

Learning by Ear – Environment

08 – Desertification

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Intro

Hello and welcome to Learning By Ear's special series that takes a look at the environment. Today you'll hear about the rapid expansion of the continent's deserts as our own activities place too much stress on the land. Over-grazing and deforestation are transforming Africa's arid and semi-arid land into sterile land through a process known as desertification. Today's Radionovela will tell the tale of how both small and large-scale farmers are literally allowing their livestock to graze the ground bare. This causes damage to the soil that will last decades repair and contributes directly to the rapid advance of our deserts.

Music – 0:30

Radionovela

SFX_local_restaurant

1. Monica: You know, we Africans can be very funny.
 Look at the Europeans. They hold their

wealth in property, while we keep our
wealth in animals...cattle, goats,
camel...whatever...

2. Moses: But when I get married how can I give my
bride's family a house? Monica, no, it must
be livestock. Cows if I can, otherwise it
must be goats.

3. Monica: [Laughs] Moses you are so old fashioned.
You think you can still pay for a bride...you
could never afford enough cattle for me!!

4. Moses: I bet your father would accept 20 cattle. He
is a traditional man.

5. Gladys: [Hum of agreement] It's true, and so is
mine. My father has just brought a new
herd of goats so that he may pay my
brother's in-laws their dowry...fifty goats
including 10 billy goats!

6. Moses: Gladys, but your father already has more
than a hundred goats on his farm. And
cattle too! How can he find good grazing for
that many animals?

7. Gladys: It's not easy. The grass quality is
deteriorating

**X-fade SFX_restaurant into SFX_birdsong and intermittent
SFX_Goats**

8. Monica: Wow Gladys, your farm looks so different.

9. Gladys: [sounding puzzled] How do you mean?
Nothing here has changed. Oh, except the forest has gone...

10. Moses: Monica's right. [**SFX_walking_bare_soil**]
The land here used to be full of shrubs and small trees. And the grass was so green...

11. Gladys: My father cleared the land about five years ago. He needed more land for grazing, so he set it all alight.

12. Monica: They call it 'slash and burn'. I learnt about it in geography class last week. Farmers who need more grazing cut areas of forest and allow it to dry. After some time, when the vegetation is dry, the farmer burns it, creating fields either for crops or livestock.

SFX_approaching footsteps

13. Moses: Good afternoon Mr Wambula...

14. Mr Wambula: [Grunt of acknowledgment] You are admiring the new herd?
15. Moses: Yes sir. Gladys was just telling us that you increased the size of your farm a few years ago.
16. Mr Wambula: Ah, well as the family grows you need more livestock to support yourselves.

SFX_hum_of_agreement

17. Mr Wambula: We burnt down the vegetation, me and my neighbours. Between us we cleared about twenty hectares. We thought the grass would grow back thick and green...[sigh of resignation] but you can see for yourselves, it is no good now.

SFX_hand_running_across_soil

18. Moses: It's just dust. The grass is so patchy...
19. Josphat: [approaching voice] Hello father,
20. Mr Wambula: Ah...meet my son, Josphat. He is Gladys's older brother.
21. Moses, Monica: Hello.

22. Mr Wambula: Josphat is at agriculture college, something I never did...

23. Monica: Can you explain Josphat why your father's soil is so poor?

24. Josphat: You see, first of all when you remove the vegetation the topsoil becomes exposed to the wind and rain. Without the roots of trees and bushes to hold the soil together it is easily washed away in heavy rain. So too are all the nutrients that the topsoil contains.

[Collective 'Ahhh' of understanding]

25. Mr Wambula: But Josphat, I gave the ground time recover. I allowed the grasses to grow back.

26. Josphat: Yes you did father but the soil was somewhat degraded. That's to say it was less fertile than before. Then when you started grazing the animals there was even more what we call 'stress' placed on the soil.

27. Moses: [confused] How do you 'stress' the soil?

28. Josphat: Well tell me what those goats over in the corner are doing?

SFX_Hooves_scraping_ground

29. Moses: They're just scraping the ground with their hooves...

30. Josphat: You say just scraping – but what is the effect?

31. Monica: They kick up dust.

32. Josphat: But what is dust?

33. Monica/Moses: [together] Don't know...

34. Josphat: That dust is fine soil particles. Each time a goat's hoof lands on the ground it compacts the soil, making it harder. On the top is a layer of fine material...that's what you're seeing the goats kick up. It's another form of erosion. What's more, when it rains the water can't seep through the compacted soil. So instead the water runs along the surface carrying away the loose soil.

