

the effort



services science to back up its policies. "The data they have used has great scientific value and they have been very careful about what they are doing." Regional councils have a use for the principles in their policy making and other agencies worldwide are also embracing ecosystem services.

The Department for Environment, Food and Rural Affairs (DEFRA) in the United Kingdom is using the principles to make policies and decisions. Other parts of Europe and America are using the basis and closer to home the Ministry of Agriculture and Forestry (MAF), the Ministry for the Environment and government departments in Australia are dipping their toes in the water.

"It's complex but the terms of thinking behind it is sound. It's now about getting that information to a state that people can use it.

"New Zealand is in a good position because it has been looking at it for about six years."

While there is research on soil economics coming out of Lincoln University, Miss Dominati's work is set to lead the way.

Both MAF and the Ministry for the Environment are using the principles. And Australia is looking at it closely.

"I hope to keep working on it if I go back to France.

"At congress it was encouraging to see a lot more linking research to practical use." Robert Costanza and his colleagues' research expressed that the choices made on one day regarding the use of land and water resources will have enormous consequences on the future sustainability of earth's ecosystems and the services they provide.

Mistakes of the past may have had a irreparable consequence on the future.

WHAT CAN SOIL DO?

Flood mitigation: Soils have the capacity to store and retain water and therefore can mitigate and lessen the impacts of extreme climatic events and limit flooding.

Filtering of nutrients: If nitrates and phosphates present in soil are leached, they can become a contaminant in aquatic ecosystems and a threat to human health. Soils have the ability to absorb and retain nitrates and phosphates, therefore avoiding their release into water. Along with other natural processes, soil can drive the quality of runoff and drainage waters and wider water bodies such as ground water, lakes, and rivers.

Biological control of pests and diseases: By providing habitat to beneficial species, soils can support plant growth and control the proliferation of pests and harmful diseases. Moisture and temperature determine the quality of the soil habitat and so dictate the type of organisms present.

Recycling of wastes and detoxification: Soils can self-detoxify and recycle wastes. Soils can absorb or destroy chemical compounds that can be harmful to humans.

Regulation: Soils play an important role in regulating many atmospheric elements, therefore impacting on air quality. Soil can store carbon as stable organic matter, which is a non-negligible benefit when talking about off-setting greenhouse gas emissions.



In the field: Estelle Dominati and her supervisor, Alec Mackay, from AgResearch.

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