

Land and Water Management

The nature of Land and Water Management

The effective management of land and water is also very contentious. Even though farming is no longer an extractive process and is now generally managed in a sustainable way, there are still a lot of arguments about the best way of doing this. 'Extractive' means a process that was concerned with taking natural resources without worrying about the need to replace them.

Clearing land of native vegetation in order to grow more crops or raise stock is one of the most contentious issues. Some landowners argue it is their right to do whatever they want with their land and if they want to clear it they should be able to do so. Other people argue there are more **stakeholders** than just the landowners. What do you think?

The issue of water allocation is also a highly contentious aspect of effective water management. This issue is very significant for rural people because often their livelihood depends on effective water management. If your parents, for example, rely on **irrigation** rights in the Murray-Darling River system, you would really understand the issue of water allocations. And, of course, it is not just farmers who are concerned with this issue. Water allocation is also an important issue for many rural towns. The problem is that in the past water rights have been over allocated. There is simply not enough water under normal seasonal conditions to meet the demand for water. What do you think should be done?

In other rural areas, people argue about issues such as how best to deal with **salinity**, mining, introduced species, soil erosion and the exploitation of natural resources like timber. What is your view, for example, on the development of open-cut mines on the best farming land?

The impact of Land and Water Management

The most important impact of land and water management is on employment. If the land and water are not well managed, the industries that rely on natural resources will suffer. For example, farming relies on fertile soil, fishing industries rely on adequate fish stocks, and all humans rely on a fresh water source. Employment opportunities in terms of income and job prospects that come from tourism are important to many Australians. The tourist industry relies on a pristine or aesthetically pleasing environment.

On the other hand it is obviously important to protect our ecosystems. Perhaps what is most important is our moral duty, as citizens of this planet, to conserve the environment not only for the current plant and animal populations, but also for future generations.

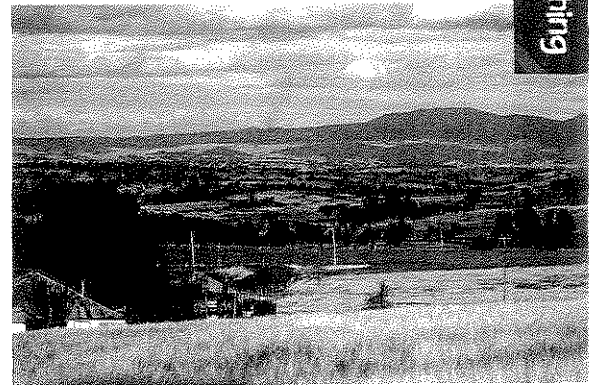


Fig 1.1 Rural land is cleared for cropping and grazing.



Fig 1.2 Overhead irrigation where a lot of water is wasted.

Stakeholders: people who have an interest or concern in something.

Irrigation: to water dry land by means of pipes or streams.

Salinity: the increased accumulation of excessive salts in water and on land.

The responses of individuals, groups and government to the issue of Land and Water Management

Many **individuals** accept a high degree of responsibility for their actions and take measures on a daily basis to engage in the management of land and water. These individuals have responded by trying to minimise their ecological footprint, often through reduced water and energy use. They have adopted strategies such as solar panels, water tanks and public transport as beneficial alternatives. Farmers generally have responded by installing more effective irrigation systems and adopting farming practices that nourish and conserve the soil.

Groups are also important in the response to the issue. Environmental action groups such as Greening Australia and Clean Up Australia Day are typical. These groups mobilise community action to redress some of the errors of the past and implement strategies to more effectively manage the land and water. Landcare Australia is another active group responding to this issue. Landcare Australia is the umbrella group for some 4000 community landcare groups that are tackling land degradation throughout Australia. Landcare Australia argues it is a partnership between the community, government and business to 'do something practical'.

Local councils have the primary responsibility for land and water management. Local councils set out all the planned development in their region in a local environmental plan (LEP), which needs the approval of the NSW Minister for Planning. Local communities can influence this plan.

The **NSW Government** tries to provide **sustainable** and **integrated** management of the state's water and land. The NSW Government has established two departments to do this. The Department of Environment, Climate Change and Water is responsible for the integrated management of the state's water. The Land and Property Management Authority is responsible for things like soil conservation and education and training in land management.

The **Australian Government** has responded to the challenges of land and water management by creating organisations where all the states can contribute to an integrated national approach. The Australian Government has established the National Water Commission to develop the required national land and water management guidelines.



WEB:

Visit your local council's website to find the following information.

- What environmental issues appear to be of greatest concern for this area?
- What programs or methods do they have in place to manage these issues?
- What activities or programs can you become actively involved in to help protect or conserve the region's environment?
- Suggest improvements the council could undertake in terms of the environment. (e.g. reporting data, greater promotion of current projects, or new projects.)
- Find out the contact details that you would need to pass on this information.



Fig 1.3 Drip irrigation uses water more efficiently to reduce waste.



Fig 1.4 Windbreaks used by farmers are rows of trees planted to stop the erosion of soil from the wind.



Fig 1.5 Landcare Australia is a group organisation which provides practical assistance to landholders.

Sustainable: the land and water resources can be conserved for future use.

Integrated: combined with another so that they become a whole.



Fig 1.6 Demonstration to landholders on how to fumigate rabbit burrows.

Worksheet 1.1 Land and Water Management

