Chapter 6: Environment

6.3 Riparian Buffers

Riparian buffers protect natural water ecosystems

- Help control soil erosion
- Reduce flood risks
- Their root systems serve as a natural filter and keep the water clean
- Prevent agricultural chemical drift from entering water bodies
- Provide habitat for wildlife
- Help regulate temperature that is beneficial to aquatic fauna

Without riparian buffer zones, the soil at the edges of a stream or river can become eroded and collapse into the water bodies. Agrochemicals that were applied to crops can drift into the water and contaminate it.

6.3 Riparian Buffers

No.	Specialized requirements	Group certification			Ind. cert.
		S-farms	L-farms	Group mgt.	S/L
6.3.1	Farms maintain existing riparian buffers adjacent to aquatic ecosystems.	✓	✓		✓
6.3.2	Producers maintain the following additional safeguards for the protection of drinking water in case the farm is located closer than 50m from a river, lake, or other water body that is frequently used as the main source of drinking. • Maintain or establish a riparian buffer that is at least 10m wide • Add an outer, additional 20m non-application zone (total 30m) where no pesticides or fertilizers are used • Add an additional 20m zone (from 30 to 50m from the waterbody), in which pesticides are only applied through mechanical, hand-assisted or targeted application	✓	✓		✓
No.	**Continuous improvement requirement**				
6.3.3	Aquatic ecosystems are surrounded by riparian buffers with the following riparian buffer width parameters: • 5m horizontal width along both sides of water courses between 1 - 5m wide. • For farms < 2 ha, the width of the buffer may be reduced to 2m at both sides • 8m horizontal width along both sides of water courses between 5-10m wide, and around springs, wetlands, and other water bodies • 15m horizontal width along both sides of rivers wider than 10 meters wide No additional non-application zones are required alongside fully established riparian buffers.	✓	✓		✓

Read the requirements and their applicability before you move on to the next page

6.3.1

Farms maintain existing riparian buffers next to aquatic ecosystems

Riparian buffers are areas of **permanent vegetation next to aquatic ecosystems.** These are areas where **crops** and **livestock are not present**.

Aquatic ecosystems include flowing and still water bodies, such as:

- Streams (also seasonal)
- Rivers
- Ponds and lagoons
- Lakes
- Wetlands

Artificial or irrigation ponds and water treatment lagoons are not aquatic ecosystems unless they are colonized by endangered species, and or developed to provide habitat for wildlife.

6.3.1

Riparian buffers can be original or planted vegetation

If there is already natural vegetation next or around a water body or a wetland, **you should not convert such area to an area for crop cultivation**.

You should keep it under natural vegetation.

If you need to establish a riparian buffer, you may plant vegetation next to the stream. These should not be **crops, as they should not be planted right next to streams or rivers**.

Similarly, **cows should not be grazing** the pasture that is planted **right next to a river**.

Case scenario

Let’s look at the riparian buffers more through an example. Let's consider these two waterbodies:

A small **stream** that is **dry for most of the year** and flows only during the rainy season for **three months**

An artificially created **irrigation pond** that ended up being inhabited by a species of **otter** that is **endangered**

?

Are these examples of aquatic ecosystems?

Think about the answer before you move on to the next page

Case scenario - Solution

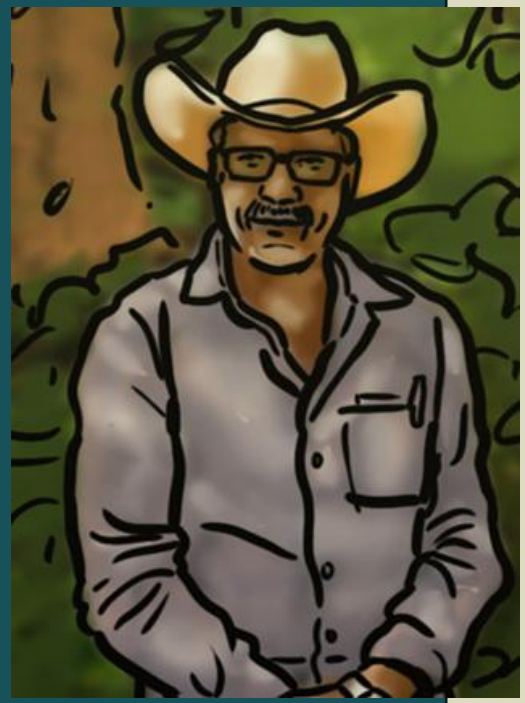
The answer is **"Yes", these are aquatic ecosystems and require riparian buffers.**

