Tell me a better story,” told her science teacher Vimala at first. But knowing Malar, the teacher looked up on the Internet that evening and found, as she suspected, that Malar was right.

It was indeed the humble pond scum and its tens of thousands of algae relatives that keep us alive. They do this by supplying a large part

of the oxygen we breathe, as part of their photosynthesis.

And during photosynthesis, they capture massive amounts of CO₂ and thus maintain their levels in the atmosphere.

Who would have thought we owe our survival to the simple algae!

But this is the truth.

As Malar would say, “No Algae, No Us.”

23

“Where Will the Algae Grow?”

Back to the Paris meeting.

The world’s top scientist had just concluded that the only hope for Jinjinoo lay in algae.

The audience took some time to understand this. Essentially, what Isaac was saying was this: **We can try growing massive amounts of algae very quickly. Through photosynthesis, this will capture billions of tons of CO2, which will reduce global warming. Once there is less global warming, the sea level will not rise anymore. We can thus save Jinjinoo from drowning.**

The French prime minister asked a relevant question: “So you mean that billions of tons of algae need to grow really, really fast, and on very large areas to suck that much CO2 from the atmosphere? But then they will need tens of millions of hectares of land, or perhaps tens of billions of hectares.” His voice sounded confused.

“Yes, sir,” said Isaac. “We would need very large areas to grow these algae. Possibly a few billion hectares.”

“Hey,” the American President suddenly joined the discussion. He had a real estate background, and knew all about land and its availability. “Where will we get billions of hectares of land in such a short time? I mean, where will these tens of billions of hectares of algae growth happen?”

Isaac took a deep breath and said what had to be said, “Gentlemen, there is only place on earth where such a large area is available for the algae to grow, at the speed at which we want it to grow.”

He looked around the room and continued.

“The ocean”

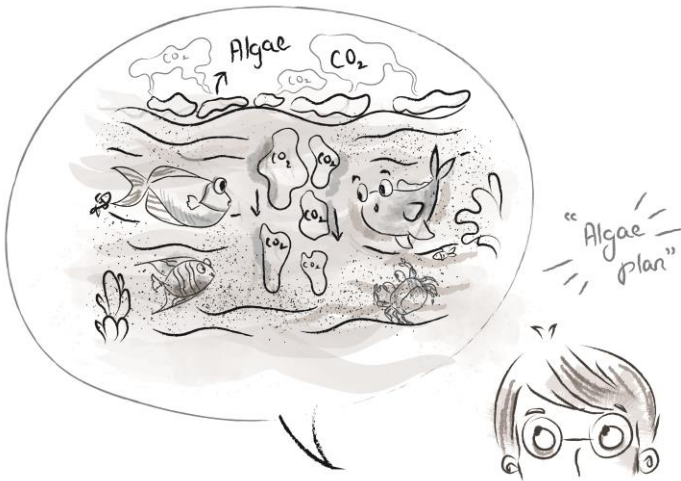
“Ocean?” – The question came from all the leaders at once.

“Yes. A few billion tons of algae need to be grown very quickly in the ocean, and once grown, they need to be buried in the ocean for a long, long time”

Even those who were willing to give the benefit of doubt to algae were now taken aback.

Growing algae in billions of hectares in the wild ocean! And then getting them buried under it!

On the way out, one could hear what the American President thought of Isaac's idea -
"Ocean indeed! That man has lost his mind".



24

The Algae Plan

After the Paris meeting ended, the importance of algae was explained in detail to the world leaders by their scientific advisors. It took them sometime to believe that we were all alive because of algae.

The leaders were all used to thinking that it was they who kept the world up and alive. Now it turned out that it was the simple algae that kept the world ticking. What a let-down!

Even after this, doubts persisted in their minds about growing massive amounts of algae in the ocean.

Despite these doubts, they decided that Isaac should prepare a plan for a project that used algae to absorb the CO₂. The world leaders realized that they had to do something.

It was in fact the French Prime Minister who called Isaac and suggested that he prepare a project plan for this immediately, so that a quick decision can be taken.

It was called the Algae Plan.

The idea was to implement a project that would somehow grow massive amounts of algae in the oceans, over millions of square kilometers, within three months. This fast growth would absorb enough CO₂ from the atmosphere quickly, stop global warming, and stop the sea level increase.

Isaac was excited.

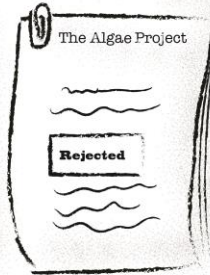
To make this project plan, he worked one full week at his lab, almost non-stop, along with some of his brilliant colleagues.

