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What does 'Climate Resilience' mean?

- We have just been talking about the risks that we might face because of climate change. It might sound very scary and very sad, but if we are better able to understand and see these risks, we can be better prepared for them and keep ourselves safer.
- Being climate resilient means that we are **better able to adapt and cope** with climate-related events in ways that help us and our families and communities thrive.
- Climate resilience is about successfully **coping with and managing the impacts of climate change** and **taking steps that prevent those impacts from growing worse**.

Climate Resilience:
The ability to adapt to and cope with climate-related events in ways that help us, our families, and communities to thrive.

- When we are climate resilient, we can better anticipate (i.e. expect/think/plan ahead) the dangers that climate change creates and then prepare ourselves better to stay safer in the face of those dangers.
- When we are climate resilient, we are better able to recover from the effects of climate change (like an extreme weather event).

2.1d – Go through the following points which talk about climate justice (20 mins):

NOTE: Climate justice is a difficult topic to understand. We talk about climate justice again later in the programme so don't worry if some learners struggle at first.

- Due to social injustice and inequality, certain groups and populations experience climate change differently and do not have a fair or equal chance to build resilience.
- For example, a girl who is uneducated might not have the confidence and skills needed to anticipate, adapt to, and cope with climate change. A woman might not be able to attend training because of the demands on her time. Or she might feel that "it is for the men", due to her beliefs or the gender norms in her community. This can stop her from building her climate resilience and her ability to stay safer during climate-related hazards. A low income country might not have sufficient funds or the technology to deal with the climate risks and hazards it faces.
- We need to promote the rights of those most vulnerable to climate change as part of building resilience to climate change. Building climate resilience should include building the capacity to adapt to and cope with climate change. Here are some examples of what we can do:
 - Support those most impacted by climate change to become more resilient to climate change: some people and groups in society are more impacted by climate change than others and in different ways. These groups may need special support to build resilience.
 - Work to eliminate the injustices and inequalities (e.g. low levels of education, poor infrastructure, and unequal access to technology/knowledge by those who need

- it the most) that make some people or groups more vulnerable to climate change and/or make it difficult for them to build resilience.
- Support those most vulnerable NOW to navigate the challenges they face to building resilience - such as helping girls and women to navigate the gender barriers.

✔ Conclude with the following statement:

Together, governments, communities, businesses, groups and individuals can be champions for those most vulnerable to climate change by providing support that matches their unique needs and circumstances. This support could include providing communities with information about climate change risks and how they might experience them; providing life skills training; providing the resources to help communities cope, adapt, and rebuild after extreme climate events, and working together to remove the injustices and inequalities that make it difficult for some to build resilience.

2.1e – End the session with these closing questions and points (30 mins)

- Does everyone understand that climate change affects us all – and affects people in different ways?
- Does everyone understand that people face climate change differently due to inequality?
- Does everyone understand how climate change poses a range of risks to communities and individuals?
- Does everyone understand that these climate change impacts can affect people's wellbeing?
- Does everyone now understand that climate resilience means that we anticipate and manage the risks and disruptions that climate change creates?
- Does everyone understand that climate resilience involves promoting the rights of those vulnerable to climate change?
- Does everyone now understand we are also being climate resilient when we find ways to adapt to the impacts of climate change and take steps to recover well from the impacts of climate change?
- Tell the class that in the next session you will teach them more about climate resilience and the steps they can take to become resilient themselves.



SESSION 2.2: RECOGNISING YOUR POWER TO BE CLIMATE RESILIENT (3.5 HOURS)

Session outcomes:

- Learners understand that they can take steps to protect themselves – and those around them – from the worst impacts of climate change
- Learners understand that communities can be climate resilient as well as individuals
- Learners understand that there are efforts at national and international levels to address the challenges of climate change and to build climate resilience
- Learners relate the idea of ‘climate resilience’ to the wider concept of ‘resilience’ (which is part of My Better World)

2.2a – Begin the session with a quick quiz about measures that can be taken to be climate resilient (30 mins)

NOTE: Some questions in this quiz are revisiting some ideas from earlier sessions and units. That’s OK. It’s good to keep reinforcing these ideas as we go forward and then to connect them to new concepts (in this case, climate resilience).

