

# Tackling Soil Degradation



## 1. Why are our soils degrading?

Scan the QR code, or click on the [link](#) to view poster from the Food and Agriculture Organization of the United Nations (FAO) Soil Doctors Programme.

► Why are your crops not growing well <https://www.fao.org/3/ca2200en/ca2200en.pdf>

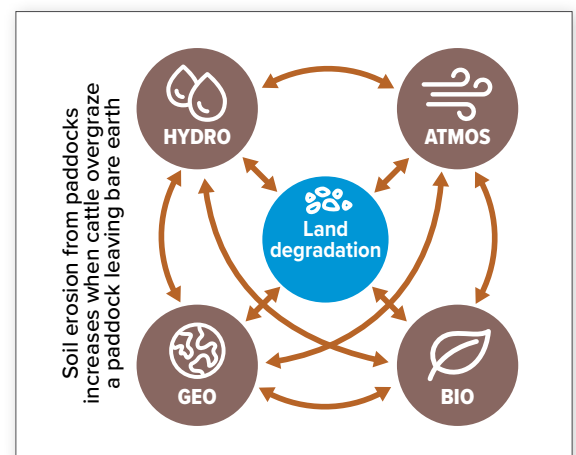
List the eight causes of soil degradation shown in the poster.

- a) \_\_\_\_\_ b) \_\_\_\_\_  
c) \_\_\_\_\_ d) \_\_\_\_\_  
e) \_\_\_\_\_ f) \_\_\_\_\_  
g) \_\_\_\_\_ h) \_\_\_\_\_

## 2. Using the 'Earth system diagram' to describe the soil degradation issues

- a) Working in groups of four, design a large 'Earth system diagram' that shows the interactions between the causes and effects of different soil degradation issues. The easiest way to create the diagram is to use a large sheet of poster paper or butchers paper. Draw the 'Earth system diagram' on the poster paper and add the cause-and-effect sentences on sticky notes close to the arrows that link the interacting spheres involved. Add arrows to show links between different cause-and-effect sentences.

Alternatively, your group could work collaboratively online using an app such as [PowerPoint on the Web](#). You can change the slide size to 36 inches by 36 inches and draw the 'Earth system diagram' using the Design tab. You can also work on the desktop version of PowerPoint and cut and paste elements onto the main diagram (Worksheet 3.5a, Figure 1). See right for an example.



Example

# Tackling Soil Degradation (cont.)

- b) Each group member chooses one of the soil degradation issues highlighted by the FAO infographic and researches that soil degradation issue (e.g. what causes the problem?, How the impacts of the problem can be fixed or, at least, improved?).

You need to gather enough information about your soil degradation issue to be able to write some cause-and-effect sentences to add to your group 'Earth system diagram' (refer to the connection keywords in [Worksheet 3.5a – Feeding the World](#)).

Some soil degradation topics include:

- Water erosion
- Loss of soil carbon (organic matter loss)
- Nutrient imbalance
- Soil salinity (salinisation)
- Soil acidity (acid sulfate soils)

Key terms for online research include soil health, soil condition, and Australia.

You will find some starter links about soil degradation topics on [Worksheet 3.5c – Soil Degradation Links](#).

- c) At the same time, record possible solutions to the problem. This will be needed later in the activity.
- d) Complete the 'Earth system diagram' for the 'Event: Soil degradation'. Then compile a list of agricultural practices that will assist in reducing soil degradation for the four soil degradation causes your group researched. As a group, present your 'Earth system diagram' and your findings in your communication mode of choice for your audience, e.g. report, presentation, video, podcast, animation etc.