After a number of complicated calculations and simulations, he was able to put together a plan that would grow a few billion tons of algae in the Indian Ocean within three months.

The project would need a lot of help – many billion dollars in money, more than five thousand workers along with the hundred top scientists, and intense cooperation among the top twenty five countries.

He sent the plan to the deciding committee that included the American President, Indian Prime Minister, Chinese President and the Russian President.

But the Algae Plan was rejected.



It was rejected because the leaders felt it cost too much – two hundred and fifty billion dollars. In addition, it required over one hundred scientists with super-specialized scientific expertise – something not available anywhere in the world! And even after all the expenditure and efforts, there was only a small chance that the project would succeed.

It was a difficult decision, but the world's top leaders concluded they had no choice but to allow Jinjinoo to drown.

The American President conveyed this difficult decision to the Prime Minister of Jinjinoo and

requested him to start making the evacuation plans.

Humans had given up on Jinjinoo.



25

Hiroshu Has an Idea

Hiroshu and Mihir were once again listening to Malar.

She had read about the latest rejection by the top level committee and was telling them about it.

Mihir was fascinated by algae. Until then he had only thought of algae as the green goo in the small street puddles and in the nearby lagoon. Hmmm, he said to himself, he would learn more about these fascinating algae.

But he suddenly realized how silly he was.

When and where would he learn about algae? His home, his island was about to drown.

He and his family will have to shift from Jinjinoo to some congested city, likely a city with no oceans, no beach. No birds. No natural beauty.

Mihir was dejected.

While Mihir was having these sad thoughts, Malar had just completed telling everything that happened at the Paris meeting.

Until then, Hiroshu had not moved at all. As usual, it just kept absolutely quiet and listened attentively.

Malar finished it off with, “So the world has rejected the algae plan. Jinjinoo will drown soon.”

Hiroshu was nodding his head up and down, chirping something and flapping its wings in a strange manner. While the two children usually understood within no time what Hiroshu meant, they were not very sure this time round. Hiroshu was saying something that was not clear to them.

After a while, it was Mihir who understood what Hiroshu was saying.

“Hiroshu says we should not worry if algae could solve the problem.”

Malar did not understand.

Mihir went on.”Hiroshu says algae are his closest friends, and they will do anything for him and the Kaboki species. Hiroshu is confident he can get any amount of algae to grow in the ocean.”



On hearing this, the first thought in Malar's mind was, "Hiroshu must be playing a prank."

It sounded incredible. Could such a thing be even possible!

Malar looked at Hiroshu. It was nodding his head and flying up and down, in a delightful manner.

It was saying YES.

26

Is It Possible?

Malar was still doubtful: “But Hiroshu, billions of tons of algae will need to grow, and they need to grow really fast, to absorb large amounts of CO₂.”

Hiroshu nodded his head in a positive manner - he was saying he could manage it.

“Manage it! How is it possible? We are not talking about plucking a fruit from a tree!” Malar thought Hiroshu did not understand how difficult the challenge was.

Hiroshu understood Malar’s doubts.

After flying around for a while, it swooped down, did a lot of funny things with its head and its paws, and then chirped a lot.

The children understood. The bird was saying that it was not joking - it knew how to do it. It was saying it would talk to the algae and somehow make such a massive thing happen.

This was beyond even Malar. She had of course talked to trees – especially to banyan and coconut trees. She found it a bit difficult even to talk to them – the language of plants

was not easy to understand, though eventually she started mastering it.

But algae. She had no idea how to even start talking to algae.

Even under such a tense situation, it made her smile when she thought how she would start a conversation with algae, “Hello algae, how was your day?” It sounded weird to her.

OK. Hiroshu is a bird. Perhaps birds knew how to talk to algae. Malar was willing to believe that.

But to whom would Hiroshu talk to complete such an incredibly large and complex project?

To have billions of tons of algae grow, who could Hiroshu talk to? Was there an algae king or something like that?

Malar doubted there was an algae empire, and an algae king who could summon millions of his algae army soldiers to march and get the job done.

How exactly would Hiroshu then ensure that billions of tons of algae grew on hundreds of thousands of square miles in the wild ocean?

Malar asked her doubt aloud – *“How is it possible?”*

27

The Brilliant Hiroshu

Hiroshu was smiling for a while. And then it spoke, as usual with his usual chirps and paws and head. But it was trying to say too many things, and Malar was finding it difficult to understand.

