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BACKYARD BIODIVERSITY

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Activity

Backyard Biodiversity salinity activity

Read about the major environmental threat of salinity and try a salinity experiment at home or school.

- [The problem of salinity in Australia](#)
- [Salinity research and CSIRO](#)
- [A salinity experiment](#)



Salinity is a major environmental threat.

Salinity is a huge environmental problem in Australia. Dryland salinity, which is rising salt that damages soil, plants and buildings, is hard to comprehend and harder still to stop.

Approximately 5.7 million hectares are at risk of, or affected by, dryland salinity. In 50 years, it is estimated this area may increase to more than 17 million hectares.

THE PROBLEM OF SALINITY IN AUSTRALIA

Native Australian vegetation has evolved to be salt-tolerant. But when European farming arrived and replaced the natives with crop and pasture plants that have shorter roots and need less water, the inevitable happened.

With every fall of rain, unused water leaks to the water table, raising it and bringing the salt up with it. That process continues today, and the volumes of water and salt are vast.

Under the soils of the Western Australian wheat belt and some parts of eastern Australia the salt store is so immense, and the movement of sub-surface water so slow, that restoration to fertility of salt-affected land will take generations. Some areas may never recover.

Our research shows that, even if we replant up to 80 per cent of the native vegetation, some cleared catchments would not see recovery within normal human timescales.

It is a tragic irony that the felling of many billions of trees to make room for the farming that let this nation prosper has caused, in just 150 years, our worst environmental crisis, and destroyed a natural balance that had existed for millennia.

SALINITY RESEARCH AND CSIRO

The great challenge in catchment science is the ability to predict the changes in water and salt levels in large river basins. CSIRO's Surface Water and Groundwater Interactions team aims to increase our ability to make these predictions, both in terms of water quality and quantity.

The team explores the implications of different pressures on river water, such as upland land use change, climate change, salinity, and groundwater balance. We assess these changes and their impacts on water consumption and the environment.

The Surface Water and Groundwater Interactions team focusses on developing integrated models of regional catchment hydrology, which can be used to develop water resource planning and water operations. This modelling capacity and hydrological knowledge are being used to support the National Water Initiative.

The team is also exploring the ecological consequences of environmental water allocations. These are in conjunction with regional assessments of salt and groundwater nutrient pollution and similar research on surface transport of sediment and nutrients.

A SALINITY EXPERIMENT



FAST FACTS

- The topic of salinity is part of the Backyard Biodiversity initiative from CSIRO's [Double Helix Science Club](#)
- Salinity is a major environmental problem in many areas of Australia
- Salinity is linked to rising groundwater that brings salt to the surface of the soil
- Many scientists are researching ways to prevent or reverse salinity problems
- Read more about salinity or try a salinity experiment

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Title: [Backyard Biodiversity salinity experiment](#)

Media: [Publication - General](#)
Size: [184 KB](#)

Title: [Backyard Biodiversity salinity worksheet](#)

Media: [Publication - General](#)
Size: [25 KB](#)

RELATED AREAS

- [Salinity & Acidity](#)
- [Double Helix Science Club](#)
- [Do-it-yourself science](#)

RELATED TOPICS

- [Backyard Biodiversity salinity experiment](#)
- [Backyard Biodiversity salinity worksheet](#)

What effect does salty water have on plant growth? Does the growth rate vary with the amount of salt in the water? Try our salinity experiment at home or at school to help answer these questions.



Try this salinity experiment yourself.

Download the [Backyard Biodiversity salinity experiment](#) and the [Backyard Biodiversity salinity worksheet](#).

Read more about [Backyard Biodiversity](#).

REFERENCES

Backyard Biodiversity is supported by the Australian Federal Government as part of National Science Week.



An Australian Government Initiative

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