

MORPHOMETRIC WATERSHED PRIORITIZATION FOR SUSTAINABLE AGRICULTURE AND WATER MANAGEMENT ON SANTA CRUZ ISLAND, GALÁPAGOS

PROBLEM

Santa Cruz Island depends mainly on **groundwater aquifers**, increasingly threatened by **saltwater intrusion**, **contamination**, **urban growth**, and **agricultural demand**. Limited **freshwater availability** and **climate variability** make efficient watershed management essential for **sustainable water conservation**.

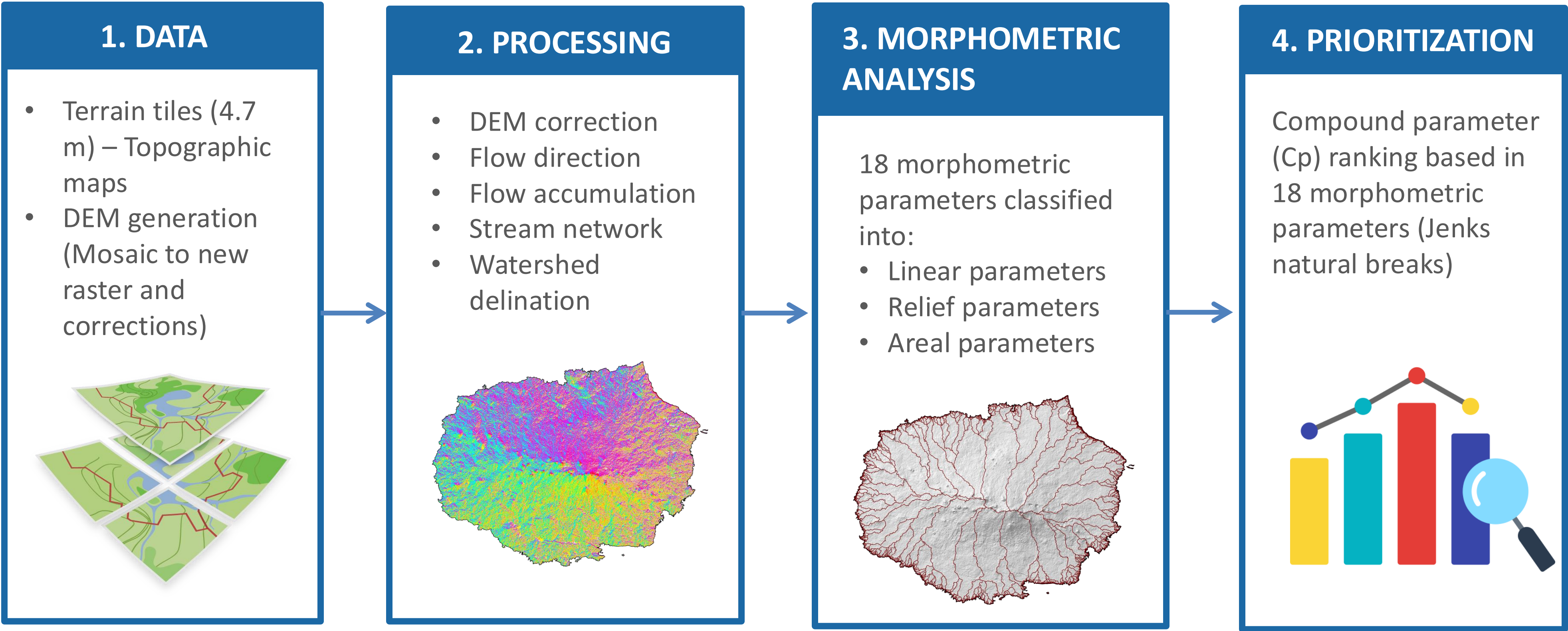


GENERAL OBJECTIVE

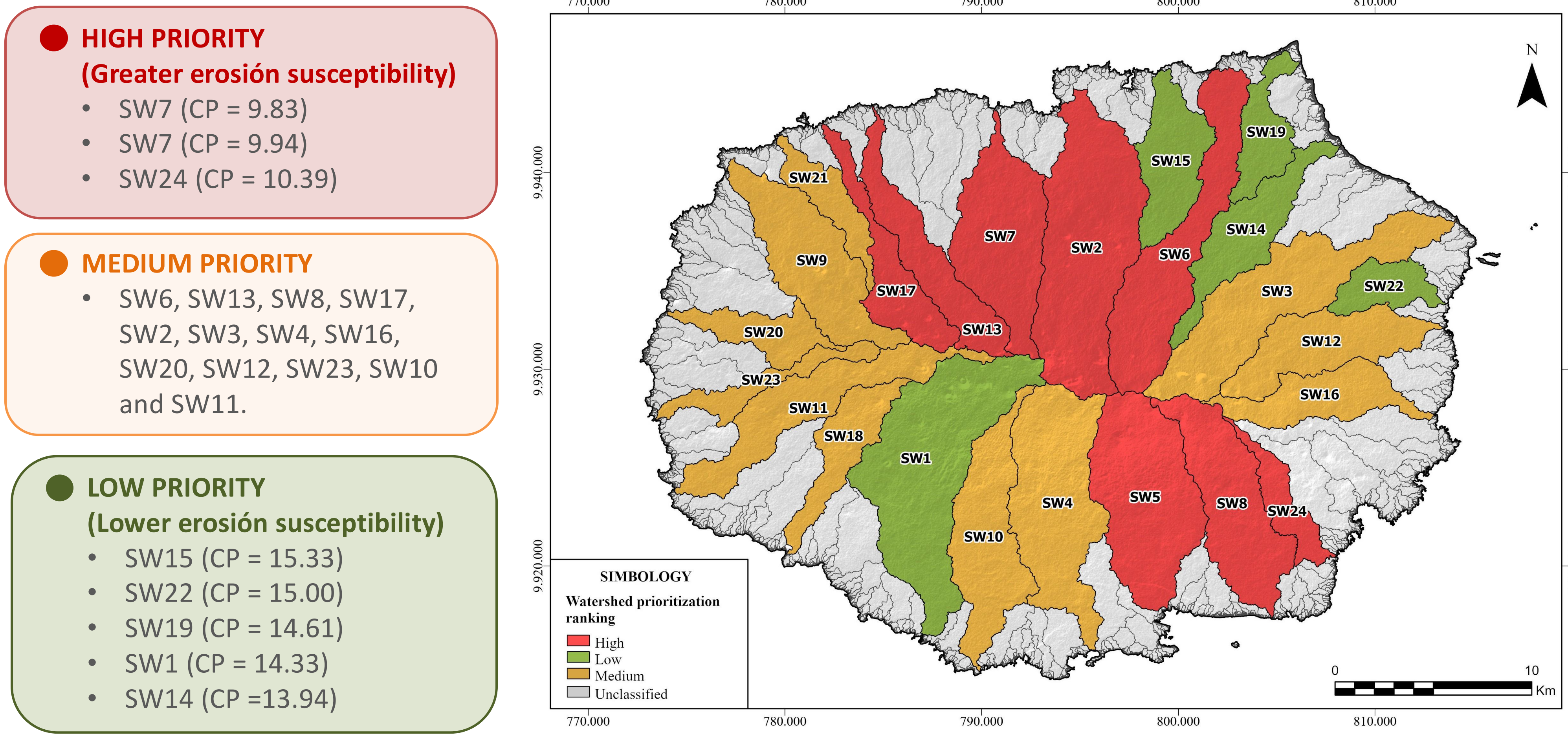


Identify and **prioritize sub-watersheds** on Santa Cruz Island with favorable morphometric conditions for sustainable water conservation, efficient agricultural planning, and erosion risk reduction, supporting decision-making for water resource management and land-use planning.

METHODOLOGY



RESULTS



CONCLUSIONS

Morphometric watershed prioritization proved to be an effective tool for identifying areas suitable for **water harvesting**, **agricultural development**, and **conservation planning**. The methodology provides a **replicable framework** for volcanic islands facing **water scarcity**, helping strengthen resilience against **climate change** and **land-use pressures**.

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