It was Mihir once again who figured out what Hiroshu was saying: “Malar, Hirosho says he will convey this within a day to tens of thousands of his algae friends present across a very vast area, and then each of them will do its job.”

Malar thought about this for a moment. Such an idea will need Hiroshu to fly a few thousand kilometers and also ensure he had had discussions with thousands of different algae, all within a day!

“How is it possible for Hiroshu to do so much in so short a time Mihir?” asked Malar, astonished that even Hiroshu could fly such long distances and communicate to so many different algae within one day.

“Malar, Hiroshu is not planning to do it on his own. He will be using a few thousand Kabokis to get it done.

“It says that within the next one hour, it will assemble a hundred of its best Kaboki friends near here and communicate the message for the algae. Each of the hundred birds will fly in different directions and in turn communicate the message to many of their friends, and so forth. By this method, within no time, thousands of birds will be carrying this message to tens of thousands of points where they will let the local algae know about it.”

“Very clever,” thought Malar. “Only Hiroshu can come up with such brilliant ideas”

Malar had another question and she shot it out to Hiroshu: “Why will the algae at so many different locations do such a monumental task for you? They may be friends with you all right, but this is just too much work to do even for friends’ sake.”

“Ha, good question Malar,” said Hiroshu, “Algae owe our bird species something special, because about five million years ago, we saved thousands of species of algae from becoming extinct. This is payback time.”

“Five million years,” exclaimed Mihir. He was trying hard to imagine such a vast amount of time.

“Yes, you humans were not even on earth at that time,” winked the wise bird.

But it took a lot to convince Malar.

“It is not payback time really,” she was saying. “Your species is not becoming extinct. It is just this island that will become extinct. Why will the thousands of Kabokis care about Jinjinoo and undertake this difficult task?”

“Well, there you are wrong my friend,” said the bird. “The island of Jinjinoo is very important for the Kabokis. We Kabokis consider this beautiful island as one of our three homes in the world. You see, don’t you, that for me and hundreds of thousands of Kabokis, this island becoming extinct is as bad as our entire species losing an important home! Sure, we can live in one of the other islands, but we will miss Jinjinoo badly, because this is our most beautiful home. Besides,” continued Hiroshu, and after looking sweetly at the two kids for a while, said, “the loss of Jinjinoo will be a huge personal loss for me.”

“Personal loss? Why?” asked both the children at the same time.

“Because, without this island, I will not be able to meet my two best friends in the world. You might just about know them – they are called Malar and Mihir.”

The kids were simply overwhelmed!

Mihir jumped and hugged Hiroshu.

28

A Sky Full of Kabokis

After Hiroshu had left them to talk to other Kabokis, Mihir and Malar just looked at each other for some time. Neither was able to say anything, but both were thinking the same thing – “Can Hiroshu do it? And can the other Kabokis indeed make millions and millions of tons of algae to grow fast?”

They need not have worried.

The next twenty hours saw some really frenetic activities in the skies over Jinjino, and for a few thousand kilometers around it.

Tens of thousands of Kabokis were flying this way and that. It seemed as if they had no sense of direction, but in reality, each flight had a clear purpose.

Hundreds of conferences were happening in the air, during which one Kaboki would quickly guide a few dozen Kabokis on where they should go, and what to communicate to the local algae.

Passengers on flights from southern India, and from Maldives, Sri Lanka and of course Jinjinoo were witness to this amazing sight.

Very few had seen the amazing Kabokis in the first place. No one had ever seen hundreds of these at once.

It was a magnificent spectacle to see so many of these strange birds all at once in the sky.



29

An Ocean Full of Algae

Three days after Hiroshu had sought the help of his Kaboki friends, Isaac was flying from Australia to Europe. His flight had taken the route that went over Jinjinoo.

Isaac was a sad man. He knew that trying to grow billions of tons of algae within a few months was a long shot, but that pretty much was the only idea that had at least some chance of working.

Now, even that was gone.

Jinjinoo would drown in a few months.

He looked out the window to get a glimpse of the island one last time.

Upon gazing out, he realized that the airplane was not yet flying over the island. It was just the ocean under him, and he was about to draw back from the window when something attracted him.

The ocean was not just plain after all – there was something on it.

Upon gazing down once more, he could see very large growths on the ocean. He was sure that such growth was not there before, because he knew those regions well.

What could the massive growth be?

As the plane flew forward, he could see this growth stretching forever – for tens, hundreds or perhaps even a few thousand kilometers.

What indeed could it be?

He closed his eyes and thought.

Slowly a question popped up in his mind: “Could it be – could it be ALGAE?”

