

Welcome to our garden



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our **garden**

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PACIFIC CLIMATE READERS

Welcome
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our **garden**

Level
2



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ISBN 978-982-9171-74-0

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Introduction

Climate change is a global threat and the greatest challenge to human wellbeing and survival. The Pacific Islands are especially vulnerable to its impacts, which have become visible in people's daily lives. Climate change education and adaptation are essential to Pacific Islanders and should become a topic of discussion in every classroom and every home. Helping people of all ages to understand climate change is important, because without the right knowledge, we cannot imagine the best solutions.

Along with other books in the **Pacific Climate Readers** series, this book aims to build the foundational knowledge required for understanding climate change impacts and adaptation options in different Pacific Island settings. By exploring island ecology, health, hygiene, and traditional knowledge within the diverse and dynamic contexts of Pacific communities, this series of readers helps children interpret and navigate the complexities of a changing world.

This series was made possible by the Australian Government's **Australia Pacific Climate Partnership (APCP)** working with **Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)** on a programme called **Accelerating Climate Education (ACE)** for the Pacific. The goal of this initiative is to empower through knowledge and to inspire educators and students throughout the Pacific to lead meaningful climate action within their own schools, homes, and communities. Working together is the best way to move forward with hope for a safe, healthy, and sustainable future.





How to use this book

Like other books in this series, this climate reader has several parts to support the learning of the reader.

- a) The informational narrative (story): Children can read the story by themselves, take turns to read as a small group, and/or listen to it being read by an older child, parent, educator, or another adult.
- b) **Learning outcomes**: This is what the reader should be able to know and do after reading the book.
- c) **Interactive prompts** for deeper discussions on topics raised in the narrative: These help parents and educators encourage children to think more about the story and research more about it, especially by talking to elders and local experts in the community.
- d) **Facts and tips** related to the topic: These help parents and educators create projects, assignments, outdoor activities, and other educational opportunities in which children will take on roles similar to the story characters and follow practical advice to engage in learning through play.

A young boy with dark skin and short, curly hair is standing in a lush tropical setting. He is wearing a white t-shirt with green trim on the sleeves and blue pants. His hands are held out in front of him, palms up, in a welcoming gesture. The background features rolling green hills, palm trees, and traditional thatched-roof huts. A large, white, rounded speech bubble with a red border is positioned to the right of the boy, containing his introduction.

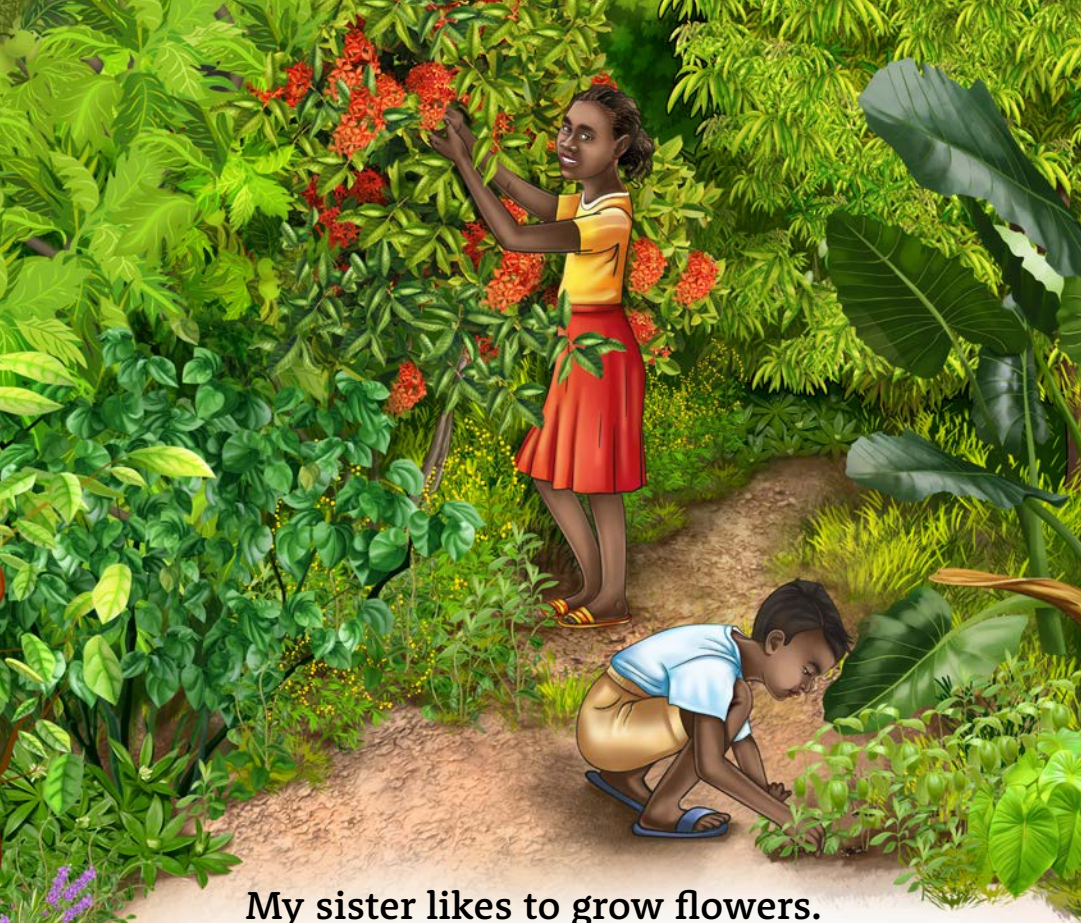
Hello, my name is
Manu.