Sort the learners into pairs or small groups. Each one should work together to find the correct answer to the questions. At the end, go through the answers with the class. The pair/group with the most correct answers wins.

Introducing Climate Resilience Quiz

1. *Without the greenhouse effect...*

- We would all turn green
- The Earth would have too much life
- The Earth would not be able to support life
- There would be no greenhouses

Answer: c

2. *Which of the following are potential risks that we might face as a result of climate change?*

- More rubbish on our streets
- Cleaner air
- Extreme weather events
- Struggles to grow crops

Answer: c and d

3. *What does it mean to be climate resilient?*

- Being climate resilient means we are helpless in the face of climate change
- Being climate resilient means we take steps to protect ourselves from the risks of climate change
- Being climate resilient means we rely on others to help us - we can’t do anything ourselves
- Being climate resilient means being able to recover from climate-related problems

Answers: b and d

4. *Who has the power and responsibility to be climate resilient?*

- It’s up to our government
- It’s a job for the governments around the world who are the biggest polluters

- It’s up to me and my friends and family
- Everybody has the power and responsibility to be climate resilient

Answer: all of the above!

5. *What can we try to do today to be climate resilient?*

- We can ignore the problem and hope it goes away
- We can think about how we adapt our lives to the impacts of climate change
- We can do what we can to reduce the amount of greenhouse gases we put into the atmosphere
- We can talk about climate change with others and build awareness

Answer: b, c and d

2.2b – Now read this short case study and discuss what it tells us about being climate resilient within our communities. Also, ask the learners if they have their own examples of where climate resilience is needed (30 mins)

NOTE: We start to talk more about adaptation in this session. This is because adaptation helps build climate resilience, so the two concepts are closely related. We shall look at the concept of adaptation in more detail during Unit 3 but you can introduce it here.

Case Study: Muzarabani District, Zimbabwe

Climate change comes with many risks. Many people in lower Muzarabani district who live close to the rivers are at risk of floods. Climate change has resulted in an increased number of floods, putting the people at a higher risk. These floods wash away their crops causing hunger in their communities. Very often, these people do not produce many crops in their fields. It is also a hot region in Zimbabwe. Crops are not growing well as a result of these higher temperatures. The country has also been affected by cyclones that are so destructive to the environment and infrastructure.

If the community members of the Muzarabani district were taught about drought-tolerant crops, they could help address the problems caused by rising temperatures. They may also be able to protect their homes and prepare better for any future cyclones. People also need to be equipped with information on the risks of climate change and the infrastructure that can be used to combat these risks. Some possible sources of trusted information are youth leaders - including CAMFED Association members, national TV, government websites, and radio stations that you can trust.

Having read the case study, discuss the following questions:

- Can you think of some of the factors making people in this community more vulnerable to climate change?
- How can a community become more resilient to the impacts of climate change?
- What examples are there in the case study of a community adapting to climate change?
- What can be done to help your community become more resilient in the face of climate change?

Then use the following bullet points to help clarify these questions:

SESSION 4.4: HELPING TO BUILD A CLIMATE-SMART FUTURE (3 HOURS)

Session outcomes:

- Learners understand the career opportunities that exist that support a climate-smart approach
- Learners are aware of the pathways that they can take to accessing those career opportunities


4.4a – We have talked a lot so far about how we can be climate-smart in the way we mitigate and adapt to climate change. And we can build on that by working towards a climate-smart future. Let's discuss what this means (30 mins)

Use the following questions to guide a group discussion:

- What might a climate-smart future look like?
- What sort of people will be needed to build a climate-smart future?
- What kind of jobs will help to build a climate-smart future?