He looked out again, this time in a way scientists are trained to look.

Yes indeed, they were. There they were – millions and millions of tons of algae were growing on the ocean.

Such an unimaginably large amount of algal growth seemed to have appeared from nowhere at all, and at a speed that he had never thought was possible.

There indeed was something incredible happening right in front of his eyes.

Of course, Issac knew nothing about Malar, Mihir or Hiroshu! He knew nothing about the Kabokis, either.

All he knew was that something magical was happening.

30

Isaac at the White House

All along the flight journey to Europe, Isaac kept thinking about the remarkable algae growth. As soon as his flight landed, he started working to find out more.

A few days later, Isaac was at the White House, the residence of the President of the United States of America. He had requested a meeting with the President.

The President, realizing the importance of the request, had cancelled all other appointments for the day to meet with Isaac.

When Isaac entered the room, the President was in an excited conversation with his top scientific advisor. Also were present some of the top scientists from around the globe, assembled together at short notice.

“Mr. Maton, good to see you again,” said the US President.

“Thank you indeed Mr President for agreeing to meet me. I just thought I should convey this news in person to you.”

The scientific advisor, who had known Isaac for many years, made a signal with his hand to a piece of paper lying near him.

Isaac went through that. Yes, what he had estimated was correct.

The CO₂ in the atmosphere had decreased significantly in just the previous week. More CO₂ had been absorbed from the atmosphere in just five days than normally gets sucked out in a year.

“What does it mean, Mr. Maton? How is this possible?” the US President’s voice was full of surprise.

“Mr President, this is indeed great news, firstly,” said Isaac. “I and my colleagues still cannot believe this is happening.”

The scientists in the room nodded in agreement.

He continued.

“Some of you might think it is magic, and some others might think it is divine intervention. But, in my opinion, it is neither.”

The US President was impatient, “So what indeed is the reason? What has made this dramatic reduction in CO₂ possible? Is it

some large chemical release or something? Did you guys do something without our committee's approval? I hope not."

Isaac cleared his throat. "Well, the fact is, none of us, neither the scientists, nor anyone else, did anything to bring about this effect."

He paused for a moment and said, "*The whole reduction in CO2 came about owing to...*" – he paused again and concluded:

"Algae."

31

The Magical Algae

There was utter silence in the room for almost half a minute.

“Those blooming algae once again,” the US President’s tone was almost mocking. “You can’t be serious. All the top leaders agreed – except the French Prime Minister of course, but he is a funny man – that it was not possible for algae to make any difference. Those small little critters cannot be the ones that might just save Jinjino. Come on, don’t give us this story just because it is your pet theory”

It amazed Isaac how someone with little or no knowledge of the specialized science of biology or biotechnology have conclude that algae could not accomplish the task.

But he had to give a polite answer, because, he was talking to the most powerful person in the world.

“Mr President, it is not my guess. It is a fact, or should I say, it is highly likely algae are responsible for this.”

“Surely you have some proof for your statement?”

“Well, yes” He passed around the satellite photographs of the regions where he had seen the massive algae growth, and the mathematics that he and his team had done based on this.

“Can someone get these photographs on the large screen?” thundered the US President.

Within a few seconds, the pictures were on a gigantic TV screen.

The pictures showed the “before” and “after” images of sample regions in the ocean, a massive two million square kilometers in size. The second set of pictures was taken just three days after the first set.

The first set of pictures showed plain seas, with nothing on them. The second set of pictures, oh, they were really something. The same regions, which had absolutely nothing just three days earlier, were swarming with algae, the entire two million square kilometers.



There was a gasp, no, much more than a gasp from the audience. The scientists were screaming.

This was just not possible.

But it was true.

“Oh my, oh my!” it was the shocked voice of the American President, “How could have so much grown on such a massive area in so short a time?”

Isaac had no answer.

He also knew that no scientist in the world would have an answer to that question.

It was good that the scientists did not know about Malar, Mihir or Hiroshu. Just imagine how the political leaders would have reacted had the scientists mentioned that two small children and a bird had done all these!

After the commotion had ended, a prominent British scientist asked, “When was the second set of pictures, the “after” pictures, taken Mr Maton?”

“Two days back, sir”

“So what do you think has happened since then? You think the algae are still floating?”

“I don’t know. But the latest satellite images can give us the answer.”

The American President boomed, “Can we ask our Sat guys to get the latest pictures of those regions right away?”

“Yes sir.” A man ran out.

In just ten minutes, he had the latest pictures.

“Hook them up please”

The latest pictures from the vast region came up on the screen.

