ECOLOGICAL MODELING SERVICE







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Leveraging Citizen Science in Mapping & Modelling of invasive plant species in

Northern Kenya Rangelands



PROBLEM SPECIFICATION



 Threat to the native biodiversity and changes ecosystem functioning/Collapse of the rangeland ecosystems.

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 Out-competes native plants - shrinking forage space available for both livestock and wildlife – source of livelihood.

> Video Courtesy of RCMRD and World Vision Kenya



LOCAL PROBLEM GLOBAL CONCERN

Kenyan 'devil's cactus' is spreading out of control -but tech is fighting back

By Stephanie Bailey, CNN () Updated 1100 GMT (1900 HKT) December 10, 2019



NEWS

Pastoralists go digital in rooting out plants harmful to livestock

FRIDAY, MAY 4, 2018 12:30



SE



SERVICE GOAL & KEY STAKEHOLDERS

 Mapping and predicting the distribution of invasive species is central in controlling their spread, mitigating the impact of biological invasions & in prioritizing and planning of the rangeland ecosystems.





TOOLS DEVELOPMENT & DATA COLLECTION PROTOCOL



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STRATEGIC PARTNERSHIP IN DATA COLLECTION



USE CASES



~180,000 H

of the rangelands infested with Opuntia currently

~340,000 H of the rangelands infested with

A.reficiens currently

 County Government uses the maps & data for monitoring/eradication plans through CIDPs – allocating FINANCIAL AND HUMAN RESOURCES

- The community conservancies uses the maps & data to develop the GRAZING PLANS
- National Gvt departments & NGO'S use the maps & data to inform the national GOVERNMENT
 POLICIES in monitoring/eradication of the invasive plant species
- **RANGELAND REHABILITATION** NRT uses the maps & data to determine the areas to plant grass especially where A.*reficiens* has been cleared.



THEORY OF CHANGE

Inputs and activities:

Invasive plant species occurrence and predictors' variability data, training, stakeholder consultations and data dissemination.

Expected outcome:

- INCREASED PROVISION OF USER-TAILORED geospatial data, invasive plant species occurrence data, predictors variability data and maps of current and future occurrence of the invasive plant species
- **IMPROVED CAPACITY** of NRT, LWF, County Government of Laikipia and KWS to use data on distribution of invasive plant species to make decisions on resource allocation and mobilization to manage and eradicate the invasive plant species.

Expected impact:

REDUCED SPREAD of invasive plant species.



KEYS OUTPUTS AND NEXT STEPS

Consortium of Stakeholders to address issues of Invasive Species – Enhanced & Strengthened

collaboration & Partnerships

• Plans are under-way to Integrate the collected data and maps into the Laikipia county

resilience diagnostic tool for an easy access to the public and for service sustainability -

http://landscapeportal.org/laikipiaRDT/





Thank You

