



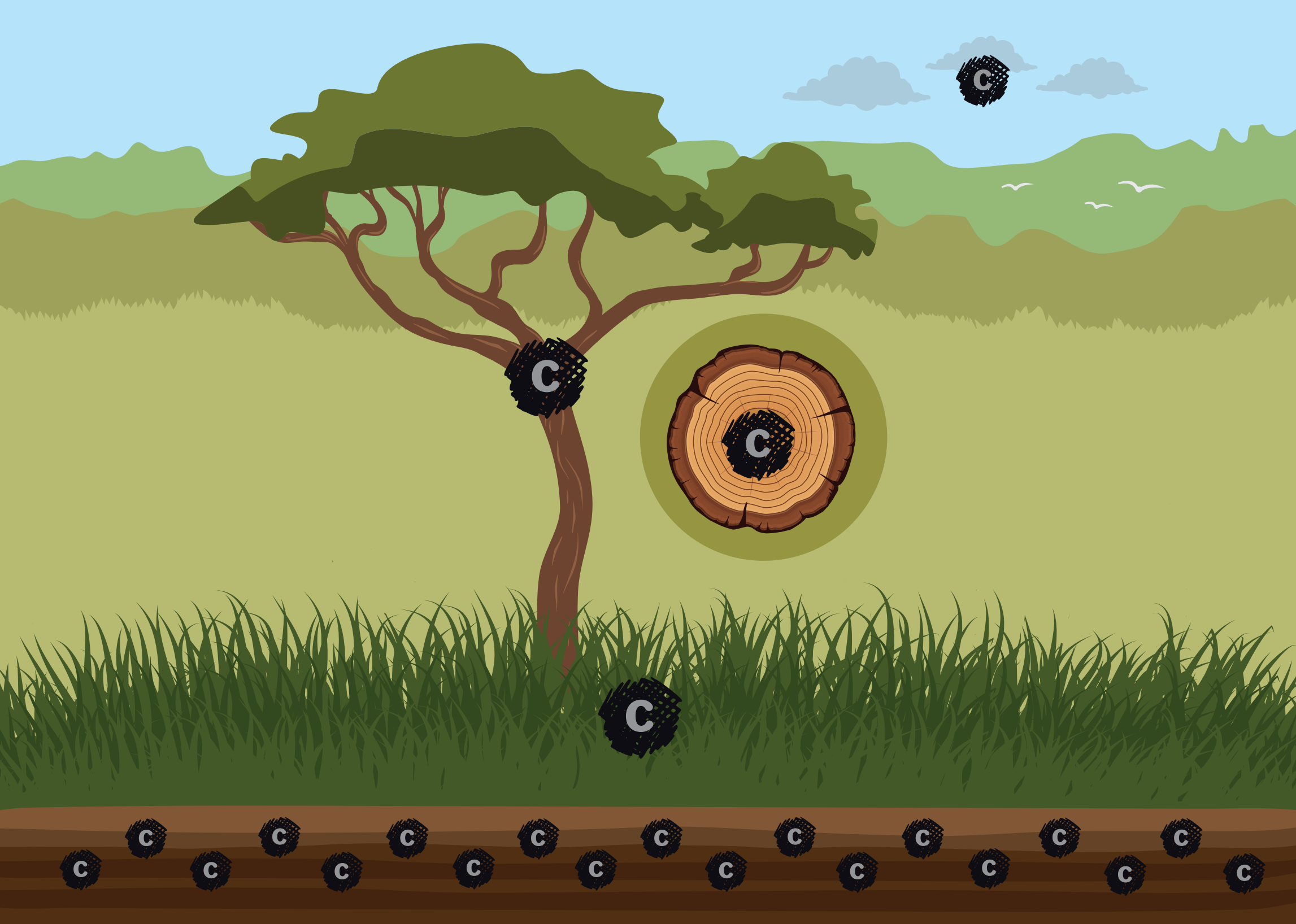
# Rangeland carbon projects for communities

A guide on climate change, rangeland health, livestock grazing, and carbon markets.



# **Carbon is a fundamental building block found in trees, soil, and the air.**

Large amounts of carbon are stored in natural systems like forests, wetlands, and soil. Healthier ecosystems generally have larger carbon stocks. Petrol and other fossil fuels are underground stores of geological carbon that humans have mined.



