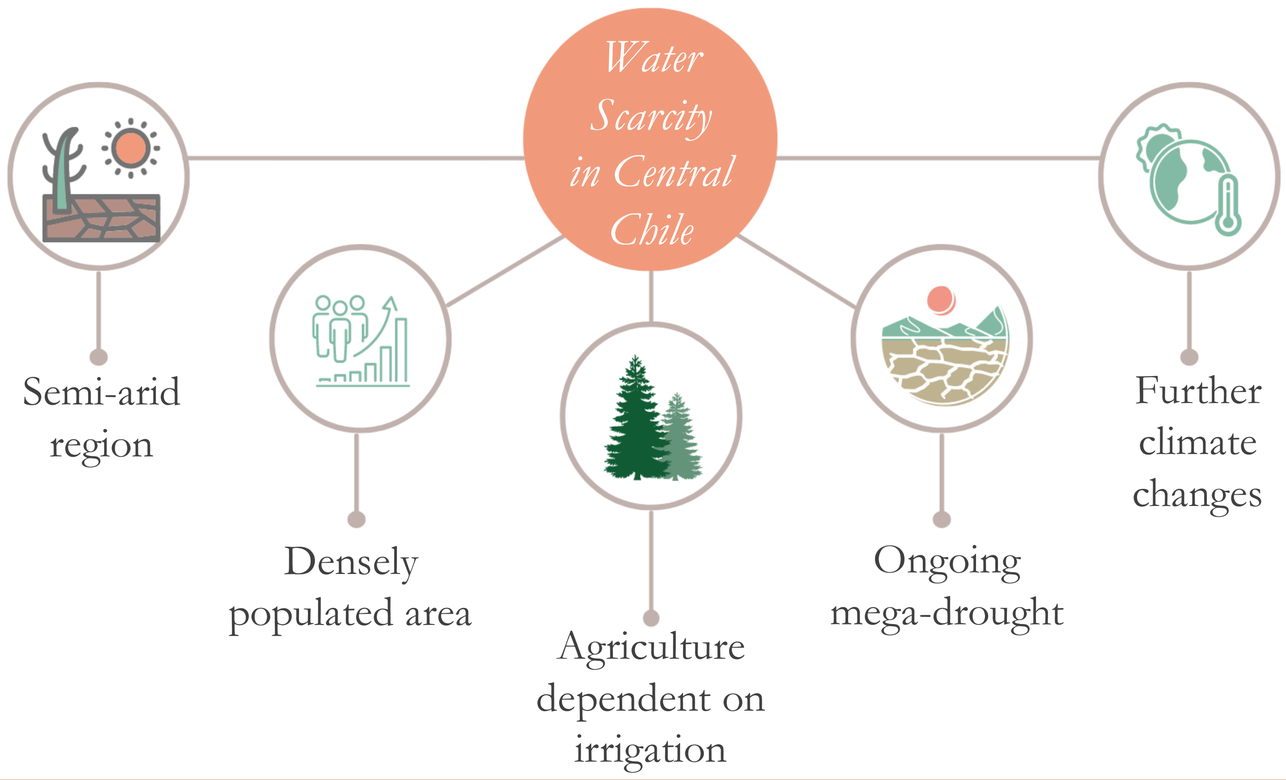
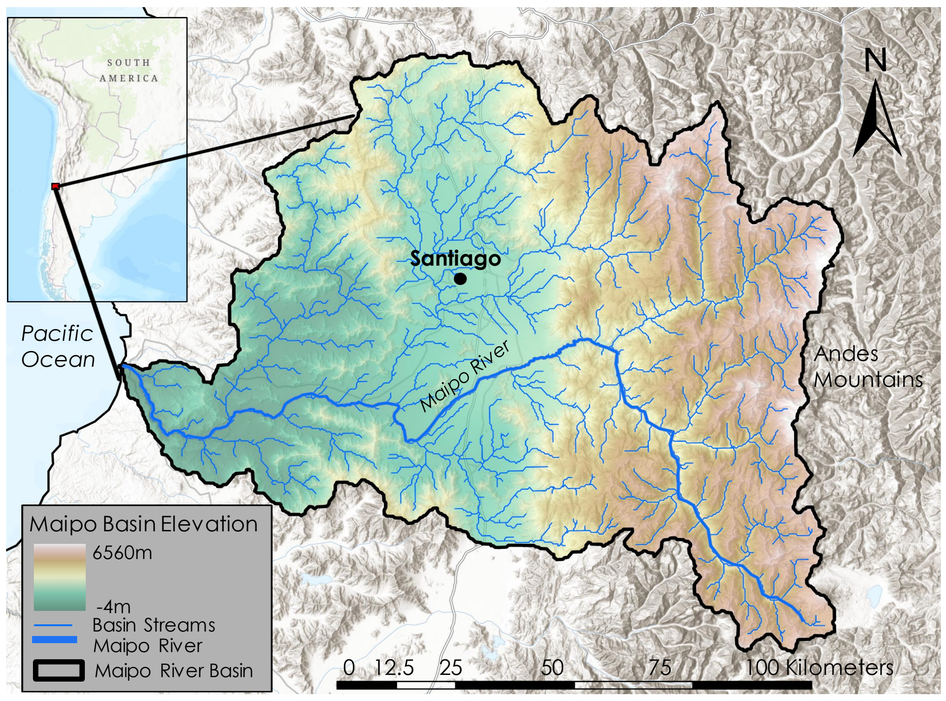
Determining Crop Coefficients Using Remote Sensing for the Maipo River Valley Basin in Chile