Then use the following bullet points to summarise the discussion and to fill in any gaps:

- A climate-smart future is a future where we are all working to mitigate and adapt to climate change.
- This is a future where we are taking positive steps all the time to deal more effectively with the realities of climate change. We proactively seek out information about the causes of climate change and why some experience it more than others.
- This future will need strong leaders and people who can stand up and take responsibility in our communities.
- This future will need people with a wide range of powers and the ability to use those powers to help others (we discuss this further below in 4.4c).
- A climate-smart future will require more doers and thinkers to develop and implement climate solutions. This requires people to build the knowledge and skills needed to develop local solutions, and translate that knowledge and skills into local action and community support.
- There are many different jobs and careers that can help directly build a climate-smart future (and we look at some of these in 4.4b).
- Climate change is creating new opportunities for employment in what people often refer to as 'green jobs' - these are jobs that contribute to preserving or restoring the quality of the environment while also providing decent work and a living wage.
- You can take steps today to plan towards a resilient, climate-smart present and future.



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UP

4.4b – Let’s now explore some of the career opportunities with the learners that support a climate-smart approach (45 mins)

A climate-smart future is a future where we are all working towards mitigating and adapting to climate change. This is a future where we are taking positive steps all the time to deal more effectively with the realities of climate change.

Ask learners: What kind of jobs will help to build a climate-smart future?

After the brainstorm, share the following list of jobs with learners, asking them first if they know what each job involves and why they might help to build a climate-smart future. You can then explain yourself using the descriptions below, referring also to the examples provided:



1. Engineer

We need many more engineers who can work to design and build cars, homes, factories and so on that are climate-smart and that reduce greenhouse gas emissions. We also need engineers who bring smart solutions to people working in primary economies - e.g. farming, fishing, forestry, logging, and mining.

(i) **Harriet** is an Agronomic Engineer and a changemaker. She likes to learn about and teach sustainable agricultural practices to farmers. She studied Agriculture Sciences at university and has since shared her knowledge with communities and farmers in Zambia. In 2017, Harriet joined other young women change makers in Malawi to build young people’s awareness of climate change and waste management. While there, they also promoted school gardens to address malnutrition among learners. Harriet played an important part in setting up CAMFED’s climate-smart farm and training centre in Chinsali, Zambia, and in the development and launch of CAMFED Zambia’s climate-smart Agriculture Guide Programme. She continues to support young women and their communities to build resilient livelihoods and adapt to the effects of climate change.

(ii) **Tinotenda**, a CAMFED Association member from Zimbabwe, studied Chemical and Process Systems Engineering. Growing up in a community that heavily relied on agriculture as a source of income, Tinotenda developed a keen interest in improving agricultural practices. In an effort to address the adverse impact of inorganic fertilisers on soil, she came up with a project that produces organic fertiliser using hydrogen from maize stalk. This type of fertiliser is not toxic to the environment. Through this process, farmers will be able to access organic fertiliser that uses less inputs, contains no toxins, and produces high yields without reducing soil quality. And we need healthy soils to store more carbon!



2. Conservation Expert or National Park and Wildlife Conservation Officer

Someone who works to protect and conserve the natural environment and who understands the way that the natural world needs to be supported to thrive. National Park and Wildlife Conservation Officers work to conserve national parks and wildlife. The Imire Rhino & Wildlife Conservancy in Wedza, and the Mbila Hot Springs in Binga are among many natural habitats that are being conserved by national park and wildlife conservation teams in Zimbabwe.



3. Environmental or Earth Scientist

An environmental scientist uses their knowledge of the natural sciences to protect the environment. An Earth Scientist is someone who studies the Earth through learning areas such as geology and geography. Earth scientists study natural hazards, climate and environmental change, lakes, oceans, earthquakes, volcanoes, fossils, soils, sediments, and rocks.