- **Seasonal stream:** According to the Rainforest Alliance glossary, a seasonal stream is considered an aquatic ecosystem if it flows continuously for at least two months in most years.

- **Irrigation pond:** Although the **pond** was artificially created for irrigation, it was colonized by an **endangered species**. Therefore, it is now considered an aquatic ecosystem the species' habitat should be protected.

6.3.2

Additional safeguards for the protection of drinking water



James' large farm is located closer than **50 meters from a water body** that is frequently used as the main source of **drinking water**.

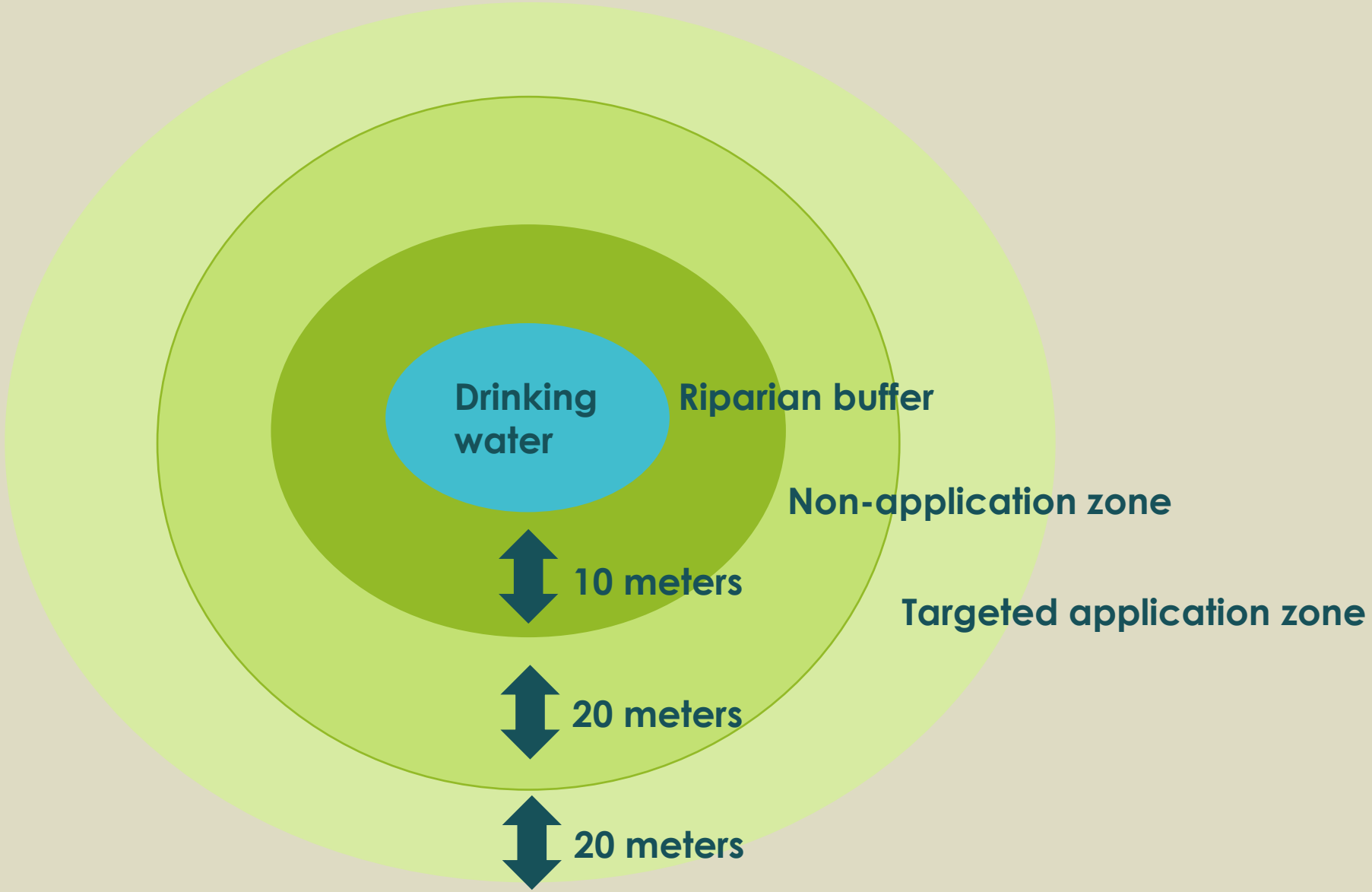
Therefore, he needs to take extra precaution to protect the water source from contamination.

