

Project Update: July 2020

In this phase of the project , we conducted a survey and interviewed 243 respondents selected from five villages that are within and around Maputo special reserve (Figure 1), to assess knowledge and perceptions of communities about invasive plant species (IPS), document the mechanism of IPS dispersal, approaches of control used by local community as well as negative and positive contributions of IPS to livelihood and the ecosystem of Maputo Special Reserve .

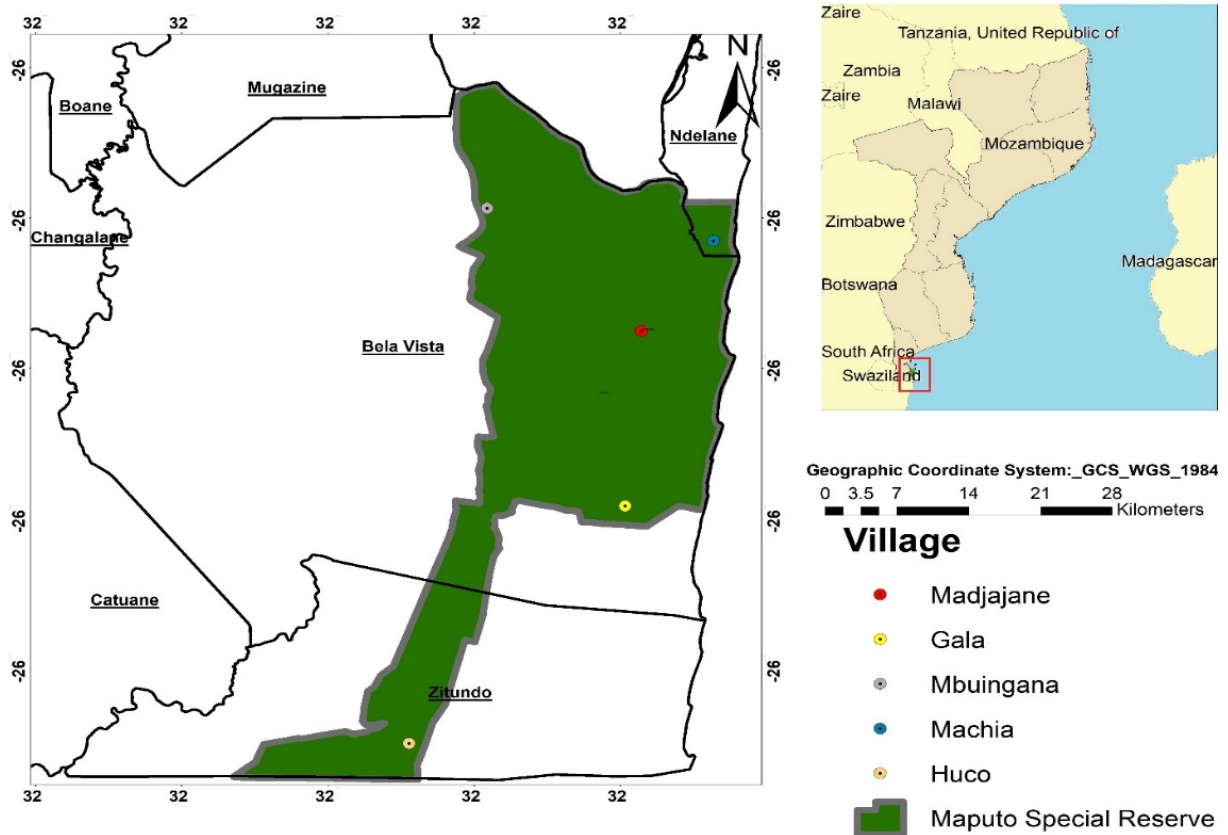


Figure 1: Map location of project area indicating five sampled villages.