## **Many human activities contribute to climate change.**

Fuel use, energy production, and industrial processes release carbon into the atmosphere. Carbon is also released by deforestation, firewood burning, wetland drainage, and soil tillage. This extra carbon pollutes the air and traps more heat in the atmosphere, which causes the global climate to change.



## **Climate change affects weather patterns.**

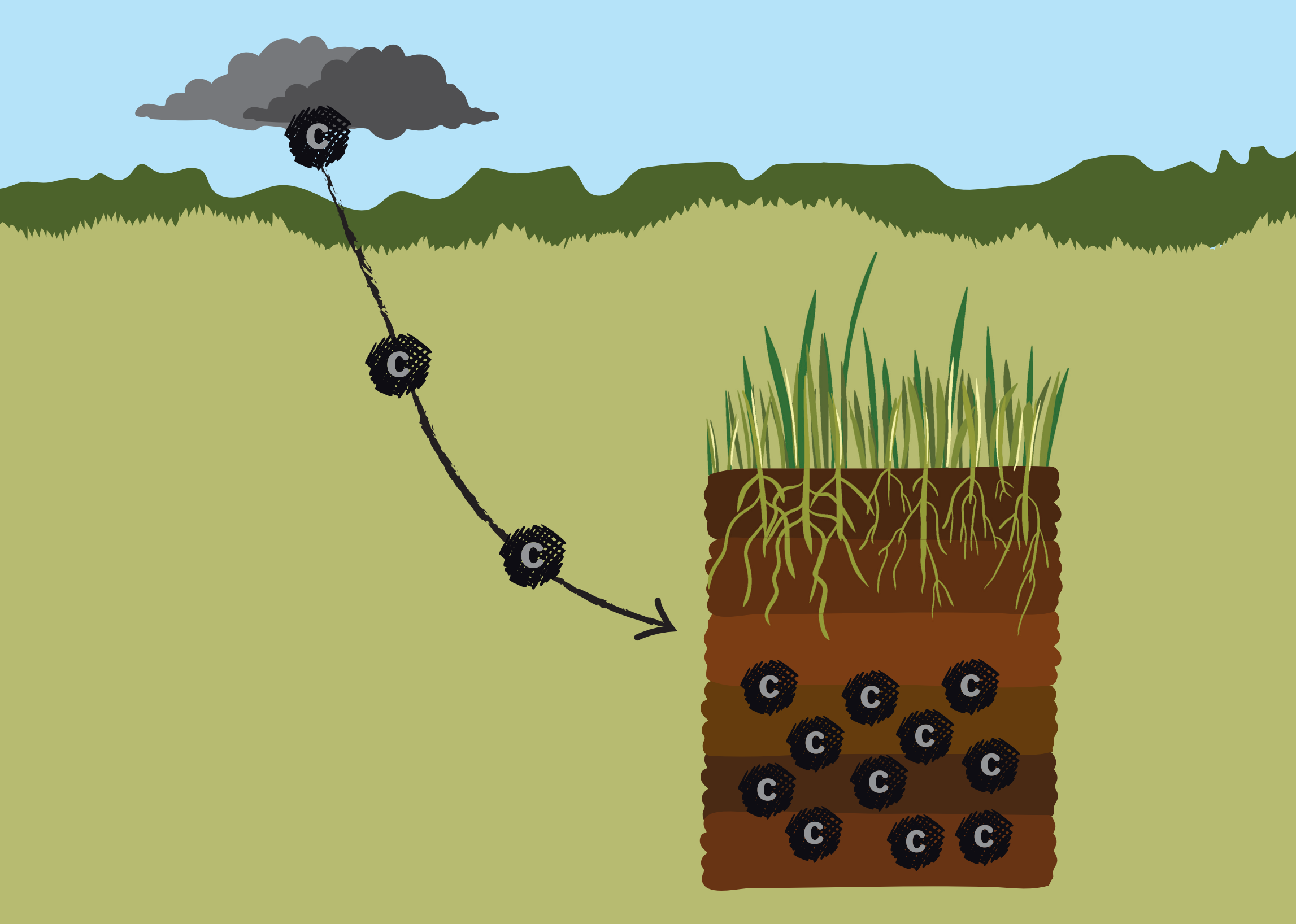
Climate change caused by increased carbon pollution in the atmosphere is already starting to change local weather patterns, making them more extreme and less predictable. Changes include more frequent droughts, heavier rainfall, and extreme flooding. If action on climate change isn't taken, extreme local weather patterns will continue to worsen.



