EVALUATING ADAPTATION SOLUTIONS

Purpose

Explore the criteria that will help you decide which adaptation solutions are worth the investment. This will help you create a mental framework that you can use to assess both these solutions and others.

Key Information

Three criteria can be helpful in measuring the significance of a solution:

- Time: How quickly can the solution's impact be felt?
- Cost: How much will it cost to implement the solution, both up front and in the long term?
- Impact potential: How great will the solution's effect be on human and natural well-being?

Process

1. For each solution below, evaluate its significance based on the three criteria (time, cost, and impact potential).

Drought-resistant seeds are specially designed to need less water, helping crops grow even during dry spells. Creating these seeds can be expensive, so farmers might pay a bit more for them than regular seeds. It takes time to make and distribute them, but once available, they can help crops for several seasons. Farmers need to be taught about these seeds, and the crops should be something the community wants to grow. In areas that are often dry, these seeds can improve food security and help farms survive changing weather patterns.	**Time**	Slow to implement				Fast to implement
		1	2	3	4	5
	Cost	Expensive				Inexpensive
		1	2	3	4	5
	Impact potential	Low impact				High impact
		1	2	3	4	5

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Storm early-warning systems use technology to predict severe weather like cyclones or storms. These systems send warnings to communities, giving people time to evacuate or prepare. Setting up these systems requires investment in technology like satellites and sensors, but they are cheap to maintain. Once set up, they work every storm season. Early-warning systems can save lives by allowing people to act before extreme weather hits, reducing deaths and damage. However, their success depends on people responding to the warnings.	**Time**	Slow to implement				Fast to implement
		1	2	3	4	5
	Cost	Expensive				Inexpensive
		1	2	3	4	5
	Impact potential	Low impact				High impact
		1	2	3	4	5

Seawalls are large barriers built along coastlines to protect against flooding from storms and rising sea levels. They are expensive to build and maintain, requiring a lot of money for materials, labor, and design. Building a seawall takes years and needs careful planning. Seawalls can protect coastal areas and prevent damage to property, but they only protect certain spots and can sometimes harm local ecosystems.	**Time**	Slow to implement				Fast to implement
		1	2	3	4	5
	Cost	Expensive				Inexpensive
		1	2	3	4	5
	Impact potential	Low impact				High impact
		1	2	3	4	5

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2. Use the evidence that you've gathered from this activity and what you've learned so far in this course to write a short paragraph (three to five sentences) that answers the question, *Which solution above has the greatest potential to lessen the impacts of climate change?*