Earth Scientist **Enelesi** is an example of a young person who combined her personal passion of addressing issues in her community with her studies. After secondary school, she attended the Malawi University of Science and Technology to study Earth Sciences as one of just three young women on the course. Enelesi chose this subject because she wanted to find a way to address her country’s energy crisis and improve how people farm. Enelesi worked hard, graduating with a distinction - a title that was awarded to only three graduates in the entire class! She also got a job at the University as an Associate Lecturer! Enelesi wants to start a company in the future that helps people build houses that can survive earthquakes and other natural disasters.



4. Clean Energy Technician or Clean Energy Entrepreneur

This is someone who works to install and support clean or renewable energy solutions – like solar panels or wind farms. You can also be a clean energy entrepreneur - partnering with those who have the technical expertise to bring smart solutions to your community.

Meet Phyllis, who is doing just that.

Phyllis lived through Ghana’s energy crisis, which sparked her interest in energy conservation and clean energy. With a background in public health, she often thought about the impact of power outages and climate change on farming and nutrition, and concluded that agriculture, energy and nutrition are all connected. Her passion to promote clean energy inspired her. During her studies in China, she met her future business partner, an expert in electrical engineering. Together, they set up Rhema Engineering Solutions. This business sells, installs, and maintains solar panels and solar/low-energy lighting. Phyllis grew up in rural Ghana and wants to help small-scale farmers incorporate solar energy solutions into their operations. Her company now sells solar-powered irrigation pumps, cold storage, and solar-powered food dryers. If farmers cannot afford their services, Phyllis allows them to pay with their produce. This allows more farmers to benefit from climate-smart technology. Phyllis uses her platform to educate community members about energy conservation. She believes that **“we don’t need to be sustainable energy specialists to protect the environment”. As long as we are aware and do our best, Phyllis believes that we can fight climate change together.**



5. Farmer and Climate-Smart Agripreneur

The agricultural practices of farmers have an important role in protecting our environment and leading us towards a climate-smart future. It is important for farmers to farm in a way that respects the land and environment.

(i) Like many across rural Zimbabwe, **Beauty** lives off the land, which also means that she experiences, firsthand, the harsh effects of climate change. Beauty trained in agriculture at Mutare Polytechnic College, Zimbabwe, where she learned about using climate-smart agriculture practices to improve farm yields and build resilience to climate change. While at college, she developed a business plan, detailing her plans to move from subsistence farming on a small plot of land to running a climate-resilient, profitable agricultural business. Her plan included a large greenhouse and drip irrigation systems, enabling her to farm all year round and increasing food, income, and providing employment for others. She has since launched her climate-smart farming business. She grows different crops for profit and nutritional value such as varieties of maize and beans that are enriched with iron and zinc. Beauty has become well-known in her district as a successful farmer and is using her cutting-edge farming methods to help reduce poverty, eliminate hunger, improve nutrition and build resilience to climate change.

(ii) **Dorcas** is a CAMFED Association member from Zambia who studied agriculture at university. She wants to use her knowledge to solve challenges that women in particular face in farming, and has since developed an award-winning agricultural technology that addresses women's poor access to land! Dorcas's innovative aquaponics system combines fish farming with vegetable production, and will allow women who do not have their own land to produce food sustainably. The system also uses organic waste from fish - instead of expensive fertiliser - to nourish the vegetables, and vegetable waste to feed the fish, which means that the food produced is healthier. Her clever solution is designed to be built with locally-available bamboo or other sustainable materials, and to suit any land type – even areas lacking soil or adequate water supply. In 2021, while researching her project at university, Dorcas received a grant to launch her business. She plans to train 2,000 rural women in Zambia over five years to launch their own aquaponics systems.



6. Teachers

Teachers play an important role in sharing information and building knowledge in learners so that they can make climate-smart decisions in their daily lives. They also support learners to build vital life skills for tackling climate change.

Take a teacher like **Lucia**, for example, who is supporting learners to build the skills they need to be climate-smart - such as how to solve problems and finding things out when they do not know the answer. Despite a difficult childhood, she worked hard to become a Mathematics teacher. To expand her horizon, she obtained two more degrees in Human Resources and Public Relations. As a teacher, Lucia encourages her learners to see themselves as people who can create change and solve the problems they come across both inside and outside of the classroom.