## **Rangelands remove carbon from the air.**

Vegetation, like trees and grasses, removes carbon from the atmosphere as it grows and adds carbon into soil. The more plants grow, the more carbon they remove from the atmosphere and store in the soil. Different types of vegetation draw in different amounts of carbon and store it in different places in the soil. Perennial grasses have long roots that store carbon deeper underground, where it is protected from soil erosion near the surface. Healthy rangelands store more carbon in their soil.





## **Healthy rangelands benefit from good grazing practices.**

Rangeland health is closely linked to animal grazing. Well-managed grazing can maintain and restore rangeland health and increase soil carbon stocks. Good grazing practices require a high density of livestock in one place for short time periods. This means that all grass and vegetation are grazed or trampled, preventing livestock grazing targeting only some grasses, which allows other undesirable vegetation to take over. Well-managed grazing requires letting grasses recover by resting, with no grazing until grass is ready to be grazed again.



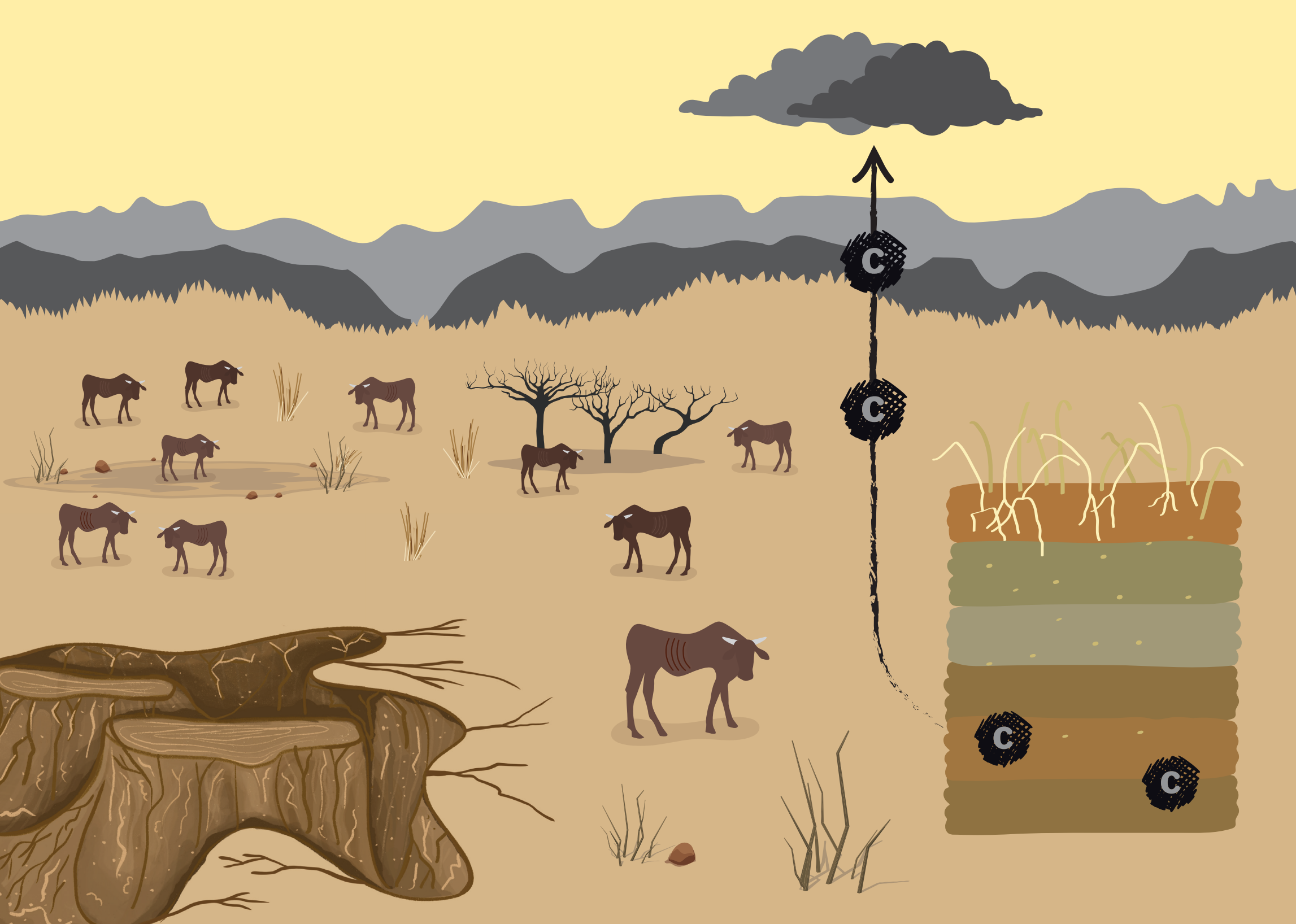
## **Good grazing practices benefits people, animals, and the climate.**