These are my younger
sister, Mere, and our
cousin, Lagi.



We love to be outdoors in our garden. I like to grow vegetables and fruits.





My sister likes to grow flowers.
My cousin likes to grow herbs
for cooking and healing.




Gardening is fun and there is a lot to learn.
We need to watch the weather and nature.
Our observations help us to make decisions
and be able to grow nice healthy plants.

We watch where the sun rises and sets to
know where to place our garden beds. We
want the plants to receive the sunlight they
need to grow well.





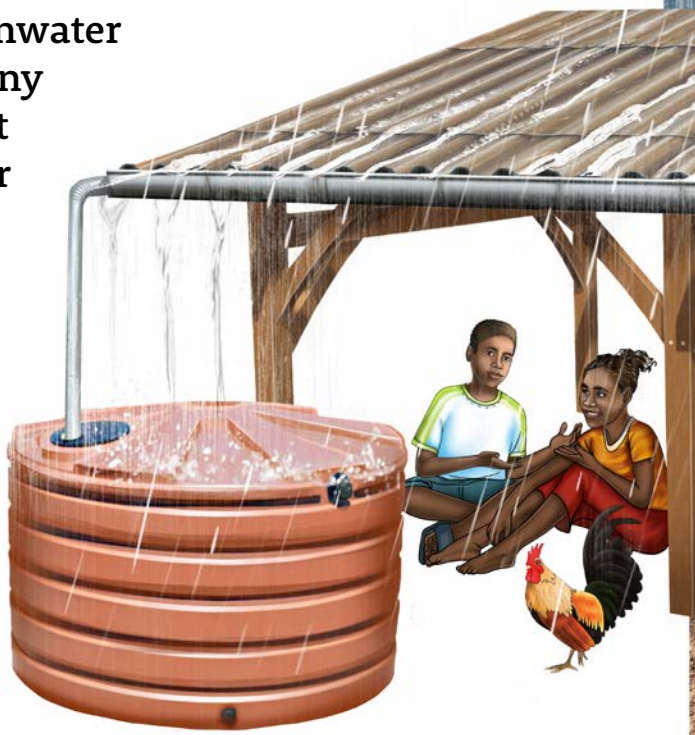


**We watch the wind as it blows
the leaves on a tree. We need
to protect our plants from the
wind. Our elders taught us to
plant trees along with the other
crops to provide protection
from the wind and provide
some shade.**



We notice that there are wet and dry seasons. Our elders show us that some plants need to be planted during the dry season, and some other plants during the rainy season.

We collect rainwater during the rainy season so that we have water for the dry season.







We even watch the moon. Our elders tell us that planting by the moon's cycle helps us grow strong and healthy plants. They say that we should plant above-ground crops such as leafy greens when the moon is growing or waxing. We should plant below-ground crops such as taro when the moon is fading or waning.



We look at and touch the soil to make sure that it provides the nutrients our plants need. Our elders taught us to make compost which helps to make the soil healthy and fertile. Instead of throwing away kitchen scraps, we save them. We layer the scraps between leaves and grass clippings to make compost.





It is very important to know how to grow plants. There are different ways to start plants.