35. Mr Wambula: You say when it rains, Josphat, but for the last two years the rains have failed.
[Exclaims] We're in a drought!

SFX_manual_water_pump

36. Mr Wambula: This is how I water my animals...by pumping water from a borehole. It's the drought that is to blame, not my animals.

37. Gladys: He's right surely. How can the grasses grow when there is little rain?

38. Josphat: Actually father, you're not quite right.

39. Mr Wambula: Oh?! How's that...

40. Josphat: It is a common misconception that droughts by themselves cause desertification. Drought is indeed a factor. But the root cause is man's exploitation of the environment. Yes we have experienced something of a drought in the last two years. But that is not to say there has been no rain at all. And the land here, if it is well managed, can recover.

41. Mr Wambula: [Indignantly] I do manage it well!

42. Josphat: Well let me ask you this – before you dug the borehole, where did you graze the animals?
43. Gladys: I remember how you used to move around. You were a pastoralist. You followed the rains and the good pastures.
44. Mr Wambula: Yes I did.
45. Moses: I see, so you would graze an area and then move on. And this would allow the soil and the vegetation time to recover.
46. Josphat: Precisely.
47. Mr Wambula: But now I don't move around because the borehole always has water.
48. Josphat: Right, so the ground here is being constantly grazed. It never has a chance to recover. It's not your fault, father. The reality is that as our population increases, there's less space for everyone and more demands are placed on the land.
49. Monica: Josphat, but can your father's farm ever be green and fertile again?

50. Josphat: Yes, Monica. It is possible through natural processes it would take a long time. Decades, perhaps not even in our lifetime. But for that to happen he'd have to stop grazing the animals here.

51. Gladys: You sound pessimistic...

SFX_walking_over_bare_ground

52. Josphat: The problem is that our father is not alone. All around here we are seeing a steady degradation of the land. The same thing is happening across the country, up and down the continent.

[Collective 'oh' of surprise]

53. Josphat: When there land is bare there are no trees or plants to retain the moisture in the air. So it rains less. What we fear is that in time there will be a permanent change in climate patterns.

54. Monica: Josphat, you mean that one day this land could become desert?

55. Josphat: Yes, Monica, that's the worst case scenario. But it's already happening across the continent.

Music – 0:30

Did You Know? – Desertification

Did you know that globally 1.2 billion people are at risk from desertification. That's one in every six people. It's believed 75 percent of the world's drier lands – that's about 45 million square kilometres – are affected by desertification. Every year some 6 million hectares of agricultural land are lost and become virtual desert.

Desertification is nothing new. In fact several ancient civilisations including the Babylonian Empire are thought to have declined more rapidly after their agricultural output fell because of water scarcity. But current desertification is happening much faster than it has done historically. Who is responsible for this? Well the blame falls squarely on our shoulders. Human activities such as logging and livestock-grazing mean that land in arid and semi-dry areas is being degraded at a faster rate than is considered natural.

The phenomenon of desertification first came to the world's attention in the late 1960s. Two hundred and fifty thousand people and millions of domestic animals died over a six year period in

west Africa's sub-Saharan Sahel region. Experts estimate that the Sahara is advancing southwards by between five and ten kilometres each year. When you consider that the Sahara is more than five thousand kilometres wide, you realise that's a lot of new desert created every twelve months.

The United Nations Environment Programme has estimated that four and a half billion dollars need to be spent every year for the next twenty years to prevent the process of desertification. Halting the advance of the deserts on the African continent requires good land management. This means reducing the man-made pressures and stress placed on the land, such as livestock grazing and crop-growing, so the soils and vegetation can recover. But as Africa's population increases, the number of mouths in need of feeding rises, adding to the demands placed on Africa's fragile dry-lands.

Outro

And that's all for today's Learning By Ear special environment focus on desertification, written by Richard Lough. Thanks for being with us. If you want to hear the programme again or tell friends about it, go to our website at www.dw-world.de/lbe. Good Bye.