Good grazing practices maintain and improve rangeland health and should lead to larger soil carbon stocks. Healthy rangelands with rich soil carbon stocks are more productive, growing more and diverse nutritious fodder for livestock and wildlife. Increased soil carbon also increases soil structure and water infiltration, allowing water to sink into the soil where it is stored and used by plants during dry periods rather than running off and causing flooding and erosion. Additionally, soil carbon improves habitats for soil organisms, boosting rangeland health and supporting greater biodiversity.



## **Frequent, uncontrolled grazing damages rangelands and the climate.**

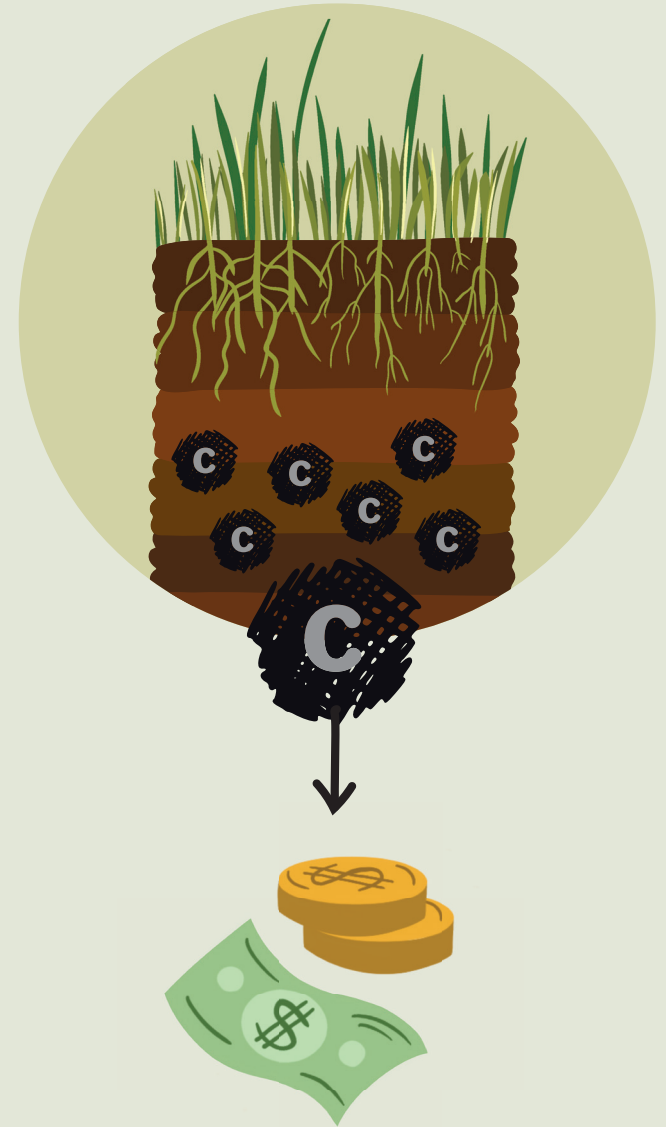
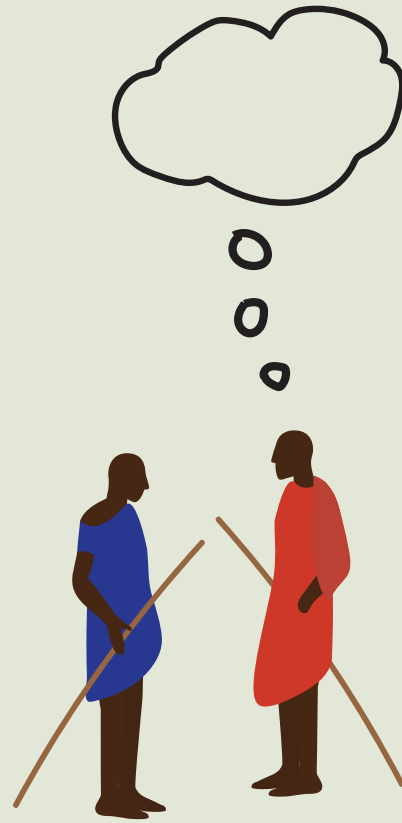
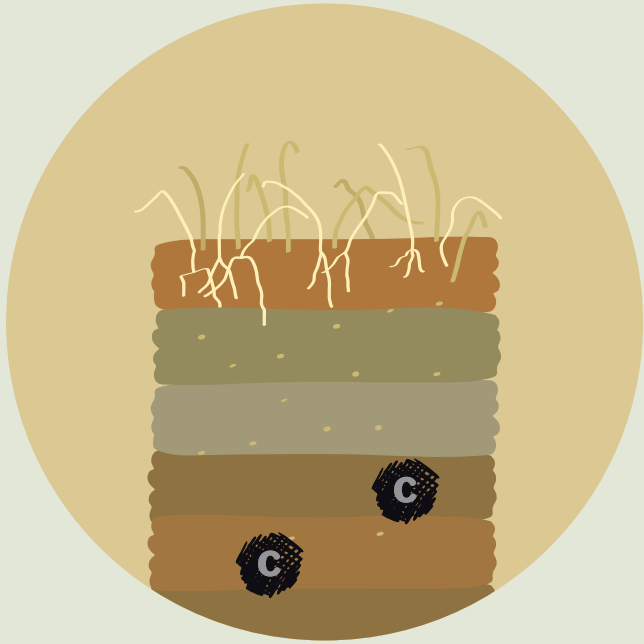
Constant grazing results in low grass biomass growth and productivity, reducing the amount of carbon that rangelands draw in. Chronic, continual grazing results in the loss of perennial grass species and allows unpalatable shrubs and annual grasses to dominate. Annual grasses have shallower roots and provide less ground cover, meaning soil carbon is vulnerable to loss due to soil erosion.