Some plants are grown from seeds. They include pumpkin, papaya, beans, basil, cucumber, and watermelon.



The seeds can be started in a small cup or tray and then transplanted into the garden. Many seeds can be directly planted in the soil.



Some plants are grown from shoots.
They include turmeric, taro, breadfruit,
bamboo, bananas, and green onions.



The shoots can be planted in holes filled with compost.



Some plants are grown from stems or cuttings. They include sugar cane, ti leaf, cassava, hibiscus, local apple, and guava.



The stems or cuttings can be first started in a pot or box. When they sprout, these plants can be moved into the garden.



A nice garden gives us many things.
We enjoy working in it and we like
eating what we grow. What we love
the most is when we can share the
food with our family, friends, and
neighbours.





My favourite
thing is to grow
tasty fruits and
vegetables.

We can eat
many of them
fresh.



We can pickle some of them to make them last longer.



We must cook root crops and breadfruit before we can eat them. One of my neighbours is teaching me that some root crops and breadfruit can be preserved in the ground. Preserving is a way to save food. It can help us have food even if a storm destroys the garden and there is an emergency.





Mere likes to make garlands with the flowers she grows. It is our custom to welcome and greet people by placing these garlands on them. Mere also makes beautiful flower arrangements for gifts and decorations.





Lagi uses his herbs in many ways. He shares them with family and neighbours whenever they need them for cooking, to make teas, and also for massage. He likes to make cuttings of the herbs to give away so that more people can grow them. It is always a good idea to plant herbs between fruits and vegetables because plants with strong scents help keep pests away.





My sister, cousin, and I all agree that having a garden is very useful for us.

We learn important things about the environment and weather. Our garden teaches us how to observe, plan, and be responsible.

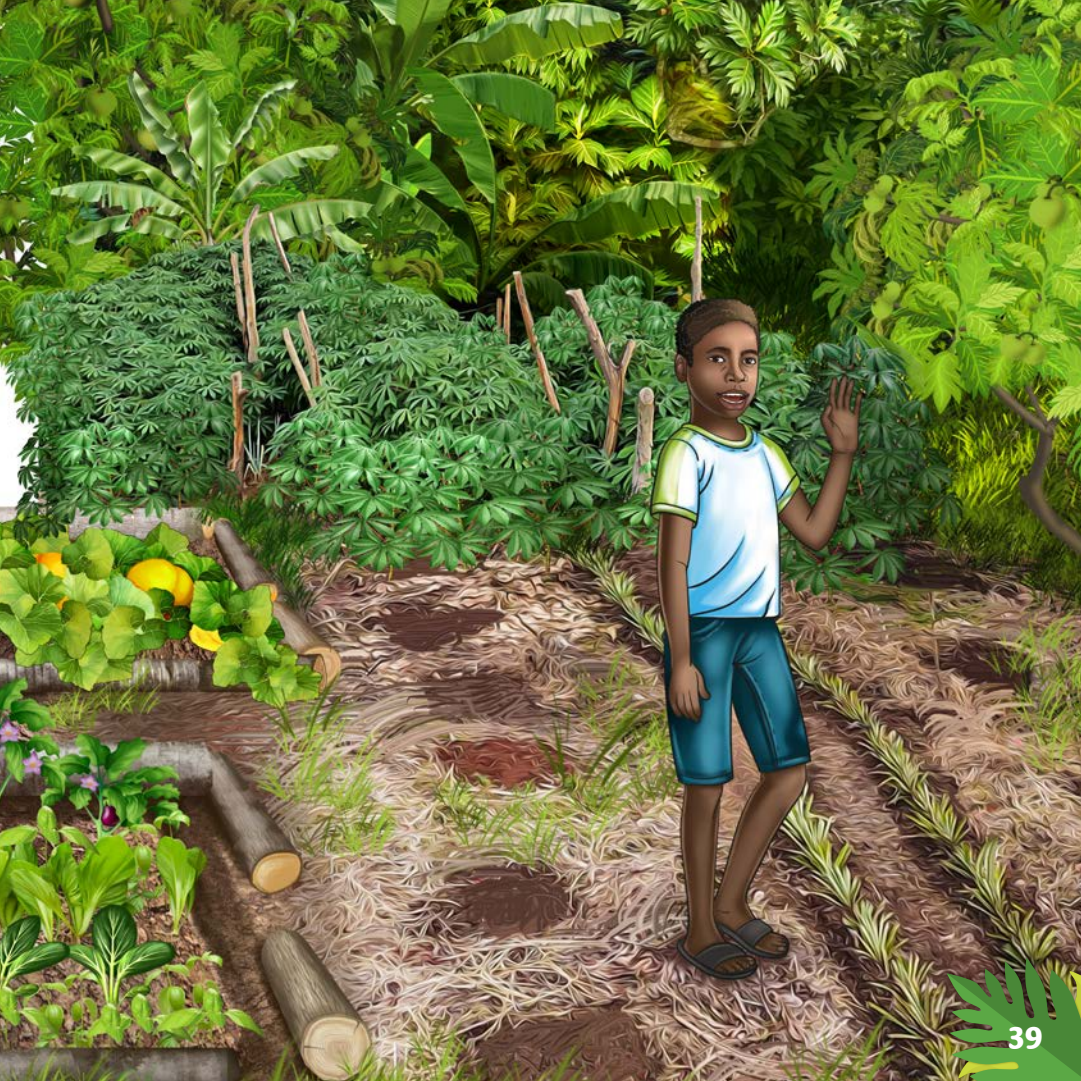
The food we produce helps feed our families and makes us feel proud.