7. A Career Supporting Others to Succeed in Agriculture

There are many opportunities in agriculture beyond farming. At various ministries and public agencies in Zimbabwe, there are people working at the different stages in agriculture. For example, there are Agriculture Extension Officers who are community organisers and champions of climate-smart farming. Then there are Business Development Officers responsible for exploring investment opportunities in agriculture, as well as helping individuals and groups to pursue the different business opportunities in agriculture sustainably.

(i) **Vivian**, raised in rural Zimbabwe, faced financial challenges that affected her education. Nonetheless, she persevered with her studies, and a year after finishing school, was introduced to the young women of the CAMFED Association. She joined the peer support network in 2008, which gave her a new lease on life and inspired her to strive forward. After an agriculture apprenticeship in 2011 at a local college, she worked as an Agriculture Extension Officer. In 2015, she earned a Diploma in Agriculture while working as an Extension Officer. She reflects on the experience: “at a young age, I had the privilege to travel around, assessing crop and livestock situations. I endeavoured to reach as many farmers as I could during my work as an Extension Officer, offering them technical services, with the main goal being to ensure that our country is food secure”. In 2020, Vivian became a climate-smart Agriculture Core Trainer with CAMFED. Her role involves training CAMFED Association Agriculture Guides, who volunteer to support rural smallholder farmers and their communities to build resilience against climate change. Agriculture Guides lead climate change awareness and train other community members, mostly women, in climate-smart agriculture techniques. Vivian is a passionate advocate for women's independence and encourages young women to pursue financial independence. She believes that young

rural women can generate income for themselves through gardening, using recycled plastic bottles or rice and sugar packaging to grow plants even if they do not have assets or land. From here, they can diversify into small livestock, which does not require a big piece of land. Vivian has seen positive change through the climate-smart initiatives she leads with the Agriculture Guides, with more young women thriving in agriculture and adopting new techniques.

(ii) **Tatenda** grew up in Buhera, an arid rural area in Zimbabwe. She went to the University of Zimbabwe, where she completed a Bachelor of Science in Agriculture. Upon graduation, she started a farming business in her community, showcasing the different skills she learnt in college. A lot of people in the community admired her efforts and prowess in business and were very keen to learn skills for income-generating projects from her. Currently, she is a Provincial Business Development Officer for the Ministry of Lands, Agriculture, Fisheries, Water, Climate and Rural Development. As a Business Development Officer, she promotes agriculture value chain development in her province. She also engages with key partners to identify investment opportunities in agriculture.



8. Healthcare Professional

Doctors, nurses, and others in health care treat diseases. These can include diseases caused or worsened by climate change - such as heat strokes and other heat-related illnesses and increased respiratory illnesses. Educating others is an important part of a health professional's job. By educating the community about the health impacts of climate change/climate events, including the mental health impacts - such as stress and anxiety - communities can become more resilient and can have more knowledge about where to get help.

Runyararo is a paediatrician (a doctor who specialises in helping children who are unwell). Her dream to become a doctor was put on hold when she lost her father and had to step in to help her mother with farming. Still, Runyararo defied all odds and excelled in school, ultimately completing a Master of Medicine in Pediatrics at the University of Zimbabwe, and is now a practising doctor. Runyararo is known for treating patients with respect and empathy. She understands firsthand the impact of climate change on physical well-being (due to poor harvests causing malnutrition). She is joining others in the fight against infant mortality.



9. Entrepreneur

These are people who are using their skills and resources to find solutions to problems in their communities.

Martha was supported by CAMFED to complete university. She is the founder and CEO of Health Choice Agro-Consult, a business she started in 2019. The business uses climate-smart technology to produce oyster mushrooms and is currently producing 12,000 bags of mushrooms per year. From her profits, she has provided grants for other young women to run businesses and also supports girls' education in her community.

NOTE: You may also want to talk to learners about volunteering opportunities that can help them to work towards future climate-smart career opportunities.