

Learning by Ear – Environment

04 – Cars and Bicycles

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Intro

Hello and welcome to Learning By Ear's special series that takes a look at the environment. On today's programme you'll hear about how the car is one of the major sources of carbon dioxide pollution. And as we'll hear later on carbon dioxide is one of the greenhouse gases that scientists say are causing the Earth to heat up in a process known as Global Warming. But since we're all so dependent on getting around, what's the solution. We look at the benefits of public transport and even the bicycle. In today's Radionovela we'll also take a look at air travel and the devastating effects that global warming is already having on the planet. And finally we'll find out more about carbon dioxide...why we need it, but not too much of it! Stay with us...

Music – 0:30

Radionovela: 5:00

SFX_Road_Traffic

1. Moses: One day I'll drive a jeep!

2. Monica: [teasing] What do you mean Moses? You'll always use the bus. As for me, I'm going to drive a Toyota Prado...the biggest car on the road!!

3. Moses: No, no, no Monica. That's where you're wrong. I'm going to be a rich businessman, and I am going to show off my wealth. I'll own a Hummer...that's the biggest, meanest car on the roads today!

4. Gladys: What, Moses, is a Hummer?

5. Moses: A Hummer, Gladys, is an American military vehicle. Only now they have been converted into road vehicles. David Beckham owns one...

6. Monica: And now it's becoming the car of choice of African big men too...!

- [collective laugh]

7. Monica: It's true. If you're rich you must have a big car!

8. Moses: And besides our roads are so poorly maintained you need a 4x4 just to drive across the city!
9. Gladys: But what about the pollution they cause?

SFX_Passing_Truck

10. Gladys: [coughs] Just look at the black smoke that truck is belching out. Uuuugh...I can feel it tickling my lungs.
11. Moses: But the exhaust just blows away. It doesn't cause any trouble.
12. Monica: [stunned] Are you joking Moses?! Have you not noticed the layer of smog that sometimes hangs over the city on cold mornings...Haven't you felt the polluted air sting your eyes?
13. Gladys: Even worse though is the damage car exhaust does to the environment. You might think it just disappears into thin air, Moses, but you're wrong.
14. Moses: Gladys, I don't understand...
15. Gladys: One of the gases you find in car exhaust is carbon dioxide.

16. Monica: That's one of the greenhouse gases right, Gladys?
17. Gladys: Absolutely, Monica!..
18. Moses: The what?
19. Gladys: Greenhouse gases...please tell me Moses you have heard of the Greenhouse Effect.
20. Moses: [Embarrassed] Well, no actually.
21. Monica: It's complicated but here's how it works. There are a group of gases that form a blanket high up in the atmosphere. These gases prevent heat escaping the Earth's atmosphere.
22. Gladys: Without these gases the Earth would not be habitable as all the heat would escape.
23. Monica: But as this blanket of gases gets thicker, more heat is trapped.
24. Gladys: And the result is global warming.
25. Moses: And cars are entirely to blame for this greenhouse effect?

26. Monica: Not, not by any means. There are many reasons why we are witnessing an increase in temperatures across the globe...
27. Moses: Like...
28. Gladys: Like burning down the forests, like the burning gasoline ...
29. Monica: But the pollution from motor engines IS a significant factor. Small cars with small engines will on average emit about 4-6 tonnes of greenhouse gas. Bigger cars, like 4x4s release as much as double that.
30. Moses: [sarcastically] So what do we do...take the bus?
31. Gladys: Precisely. Here in the city there's no reason why we can't take the bus. Or even better still, you could walk...
32. Moses: [incredulous] Walk?!!!!!!
33. Monica: At least then your conscience will be clear...you won't be emitting any greenhouse gases.

34. Moses: But look at all the exhaust our buses throw out.
35. Gladys: It's true...the old engines are dirty and big polluters compared to modern engines. But if the bus is full then you are contributing less per passenger than a single person driving a car.
36. Gladys: Or how about peddle power? You could cycle, Moses. That too is a clean mode of transport.
37. Monica: Gladys, I think our roads are too dangerous to cycle. But I agree, it is quicker than walking at least.
38. Moses: Listen, all this talk of exercise is making me thirsty. Let's get a soda at a café around the corner. I am supposed to be meeting my brother Quentin.