## **Payments for improved rangeland health.**

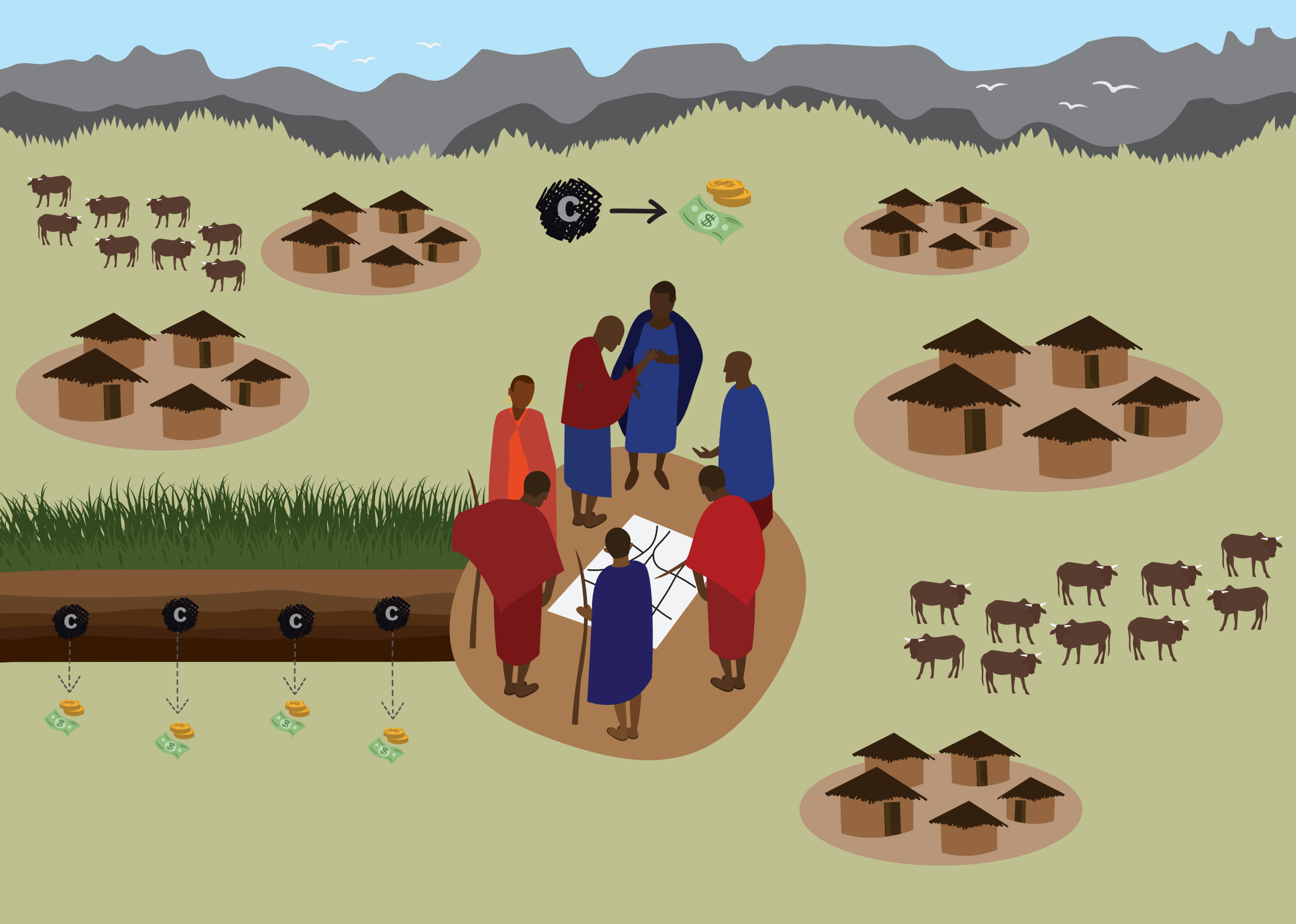
Carbon markets are a tool to fund climate change action. Through carbon markets, individuals and organizations pay to protect forests or to support improved rangeland management, grazing practices, and other activities that either avoid carbon being released or remove carbon from the atmosphere, contributing to global efforts to reduce climate change.