The screaming from the audience was even louder this time. Scientists were trampling

over one another to get a better view of the picture.

No one in the room could believe what they were seeing.

Because, there was not a spot of algae anywhere in the two million square kilometers.

In the same area that contained a few billion tons just two days earlier.

It was as if the algae had never been there.

32

CO2 Gets a Burial

The vast stretch of the Indian Ocean was witnessing something never before witnessed.

The fish and other sea creatures were having their daily lives disturbed because something unusual was happening.

A few billion tons of algae were slowly sinking to the bottom. The journey had started a day earlier, and it would take another week for the entire mass to have reached the ocean floor, to a depth of about 4000 meters under the surface.

The gigantic mass of algae was taking along with it the billions of tons of CO2 it had captured from the atmosphere.

Once they reach the bottom of the ocean, the algae will lie there for many decades. After this period, owing to the many natural activities that take place under the sea, the algae will start releasing the carbon stored in them back into the atmosphere.

But for the next few decades at least, the billions of tons of captured CO₂ will remain buried under the sea.

33

Jinjinoo is Saved

The earth's atmosphere had lost a few billion tons of CO₂ in a very short duration.

With such a massive amount of CO₂ removed, a stabilizing climate pattern was seen all over the world. The temperature had already cooled in many regions.

The cooling atmosphere had started cooling the ocean waters. In addition, the rate at which glaciers were melting had also slowed the world over.

With all these, sea levels stopped increasing near Jinjinoo.

Jinjinoo had been saved – at least for now.

34

“A Stupendous Achievement by Humans”

The whole world came to know of this incredibly happy news.

Jinjinoo had been saved. The ocean was not going to drown it.

Malar, Mihir and Hiroshu were overjoyed. It was indeed Hiroshu who, after continuously flying over the ocean around Jinjinoo, had brought them the great news about the algae growth, the CO₂ capture and its burial under the sea.

But most people worldwide had no clear idea how it had happened.

They were just told that very large amounts of algae were somehow grown to make this happen. They were told that an international team of brilliant scientists, top business heads and bold political leaders had made this happen.

The world's top politicians were not worried about the truth. For them, this was a great

occasion to prove that their wisdom, and their quick and bold action had saved Jinjinoo.

To celebrate this “stupendous achievement of the human mind and efforts” as they called it, a grand function was organized in the center of Jinjinoo.



Set in a gala stadium, the glittering function had the heads of the top twenty five countries gathered together.

They were congratulating themselves and their scientists on the wonderful job they had done.

Thousands of important people from all over the world, scientists, billionaires, celebrities from the world of art, movies, sports and

technology had assembled in the massive stadium.

The world leaders spoke, one after the other.

The American President spoke at length on how it was a team of American scientists that had figured how the algae could grow faster on the ocean surface.

The Indian Prime Minister also claimed an important role and mentioned how his country's scientists had spent many hours researching the various algae species.

The Chinese and the Russian leaders mentioned how their physics and biotech scientists had figured out how the algae could sink really quickly to the bottom of the ocean.

The leaders of all the other countries on stage were nodding their heads in appreciation and approval. Except the French Prime Minister, who decided that the best he could do was to keep quiet!

Isaac was there too. He was seated on the stage along with the politicians.

Isaac had of course protested when the world leaders told him that in their opinion Jinjino had been saved by brilliant human efforts. He could not believe what he heard.

Human efforts! But who did what, he asked the top leaders.

After failing to convince Isaac, the world's political leaders requested Isaac to just keep quiet during the entire show. That was fine with Isaac, who was glad that he did not have to say a lie.

There were 20,000 people in the massive stadium – the most important and powerful people of the world – and all of them were proud how human brilliance had saved the island, and perhaps the world.

Over a billion people worldwide were watching on TV the celebration of this achievement.

Malar's & Mihir's parents too were watching the event with relief and happiness. But like many others, they too were not entirely sure how the island had been saved.

Little did they know about the role their children had played in what was being claimed as a great scientific and political achievement!

35

A Quiet Celebration



Just three kilometers away from the venue of the grand show watched by a billion people worldwide, on the lonely beach of Jinjino, two young children were quietly doing what they had done many times before - building a small monument to nature.

The only ones watching them was a strange looking bird happily flapping its wings a few meters above them, and a poor peanut seller who was having no business that day.

This time, they were building a monument to something new.

What monument were the children building?

They were building a monument to...algae.

THE END

*Dear girls & boys -
The story has ended.
But there's more for you.*

Eh?

Yes.

Read on.

Get in touch with Malar, Mihir & Hiroshu!