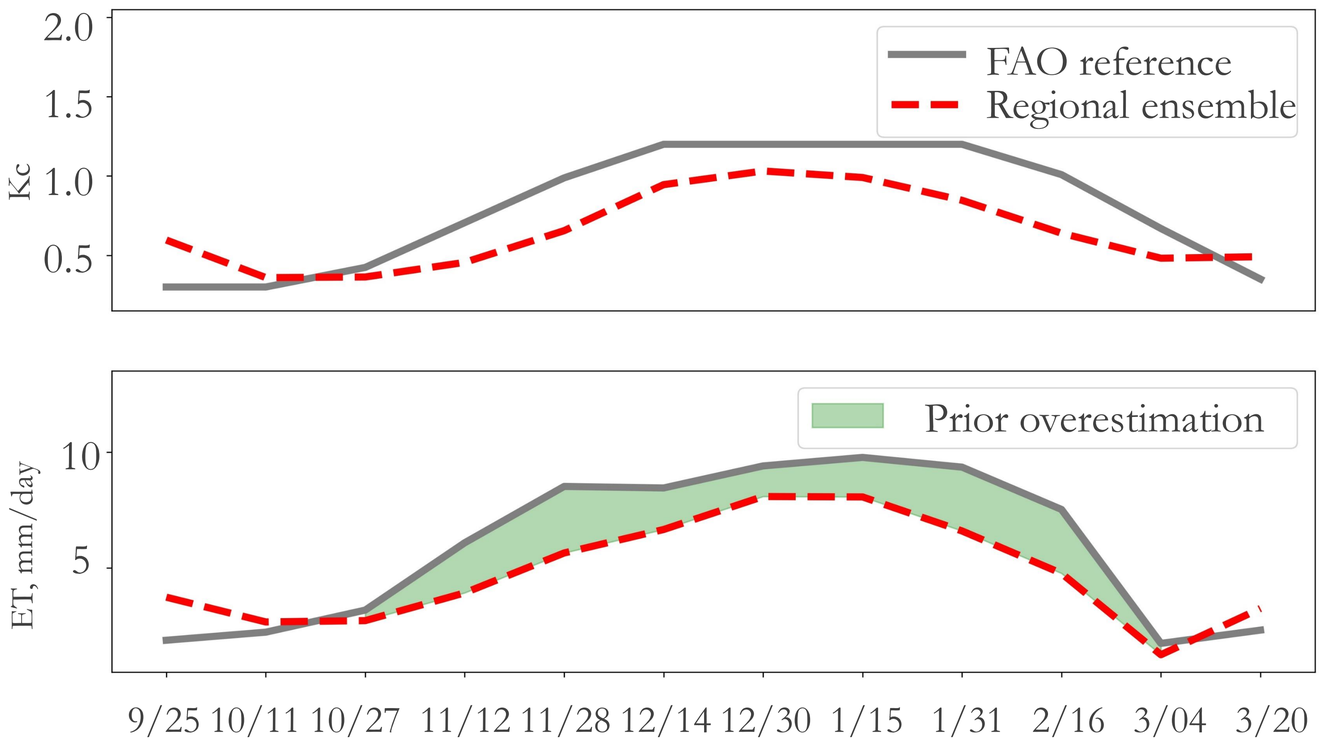
What environmental issues are farmers & water users facing in Central Chile?