X-fade from SFX_Traffic in SFX_Café

39. Moses: Hey Quentin, meet Monica ...
40. Monica: Hello.
41. Quentin: Hi Monica.

42. Moses: And Gladys ...

43. Quentin: Hi Gladys ...

44. Moses: I was telling these girls that when I'm rich
I'm going to drive a Hummer!

45. Quentin: [to the girls, quietly] This guy is a
dreamer...

[giggles from Monica and Gladys]

46. Quentin: Or my little brother, you could fly like me.

47. Moses: Quentin is always travelling around the
region.

48. Gladys: Flying is even worse for the environment!

49. Quentin: I know, it's true. You know I read
somewhere that aviation accounts for 2
percent of the world's carbon dioxide
emissions. But I have no choice...it's for
business.

50. Gladys: Yeah, but you know the problem is that
there are millions of others like you who are
saying they have no choice. Aviation may

only account for 2 percent of carbon dioxide output....

51. Moses: [slams down his glass] Which is peanuts!

52. Gladys: But it is the fastest-growing source greenhouse gases and the industry risks undermining our efforts to tackle climate change in other areas.

53. Quentin: Gladys, I don't dispute what you are saying. But you know modern technology is enabling us to manufacture cleaner, more fuel efficient aircraft.

54. Monica: But like Gladys says, more and more people are flying. Couldn't you just pick up the telephone, or maybe even make a video call?

55. Quentin: It wouldn't be the same.

56. Moses: You say these greenhouse gases are warming the earth ...

57. Monica: They are. There's scientific evidence ...

58. Moses: How much by?

59. Gladys: Well so far they say less than one percent ... in fact 0.7 percent to be precise.
60. Quentin: That's nothing.
61. Moses: The average temperature in this city is 30 degrees celsius. So what difference does another one degree make?!
62. Monica: Well, quite a lot actually. Haven't you noticed how our weather patterns are changing? Just talk to any farmer and they will tell you that it is now impossible to predict the rains. A generation ago they knew exactly on which day to harvest.
63. Gladys: Monica is right. And some scientists fear that if the Earth warms up by more than two degrees then we may not be able to reverse the process. So do you still want to own that Hummer when you're a rich man?
64. Moses: [defeated] Well now you're making me feel guilty, as if this greenhouse effect is my fault.

[Monica/Gladys laugh]

65. Monica: Of course it's not your fault Moses. But we must realise that we can all make a difference.

66. Gladys: And the reality is that there are modes of transport that are more environmentally friendly than others ... your Hummer is not included!!

67. Monica: Who's ready to head home?

68. All: Sure

69. Moses: Of course, you'll both be walking?!

[collective laugh]

Music – 0:30

Did you Know? – Carbon Dioxide – CO₂

Did you know that back in the 17th century carbon dioxide was one of the first gases to be described as a substance distinct from air? Carbon Dioxide – or CO₂ as it is more commonly known, has something of a bad reputation, largely because it is the most prevalent of the greenhouse gases. And as you have just heard, the scientific consensus is that the increase in greenhouse gases

is warming up the planet. But CO₂ is a naturally occurring gas in the Earth's atmosphere.

Indeed, if CO₂ and the other greenhouse gases didn't exist the Earth as we know it would be uninhabitable. Why? Because the sun's heat wouldn't be retained within the Earth's atmosphere. All animals, plants, fungi and micro-organisms produce CO₂ during respiration. Plants then re-use the CO₂ to make sugars through a process known as photosynthesis. In other words, CO₂ is a key component of the carbon cycle.

The problem arises when there is too much CO₂ in the atmosphere. Due to human activities such as burning fossil fuels, driving cars and flying planes and deforestation, the concentration of atmospheric CO₂ has increased by about 35 percent in the last two hundred years - in other words, since the age of industrialisation. Some scientists argue this is just a natural cycle. After all, five hundred million years ago carbon dioxide was twenty times more prevalent than today. But the majority dismiss this argument and say that the concentrations of atmospheric CO₂ are increasing at an unprecedented rate.

Curbing the emissions of CO₂ worldwide is one of the major challenges facing our generation. But politicians disagree on how best to achieve this. What does appear increasingly certain, however, is that if we fail to control greenhouse gases, the Earth will continue to heat up with devastating environmental consequences: polar ice caps will melt, sea levels will rise, and droughts will become increasingly severe.

And which will be the worst hit continent? Well, many scientists believe Africa will bear brunt of climate change, even though other continents are responsible for the polluting in the first place.

Outro

And that's all for today's Learning By Ear special environment focus on cars and bicycles, written by Richard Lough. So remember, think about whether you really need to take the car or bus. Perhaps you can walk or cycle instead. If you can, you'll be doing the environment a great favour. You CAN make a difference and set an example to world leaders as they debate how to tackle greenhouse gases. 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.