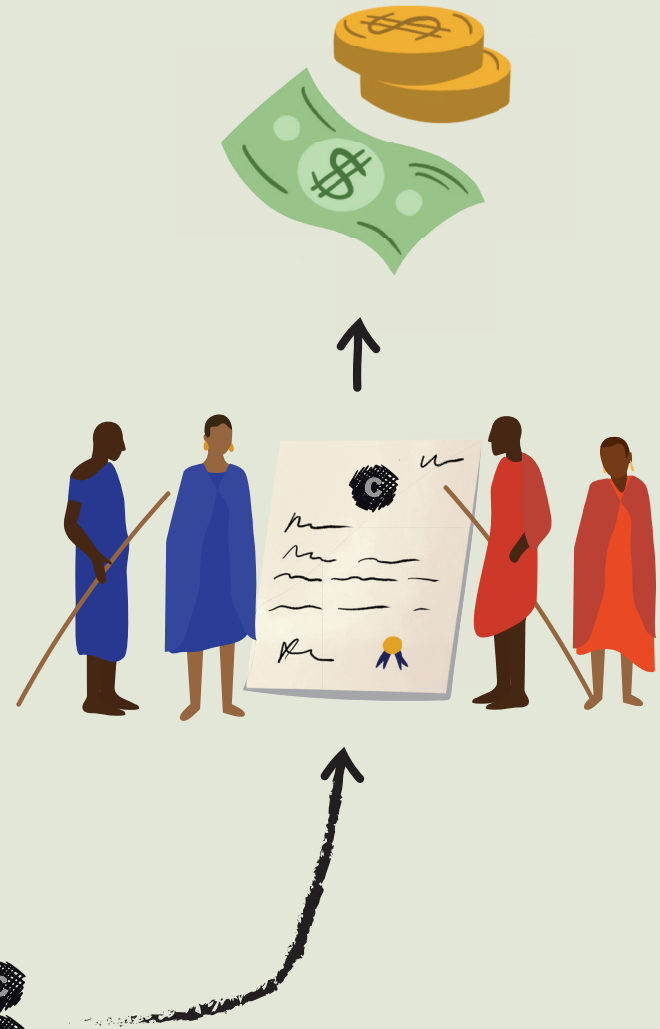
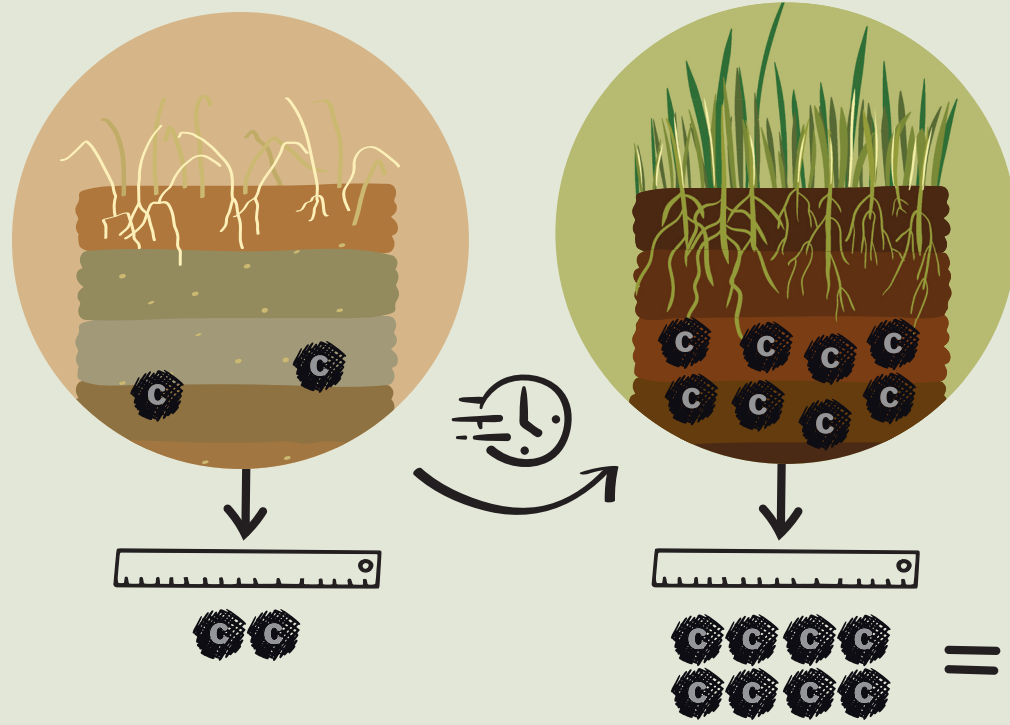
## **Working together to improve rangelands can generate revenue.**