Do you know that you can actually write in to Malar, Mihir or Hiroshu? And even get replies from them?

In the following pages, Malar, Mihir & Hiroshu ask you some interesting questions. Send in your answers, and see what happens!

Here's Malar asking you some interesting questions on algae, climate change & more



Hi friends,

It feels really good to say Hello to you all.

As you know, I am fascinated about nature.
And I am sure you too are.

So, here are some questions on nature. During Sundays, other holidays, or whenever you have time take some time to do some research on my questions and send me your answers.

Send your answers to as many questions as you like to malar@malarmugam.com

Remember, all your answers will be published on our web site www.malarmugam.com

I look forward to hearing from you.

Here are my questions:

- **Question on Algae** - You know from this story that algae are very important for us to live! I am requesting you to find a bit more about them. Algae are of two main types – microalgae are small and macroalgae are large. **Can you read up on both microalgae and macroalgae and tell me which of the two you like, and why?**
- **Question on Greenhouse Gases** - In this adventure, you came across greenhouse gases that result in global warming. Carbon-di-oxide is of course the most prominent greenhouse gas, but there are others. **Give me a list of a few other greenhouse gases in our atmosphere.** *To do this, you can search on the Internet, or take help from your parents/siblings/friends.*
- **A Question about Islands** - There are many islands around the world threatened by climate change and global warming. Some of these islands are actually well known countries. **Can you provide a list of countries that are also islands?** *Oh, this will be easy to find, and also fun. Just sit with your friends and parents, and you will get a list fairly quickly.*

- **A Question about Coastal Cities** - Cities located on the sea coast are face the biggest risks because of global warming. **Can you give me a list of 10 famous cities in the world that are on the coast?** *Well, you know, you can really get to know a lot about interesting cities while trying to find the answer to this question. Use a world map or a globe to get this list – also, don't forget to take help from your parents!*

Remember, you can send in your answers to my questions to malar@malarmugam.com . I will review each answer and respond back too, along with my autograph!

Yours truly

Malar Mugam

Here's Mihir asking you some cool questions on nature



Hi pals,

I am amazed and thrilled to be talking to you. It just feels great.

You already know that I like exploring things, especially many things related to nature. When I am not studying or not at school, I spend most of my time on the beach, in the coconut groves and of course these days, I spend a fair bit of time with Hiroshu also.

I would like to know something about each of you and what you think about some cool things. So, here are some questions for you to think about and send me your answers.

- Send your answers to as many questions as you like to mihir@malarmugam.com
- All your answers will be published on our web site www.malarmugam.com

I look forward to hearing from you.

Here are my questions:

- **Tell Me about Gardens** - Do you have a garden in your house? If not, I am sure you have been in gardens in some other house. **Tell me what you like most about gardens and what types of plants you would like to grow in your garden?**
- **Tell Me about Birds** - Now, a question on birds: **List down at least 5 different birds you have seen, and some interesting features for each of them. Hey, let these not just be parrots and crows, think of other interesting birds you have seen!**
- **Tell Me about the Beach!** – How can I forget the beach, of all things! I spend a lot of time on the beach and I just love it. But it is not just the sand and the water. There's a lot more on a beach. My question to you is: **What all do you like about the beach, and what all do you do when you are at a beach?**

Discuss with your friends and parents, and take their help while sending in your answers.

Remember, you can send in your answers to my questions to mihir@malarmugam.com . I will review each answer and respond back too, along with my autograph!

Yours truly,

Mihir Mitra

And now, it's Hiroshu's turn to ask you some questions on amazing things around the world



Hi all!

Kooooo-Keeeee-Kowwww! That is my way of saying “Hello, how are you” – remember, I am a bird.

I am sure you know that I just love flying all over the world.

Oh, what amazing places I have flown above. I have flown over astonishing waterfalls, large mountain ranges, incredible forests, beautiful gardens, some fascinating glaciers...

While you might not see all the stuff I have seen in real life, I feel you should at least see them in pictures and videos.

So, I am going to request you to do something on the Internet and get back to me with your answers:

Send your answers to hiro@malarmugam.com

Remember, all your answers will be published on our web site www.malarmugam.com

I look forward to hearing from you

Here are my questions. Hey, take help from your parents and friends wherever you like, because you will have to do some research to answer my questions. ***Kweeee-Hwoooo-Droooo!***

- **The Amazing Amazon Forests** – Friends, go through some videos of the Amazon forests on YouTube. Tell me what different animals or birds you found there.
- **The Majestic Egyptian Pyramids** - Have you heard of the Egyptian pyramids? Oh, they are majestic. You must see them. When you have some time, look up pictures of the Egyptian Pyramids and tell me what you think of the pyramids, in your own sweet words.
- **The Awesome Trees** - Now, something on trees. I am sure you have seen a good

many trees, but have you ever written a few lines about these trees? Here's your chance! Write down and send me a few interesting things about each of the following trees: Oak, Maple, Eucalyptus, Banyan, and of course the Coconut. Look up each tree on the Internet and tell me what you liked most about each of these awesome trees.