We found that communities are aware of 12 IPS and their impacts to the livelihood (Figure 2). The most dominant IPS in the locality was *Lantana camara* and *Eucalyptus* sp. (Figure 2)

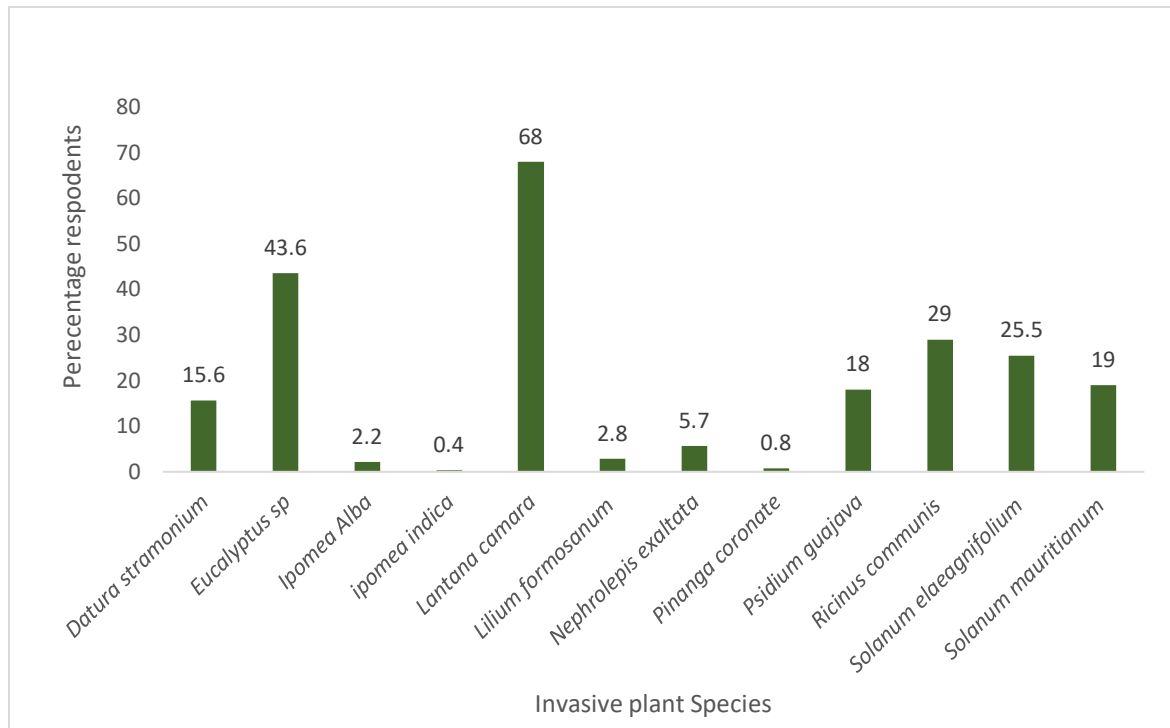


Figure 2. Invasive plants species mentioned by the community interviewed.

We also found out that some members of the community are aware of the ways through which IPS come into their locality (Figure3).