We are more prepared for emergencies because we grow food and medicinal plants right by our home.



Having and tending a garden is good.
We feel healthy, strong, and safe.
We are connected to the land through
our garden.





Learning outcomes

In this story, Manu, Mere, and Lagi take the reader on a journey towards food security and health by sharing what they know about their favourite activity: gardening. They show us how gardening is fun and explain why it is important and useful for everyone.

There are many things to observe in order to have a successful garden. Asking and following the advice of experienced gardeners will make gardening even more enjoyable and fruitful. Gardening does not require a lot of money, but asks of your time, effort, and love. In turn, gardening gives us fulfilling experiences and delicious food, while helping secure families' nutrition needs and making stronger and more resilient communities.

After reading this book, children will be able to:

- 1.** Explain why observation is the key to successful gardening and identifying changes in the environment,
- 2.** Describe different plants that can be grown in gardens,
- 3.** Explain how gardening supports healthy living and eating and provides food security and helps adaptation to climate change,
- 4.** Describe some of the best gardening practices to keep gardens thriving even during a changing climate, such as improving soil quality through composting, and
- 5.** Describe some of the best gardening practices to help encourage biodiversity and agrobiodiversity by planting many different types of plants, including species able to withstand varied climatic conditions.

Interactive prompts

Educators, caregivers, and parents can use these guiding questions to kick off discussions with students. The discussions are intended to support the students' deeper understanding of the story by helping them reflect on what they read, and by encouraging them to find out more.

1. Manu, Mere, and Lagi learn about wind patterns and wet and dry seasons from elders. Ask the elders in your community about the winds and seasons. What are the names of the seasons and winds? What months or times of the year do these seasons and winds occur? What gardening and farming activities occur during those seasons? Are there any changes in the occurrence and patterns of winds and seasons over the years?
2. Manu, Mere, and Lagi have many different plants growing together in their garden, instead of just one type of plant. Why do you think it is important to have a variety of plants growing together? What happens if there is too much rain or not enough rain? How does growing a variety of plants help adapt to the changing rainfall patterns?

3. Manu, Mere, and Lagi grouped plants by their different planting methods – started from seed, grown from shoots, and grown from stems or cuttings. Why is it important to be able to use different parts of the plant to start new plants? Can you think of ways that are different from how Manu, Mere, and Lagi grouped the plants?
4. In the story, the children like to eat different plants. What types of plants do you and your family eat? From where do you get these plants?
5. There are many reasons to compost. In the story, the children compost to reduce waste. Ask an elder or friend who likes farming and gardening if they compost and if they do, how do they do it? Ask how composting helps the soil and protects it from climate change.

Tips

***Nature as teacher.** Observe a farm or garden. Use the tips listed below to guide your observation.*

- Planting lots of different species together helps prevent the spread of disease, reduces damage from pests, and increases soil fertility. Do you see many different plants growing together or just many of the same plant?
- Mixing vegetables, herbs, and other smaller crops with trees creates a biodiverse ecosystem. The tall trees provide shade and protection from wind and shrubs and smaller plants hold the soil in place. The crops that grow close to the ground, such as pumpkins, also shade the soil and keep it healthy. Look for a garden or farm with many different crops and trees. What do you observe about that ecosystem?
- Choose plants wisely by consulting elders or looking at nearby gardens to see what is likely to grow well. What are some of the tips from the elders?