You can send in your answers to my questions to hiro@malarmugam.com . I will review each answer and respond back too, along with my autograph!

Yours truly,

Hiroshu of the Kaboki species

The Kiribati Islands - Jinjinoo in Reality!

Hello Children,

I hope you liked the story *Will Jinjinoo Drown?*

What I have written here is a story, and the island of Jinjinoo does not actually exist.

But you will be surprised to know that there is a real group of islands parts of which are expected to drown by 2030.

Yes. Called the Kiribati, this group of Pacific islands is slowly being invaded by the rising ocean. It is expected that by 2030, some or most parts of the islands will be under water.

The inspiration for me to write this story came from this alarming news about Kiribati.

Can someone save Kiribati from drowning?

Perhaps Malar & Mihir can. Perhaps Hiroshu can.

Or, perhaps - you can.

You can read more about Kiribati from this interesting web site *The Little Island that Could*

- <https://thelittleislandthatcould.com>

Signing off,
Yours forever
ENN ESS

About the Author & Illustrator

Hello from the Author

Hello there – I am Enn Ess. Well, what sort of a name is THAT?

Oh well, that's just the short form of my real name, which is Narasimhan Santhanam – a real mouthful! You will agree that my short name is far easier to read & remember.

I live in the city of Chennai, in south India, and run a company that helps many others put up solar power plants. My company is called Solar Mango. You can write to me at narsi@solar mango.com

Hi from the Illustrator

Hi children – I am Raghavi C. I provided the illustrations for all the chapters in this book. I hope you liked my work.

I live in the city of Chennai, and run a creative design firm called Picturebookfactory. Isn't that a cool name to have for a company!

You can find my company at Instagram under Picturebookfactory. You can write to me at raghaviillustrations@gmail.com

Words & Terms Explained by Malar

Here's Malar explaining some of the interesting terms and words in the story in her own, simple and cool style

- **Algae** – Friends, can you believe that there are over 30,000 different species of algae! Some algae are microscopic in size, and these are called microalgae. But not all algae are so small – many other species, called macroalgae, are large and can be found in oceans. The large seaweeds in the oceans that you might have seen in pictures actually are macroalgae. ***So, the next time someone mentions algae, zap them with the question: “Are you talking about microalgae or macroalgae?”***
- **Amphibian** – OK friends, most of you will know what amphibians are – well, they refer to animals that can live both on land and in water. What comes to your mind as soon as I say Amphibian? ***Ah-ha, yes, a frog. Frogs and toads are the most common amphibians we know.*** Another well-known amphibian is the lizard-like salamander. Look it up on the Internet.

- **Billion** – A billion is a pretty large number. It is a number with 1 followed by 9 zeros = 1,000,000,000. Massive, isn't it? Talking of billions, here's an interesting fact: ***Our earth is over 4.5 billion years old*** - that would be over 4.5 thousand million years. Just imagine! Now, if you thought that was really old, listen to this: Our universe has existed for much longer; it is over 12 billion years old - that would be over 12,000,000,000 years. My head spins. What about yours?
- **Biodiversity** – Biodiversity refers to the extent of different plants and animals present in a region. So, if your region is high on biodiversity, it implies that it is full of different plants and animals. ***Friends, I request you to check out how well your city does in biodiversity through a Google search!***
- **Biotech** – Biotech is short for biotechnology. Now, what is biotechnology? Biotechnology is a specialized branch of science, and comes under biology. It refers to technologies that use biological processes for useful purposes. ***Check with your parents and relatives whether anyone in your family is a***

biotechnologist! By the way, the study of algae also comes under biotechnology.