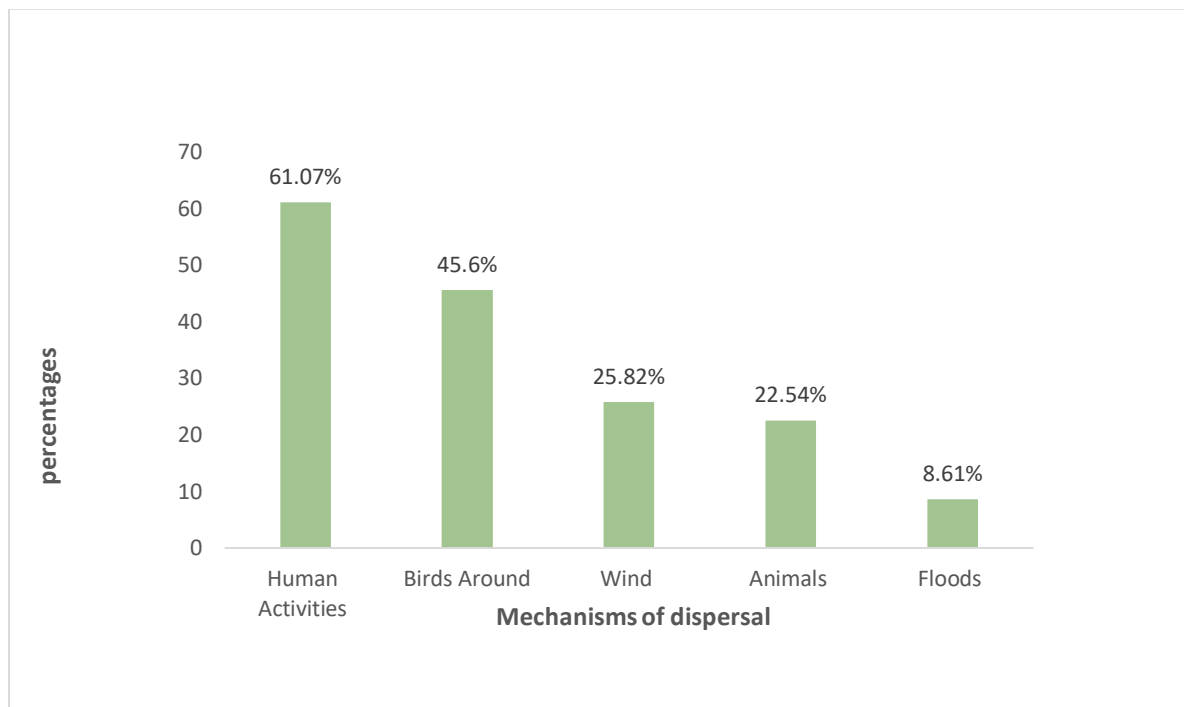


Figure 3: Perceptions on mechanism of dispersal of invasive plant species.

We found out that community is aware of the different dispersal mechanism of IPS to the locality with human activities mostly responsible. Negative impacts of IPS documented were threatening local plants, reducing crop yields, decreasing ecosystem, being thorny to animals and people as well as reducing grazing land for livestock and wildlife (Table 1)

Table 1. Perceptions of households on negative effects of invasive plant species

Effect	Numbers of respondents	Percentages (%)
Threaten local plants	104	42.62
Reduce crop yields	80	32.9
Decrease ecosystem	77	31.56
Thorny to animals and people	63	25.82
Reduce grazing land	33	13.52

Communities also reported that they utilise IPS for medicinal purposes, construction material, cultural function, firewood source, charcoal sources and hedges as well as other ecological benefits (Table 2)

Table 2. Perceptions of households on benefits of invasive plant species.

Benefits		Respondents			Respondents
Economic and social benefits	N	Percentage (%)	Ecological benefits	N	Percentage (%)
Construction material	110	45.08	Decrease wind speed	110	45.08
Medicinal source	98	40.16	Provide shelter to Wildlife	108	44.26
Cultural function	82	33.61	Reduce soil erosion	57	23.36
Firewood source	50	20.49	Shade provision	41	16.8
Charcoal sources	48	19.69	Control floods	12	4.92
Provide hedges	9	3.69			

Meanwhile, the local communities were aware of the undesirable side of IPS and they had already started controlling the spread through manual uprooting, cutting, burning and spraying with pesticides (Figure 4)