Communities working together to improve grazing management can restore rangeland health and remove carbon from the atmosphere. But to do so, they must decide how best to manage their rangelands and grazing. Carbon market buyers may be willing to pay communities for their efforts in improving grazing management and changing their grazing practices. There are some fixed costs for project operations and certification; however, most of the revenue generated should be passed back to communities to compensate them for the efforts they undertake on their land. Communities should be able to understand the different costs and payments that accrue across the project.



## **Performance-based payments for measured climate impact.**

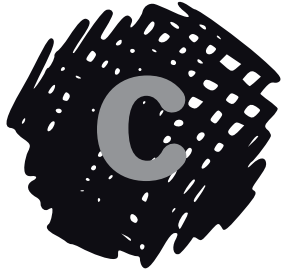
Carbon market payments are based on the extra carbon that is stored in the soil due to improved grazing practices. Changes in soil carbon need to be measured every few years, along with rangeland health and other indicators of the project's impacts. The project will create carbon credits, which are certificates of the measured increase in soil carbon due to a project. Carbon credits can be sold, generating revenue for the project for over 30 years. The better the grazing performance, the more carbon that is stored and the greater the number of carbon credits generated.



## **The community chooses together.**

Community members must decide together on a fair and equitable process on how they will make decisions, how to share revenue, and what the revenue should be spent on. Revenue should not be spent on actions that damage rangeland health, but activities could include projects that support better grazing; fund community development initiatives like providing schools, health services, water and sanitation services, or local enterprises; or provide individual benefits and payments.





The purpose of this guide is to support communities, carbon project proponents, and carbon project operators during the project's design stage to ensure a common understanding between all project participants on the basic principles of rangeland carbon projects. This is a critical component of the stakeholder consultation process and a prerequisite for communities being able to make empowered decisions and maintaining Free, Prior, and Informed Consent (FPIC) over the project's lifetime.

Building on the content of this book, communities must understand that it is within their rights and power to co-design the carbon project's interventions, delivery, and benefit sharing. Project participants must recognize that success depends wholly on communities and their willingness to contribute their land for a project and undertake significant land management and behavioral changes. Communities should always have a voice and the choice to say no. These are required by FPIC and voluntary carbon standards.

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