- **Calcium Carbonate** – Calcium Carbonate is a chemical compound and has the formula CaCO_3 . It is a common substance found in rocks. By the way, ***did you know that the common limestone is actually Calcium Carbonate!***
- **Climate Change** – We all keep reading about Climate Change. Let me try explaining it in my own way! Climate Change refers to changes seen in the climate across the world in the recent years. When I say Climate, I refer to temperature, wind, and also to specific weather-related events like drought. ***Most scientists today agree that Climate Change is mainly the result of increasing levels of CO₂ in the atmosphere.***
- **CO₂** – We all know about CO₂, because we breathe it out with every breath! In addition to our breathing, many other human activities such as electricity generation, our cars, our industries, emit CO₂. ***Excessive amounts of CO₂ can result in Climate Change and Global Warming.*** Interestingly, all plants breathe in CO₂ for

their photosynthesis. Thus, the CO₂ that is emitted by us is captured by the plants, and that is how the level of CO₂ in the atmosphere is kept in a balance.

- **Corals** – Hey friends, I am not sure if you know about corals. If not, you must know about these interesting organisms. Read on! Corals are in fact animals that live in small colonies in the oceans. They have a hard skeleton made of calcium carbonate. The wastes and other matter from these corals sometimes end up forming islands, and these are called Coral Islands. ***Isn't it fascinating that some sea animals can actually create islands!***
- **Extinct** – The word Extinct means “no longer existing”. The word is commonly used to refer to plants or animals that no longer exist on earth because their species vanished for some reason – isn't it quite sad that many of these wonderful organisms no longer exist! A famous example of an extinct animal is the dinosaur, of course! ***Can you come up with other extinct animals? Do an Internet search and you can surely find more of these.***

- **Global Warming** – Most people in the world believe that our earth is becoming hotter every year because of the changing climatic conditions, and this phenomenon is called Global Warming.
- **Greenhouse Gases** – Friends, it is important that you learn more about greenhouse gases and the greenhouse effect. Well, these gases present in the atmosphere give rise to the greenhouse effect. What is the greenhouse effect? In the greenhouse effect, heat radiated from the earth's surface is captured by the greenhouse gases, leading to higher atmospheric temperatures, and global warming. ***So, greenhouse gases, through the greenhouse effect, result in an increase in atmospheric temperature.***
- **Hectare** – A hectare is a large area of land. It equals 10,000 square meters. ***Imagine a football field - a hectare is almost the size.***
- **Indian Ocean** – The Indian Ocean is the world's third largest ocean. It covers a massive 70 million square kilometers. The ocean has Asia (and India) to its north, the Southern Ocean (also called Antarctic Ocean) to its south, the African continent

to its west and Australia to its east. ***As you can guess, the Indian Ocean is named after India.***

- **Kelps** – Pals, you might not have heard about kelps. And that's not surprising because you cannot find kelps on land - they are found in the oceans. Kelps are actually macro algae (macro means large). Some of the kelps can be pretty large, reaching as much as 150 feet in length! ***Just imagine seeing a 150 feet algae in the sea! Whew!***
- **Lagoon** – Hey, I am glad you wish to know about lagoons. A lagoon is a shallow body of water (looks like a pond), and is actually separated from a much larger water body like an ocean. ***Lagoons are usually found on islands, and many of them are lovely.*** You must search on the Internet for images of lagoons – I am sure you will really like them!
- **Maldives** – Maldives is a gorgeous island located in the Indian Ocean. It has amazing natural beauty, awesome beaches and of course the splendid ocean around it. ***Is there any surprise that Maldives is one of the most preferred tourist spots in the world today!***

- **Million** – A million is a thousand thousand. In numbers, it is 1 followed by 6 zeros = 1,000,000. A pretty large number. If you have a million dollars with you, you can consider yourself rich.
- **Molluscs** – Molluscs are invertebrates (organisms without backbones) that usually live in damp places and in water. Oh, and by the way, you already know some molluscs ***because some of the most well-known molluscs are - snails and octopuses!***
- **Naval Engineer** – You would have heard of mechanical engineers and electrical engineers. Do you know that there are also naval engineers? Now, what do these engineers do? Naval engineers are technicians who maintain the operations and maintenance of a ship, including its engines. Do read up more about naval engineering from the Internet, or ask your parents about it.
- **Payback Time** – You may or may not have heard the term “Payback Time”. What does it mean? This term means it is time for someone to help you, in return for some other help you had provided them earlier.

So, if you had helped your friend in something recently, and you wish to get some help from them in return, impress them by saying, “Hey, it is payback time”. Won’t it sound hip!

- **White House** – The White House is the residence of the President of the USA, which also serves as his office. It is located in the city of Washington DC, which is the capital city of the United States. ***By the way, did you know that the White House is called so because it is painted white!***

Friends, thank you for reading the dictionary I prepared for you. I hope you found it useful – Malar.

Dear boys and girls -
On the Internet, we are at
www.malarmugam.com