



**Landscape ecology differs from traditional ecology by including humans as a key component of ecosystems. We study how ecosystems are affected by human activities over very large regions.**

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## Important Scientist Characteristics

★ Research is often about finding practical solutions to real-world problems. Problem-solving skills such as the use of comparison between things that seem different, or separating something to examine it in more detail, help to see how past problems have been solved. Skills in mathematics and logic are important when solving problems with maps and computers.

## Example of a simple research question I have tried to

**answer:** Landscape ecologists often use maps to study the spatial patterns of ecosystems. How can we use computers to measure the patterns which we as humans can so easily see with our own eyes when we look at a map?

**Technology or equipment used in research:** I use advanced computer systems to automate the analysis of very detailed maps covering the Earth. Spatial analysis of those maps requires highly specialized image analysis and geographic information system software.

## • Most Exciting Discovery

• I invented a way to measure  
• forest spatial pattern  
• and used it to conduct  
• the first high-resolution  
• global inventory of forest  
• fragmentation. Forest  
• fragmentation—where forest  
• land is broken up into smaller  
• pieces—is often a signal of  
• poor ecological condition.

## • When did you know you • wanted to be a scientist?

• I was drawn to science when  
• I realized that scientists  
• did more than just discover  
• things. We also invent things  
• like tools and techniques  
• to help solve important  
• environmental problems.