

BRINGING LIFE BACK TO KENYA'S GRASSLANDS PROFESSOR MARIANA RUFINO AND DR JOSEPH HITIMANA

TO MAKE THE MOST OUT OF THIS SCRIPT, YOU COULD:

- Stick it in your book as a record of watching Mariana and Joseph's animation
- Pause the animation and make notes as you go
- Add your own illustrations to the sheet
- Create your own animation to accompany it
- Add notes from classroom discussions
- Make notes of areas you will investigate further
- Make notes of key words and definitions
- Add questions you would like answered – you can message Mariana and Joseph through the comments box at the bottom of their article:
www.futurumcareers.com/bringing-life-back-to-kenyas-grasslands

SCRIPT:

Cultivating the land for agriculture and over-grazing of livestock can lead to land degradation. As soils become less fertile, biodiversity decreases and agricultural yields fall, damaging ecosystems and the livelihoods of farming communities.

The ReDEAL Project hopes to address this problem in Kenya. An international team of researchers, led by Professor Mariana Rufino, an agricultural scientist at Lancaster University in the UK, and including Dr Joseph Hitimana, an agricultural and forestry scientist at the University of Kabianga in Kenya, is working with farmers to find methods for land restoration.

By interviewing farmers, the team discovered that farmers and scientists have different definitions of land degradation, as farmers have different priorities for the land. Scientists measure land degradation in terms of physical properties of the soil, but this does not consider the social and economic pressures faced by farmers when making decisions about their land. Success of the project depends upon the researchers having the same objectives as the farmers they aim to support.

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In Kenya, farmers rely on grasslands to feed their livestock, which in turn feed their families and provide a source of income. Farmers therefore have a vested interest in avoiding land degradation.

However, limited income often means farmers must prioritise the short-term picture, ensuring they have enough food and income for the current year, rather than considering the long-term picture of whether their land is degrading. This means farmers may overlook early signs of land degradation if they are not currently impacting their production goals.

The ReDEAL team are working with farmers to find solutions to grassland degradation. The most important feature of any land restoration scheme is that it must be desirable for local farmers, so farmers' input is crucial. If it is expensive or time-consuming, then farmers will have no incentive to participate.

Farmers are sharing their knowledge of local plant species, as increasing plant diversity can enhance the quality of the soil. Researchers are growing these plants in experimental plots to determine which species combinations grow best in different environmental conditions. They are also assessing how plants respond to different land management practices, and how different methods of livestock management contribute to land degradation.

The ultimate aim of ReDEAL is for the land restoration methods developed during the project to be carried forward by local farmers. The team is hosting workshops to discuss and learn together with farmers, agricultural students and land management agencies throughout Kenya how to implement these land management solutions. If grasslands are to be protected for the future, farmers must have the power to design the solutions to the challenges they encounter on their land.

What could you achieve as an agricultural scientist?

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