- Observe the environment before you start your garden. Look at the sun at different times of the day and wind and waves at different times of the year. That will help you identify the best location for your garden. Most plants are harmed by salt, so your garden should be away from the coastal areas with too much wind and salty spray from waves.
- If you think that you don't have space for a garden, think again! Container gardening is a simple way to grow vegetables and herbs even if you do not have land for a garden. Green onions, basil, cherry tomatoes, leafy greens, chives, and many other plants that support healthy eating can be grown in containers. Large laundry detergent bottles, old buckets, and other such containers can be used. Make sure the containers are very clean before adding soil and growing the plants. Growing your own food using available resources enhances adaptation to climate change.

Start with the soil. Observe the soil in a farm or garden. Try some of the tips listed below to improve your soil and protect it from impacts of climate change.

- Feel and smell the soil. Healthy soil will not smell bad or disgusting. It should actually smell like soil and maybe even slightly sweet. Healthy soil is not too wet or too dry. When you squeeze the soil in your hand, it will keep the shape briefly and then fall apart. Soils that are too wet will keep the squeezed shape and soils that are too dry will not keep a shape and quickly crumble.
- Feed your soil regularly. Healthy soil is fed with real food, such as table scraps or animal waste that has been composted. Avoid using chemical fertilizers on your soil as these are not healthy for the environment or for your body. Organic fertilizers such as compost, worm castings, cow manure, and crushed-up fish bones are great for the soil.
- Protect your soil with mulch. Mulch is a covering for the soil that helps retain moisture and protect the soil from the sun and drying winds. Shredded coconut husks, leaves, grass, and other plant clippings work well.

- Soil is a limited and precious resource. Protect your soil by minimising how much of it is exposed. Dig up only what you need to plant a new plant and leave the rest covered with other plants. Never leave soil brown and bare, as exposed soil is prone to erosion and leaching.

About this book

This book is a part of the **Pacific Climate Readers**, a series of early readers created specifically for children in the Pacific Islands. The place-based focus on Pacific Island landscapes, local flora and fauna, and the island way of life helps students to explore new concepts within familiar contexts. While providing engaging and relatable literacy materials that children and educators can use to promote reading and comprehension skills, these books' Pacific Island focus on themes such as ecology, communities, health, and hygiene also allows students to develop fundamentals of climate literacy and refine their critical thinking, problem solving, and understanding of adaptive solutions.

The individual titles in the series are interrelated and grouped in three levels, with higher level books building on the lower level ones. To date, the Pacific Climate Readers include:

- ***How I take care of myself and others*** looks at ways to take care of oneself and others including steps and resources used while promoting drinking clean water and eating healthy local food.
- ***Welcome to our garden*** cultivates understanding of the need to maintain local agriculture and food security even during changing climate.
- ***Teamwork in my community*** highlights the importance of working together as a community to build climate resilience.

- ***Our high island adventure*** explores high islands in the Pacific, their key habitats, how they are interconnected, and what challenges they face.
- ***Our atoll adventure*** explores atolls and other low-lying islands, reiterating the interconnection of different habitats and promoting the need to protect and conserve island resources.

This series was made possible by the Australian Government's **Accelerating Climate Education (ACE)** for the Pacific programme, an initiative of the **Australia Pacific Climate Partnership (APCP)** implemented in partnership with **Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)**.

About the publisher

Island Research & Education Initiative (iREi) is a non-profit organisation dedicated to upholding the unique environmental and cultural legacies of islands and island peoples. We are based in Micronesia, but our work spans the entire Pacific. Our core activity is to assist educational authorities in creating locally relevant school resources, particularly in indigenous languages. That grants the children of Pacific Islands place-based tools they can relate to and positively reinforces their adventures in the world of learning. iREi can be contacted at irei@islandresearch.org

Disclaimer

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Although the authors have taken all reasonable care in preparing this book, we make no warranty about the accuracy or completeness of its content and, to maximum extent permitted, disclaim all liability from its use.

The production of these climate readers is supported by the **Australian Government**. The perspectives and recommendations expressed in this book are those of the authors, and do not necessarily reflect the views of the **Australian Government** nor **GIZ International Service** as implementing partner.

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