James must:

- Maintain or establish a riparian buffer that is **at least 10 meters wide** along the water source
- Add an outer, additional **20-meter non-application zone** (total 30m) where no pesticides or fertilizers are used
- Add an additional **20-meter** zone (from 30 to 50 meters from the waterbody), in which pesticides are only applied through mechanical, hand-assisted or **targeted application**.

6.3.2

Additional safeguards for the protection of drinking water

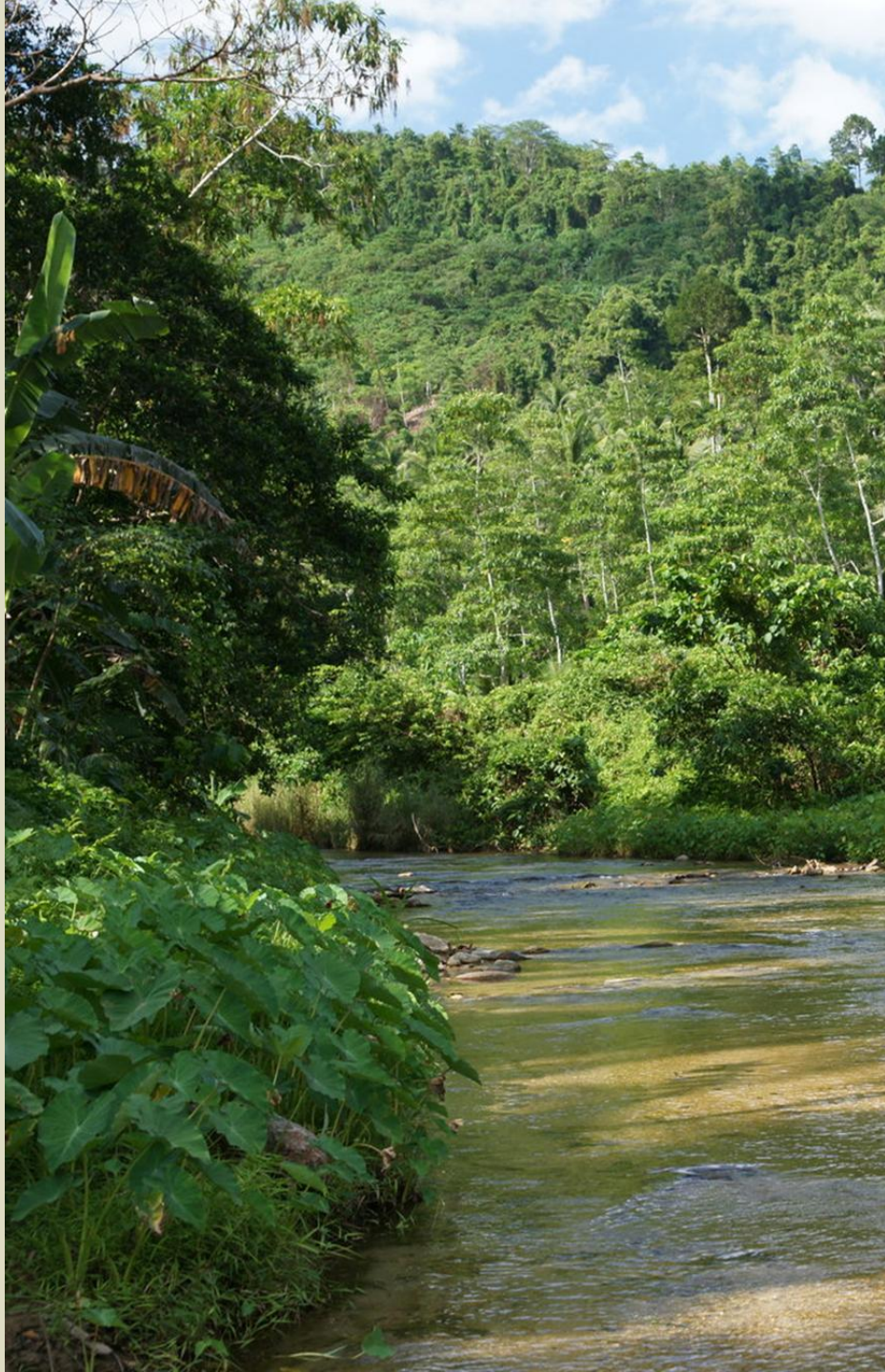


6.3.3

Aquatic ecosystems are surrounded by riparian buffers with width parameters

Farmers actively plant **native trees and native plants** along both sides of streams or rivers to establish or restore riparian buffers.

If crops were planted near water bodies, they will need to be uprooted to establish riparian buffers.



6.3.3

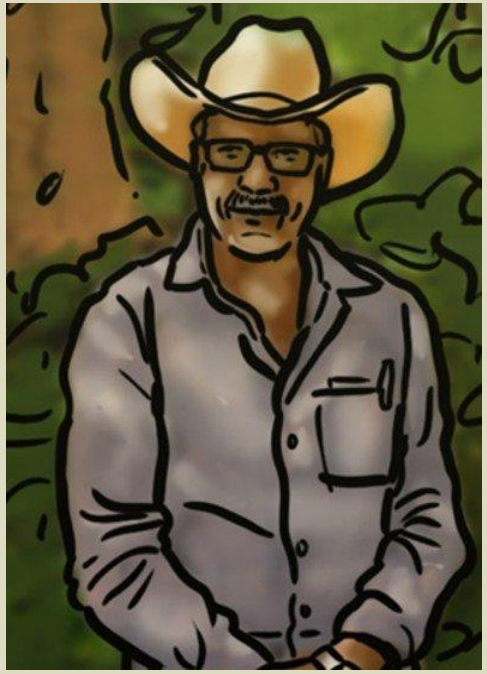
Riparian buffer width parameters

- If a **stream** is between **1-5 meters wide**, its riparian buffers should be at least **5-meter-wide** along both sides of the stream.
- For farms that are less than 2 hectares, the width of the buffer may be reduced to **2 meters** on both sides.
- When a **river** is between **5-10 meters** wide, its riparian buffers should be at least **8-meter-wide** along both sides of the river.
- For **spring, wetlands**, and other **still water bodies**, riparian buffers should also be at least **8-meter-wide**.
- When a river is wider than **10 meters**, its riparian buffers should be at least **15-meter-wide**.

Once riparian buffers are fully established, it is not necessary to establish non-application zones in addition to them.

Case scenario

Let’s test your understanding by looking at a case example.



James' large coffee farm is located next to an **8-meter-wide river**.

To establish a riparian buffer zone, James has removed coffee plants that were planted next to the river. He kept a distance of **10 meters** between the crops and the edges of **both sides of the river**.

?

Is James meeting the riparian buffer width parameters?

Think about the answer before you move on to the next page

Case scenario - Solution

The answer is **"Yes", James is following the width parameters requirement.**

Since the width of the river is between **5 and 10 meters**, the required width of riparian buffers is **8 meters** according to 6.3.3.

James has established riparian buffers of 10 meters, therefore meeting the parameters.

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