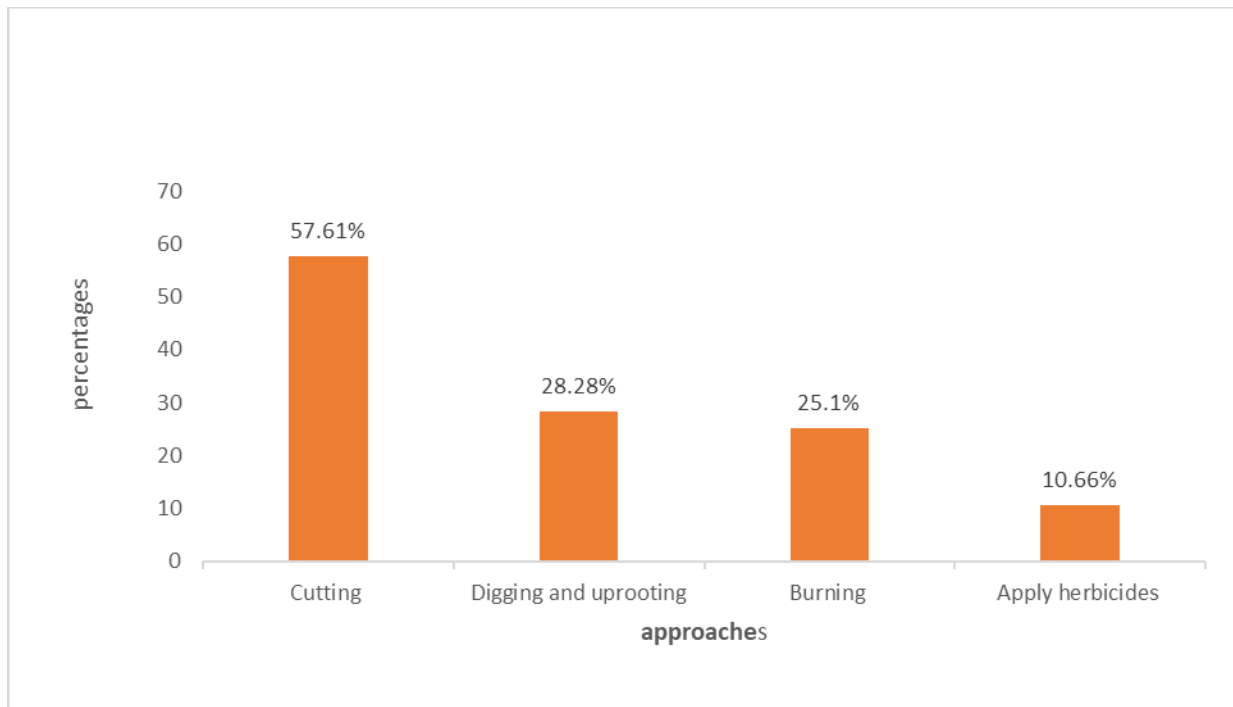


Figure 4. Local community approaches to control invasive plant species.

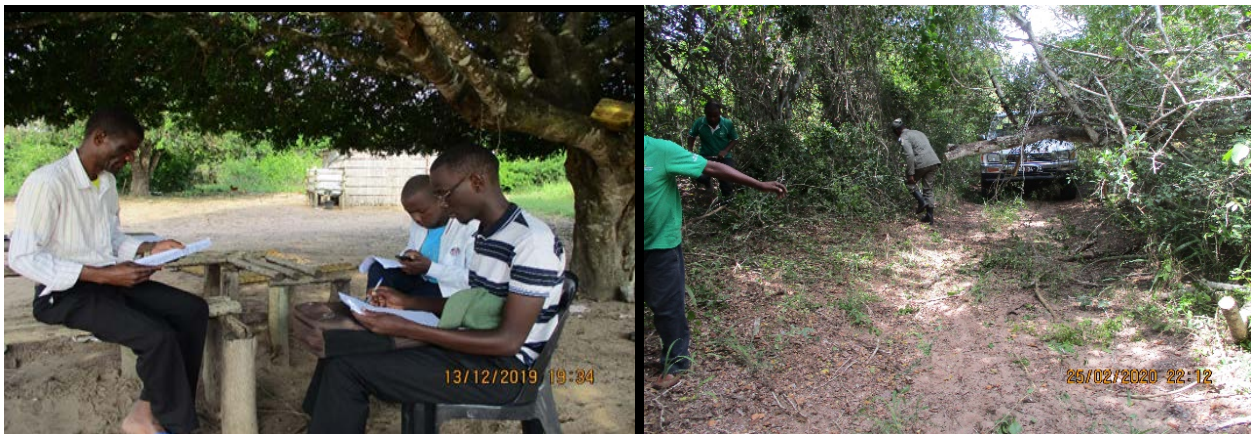
We recommended to Maputo Special Reserve management that:

- Management of invasive plant species within the area needs to involve the community, as their perception seems to be based on both negative and positive impacts.
- Eradication plans for IPS should integrate an alternative source of ecosystem services that the community derive from IPS.
- Local communities should be further sensitised on the impact of invasive plants as this will greatly improve the IPS management and control plants.
- Eradication of invasive species would come at a cost as various groups of stakeholders would lose all the many benefits, they obtain from them such as fuel wood, timber and medicine. Therefore, alternative programmes should be implemented.
- Coordination among the local community and Maputo Special Reserve technical team be established to ensure short- and long-term management of IPS.

Maputo Special Reserve -2019 - 2020 – Project field photos.



Left: Community in Maputo reserve. Right: Discussing with respondents about IPS.



Left: Interviewing a respondent. Right: State of the roads in the reserve.