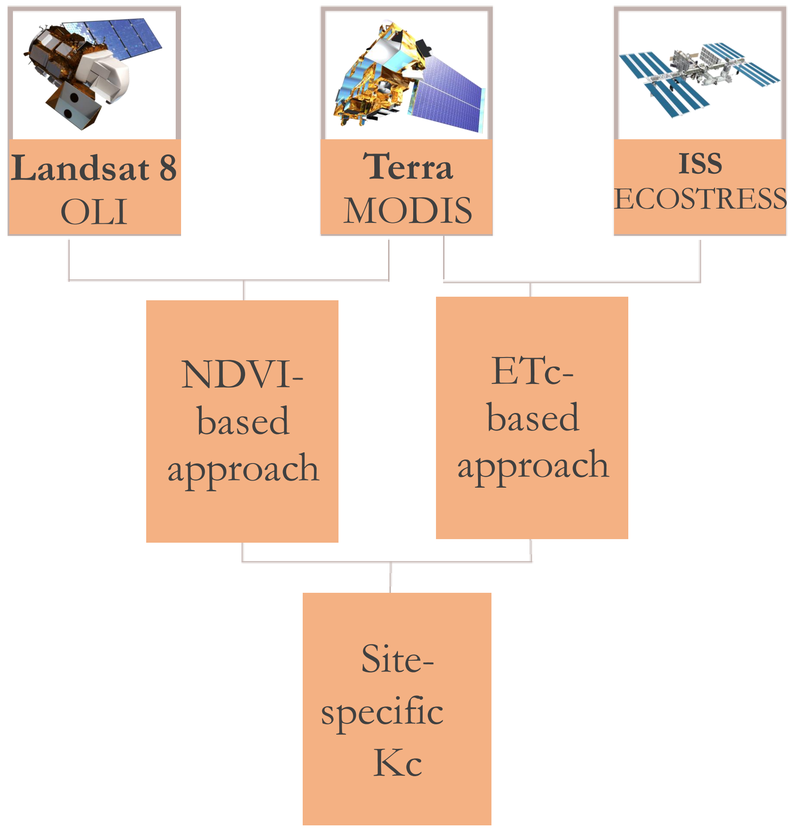


Study Area Elevation & River Flow

How can NASA DEVELOP build on Earth Science to provide a practical solution?



The calculated crop coefficients (Kc) captures unique site response based on vegetation reflectance. For the site and season shown herein, our regional ensemble produces Kc values lower than those of the FAO reference (top). Our method also yields lower evapotranspiration (ET) estimates, which indicates a prior overestimation of irrigation needs per the FAO reference alone (bottom).



What are the significance and broader impact of our findings?

- Leveraged **NASA observations** from space
- Obtained **site-specific** crop coefficients
- Estimated **actual crop** water requirements
- Will inform **irrigation management** practices
- Will alleviate **water scarcity** on the ground

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