



Integrated Management Project of Mesquite in Oman

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INTRODUCTION

Oman environment has been invaded by mesquite tree before 4 decades. However, it was very attractive to the Omanis as an ornamental plant and pasture plant. Recently, this tree has become as an environmental problem because it occupies native pastures, urban & abandoned land and valleys. In 2014 Ministry of Agriculture & Fisheries adopted a national project named “Integrated Management Project of Mesquite”. The main goals of this project were to draw a national program to control mesquite trees, reducing or eliminating the spreading of mesquite trees in the most affect areas through application of new technologies like Geographical Information System “GIS” and Remote sensing “RS” in detecting and surveillance of mesquite tree in Oman.

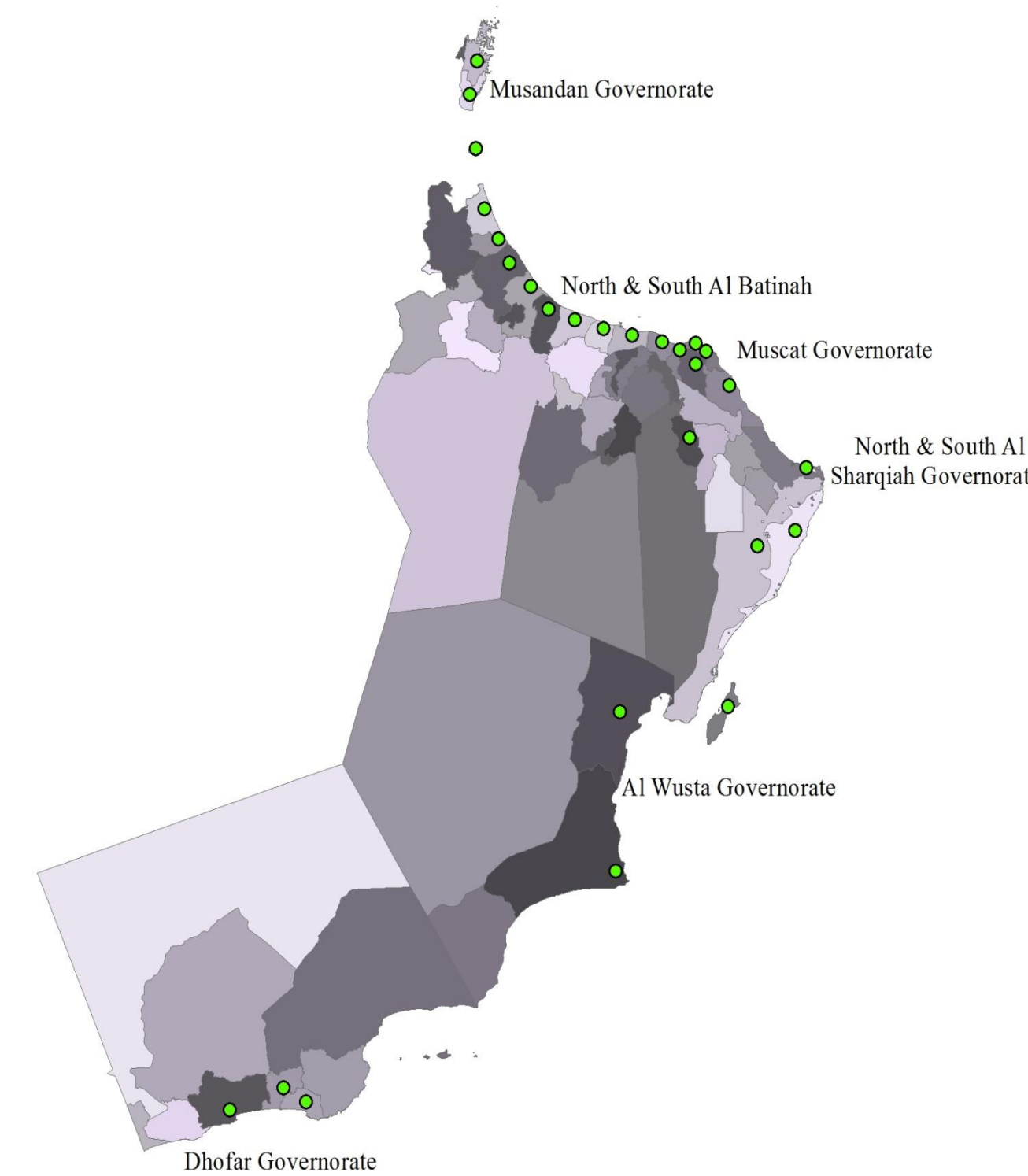
ACTIVITIES / PRACTICES

1st step of the project was to conduct field experiments in four sites. Nine practices have been implemented as follows:

1. Fork the mesquite tree from a depth of 50 cm and clean the place from any falling seeds and young plants.
2. Cut the stems of the mesquite tree on ground level and spray immediately by herbicide.
3. Cut the stems of the mesquite tree on ground level and spray immediately by diesel.
4. Cut the stems of the mesquite tree on ground level and spray immediately by vehicle oil.
5. Spray whole green canopy of the small mesquite tree.
6. Injecting the herbicide into the stem of the mesquite tree.
7. Ring cutting of the mesquite tree stem and spray immediately by herbicide.
8. Peel off the mesquite tree stems and spray immediately by herbicide.
9. Spray the mesquite tree stems by herbicide only.

2nd step of the project, was to conduct a field survey to delineate the most affected areas and zones by Mesquite.

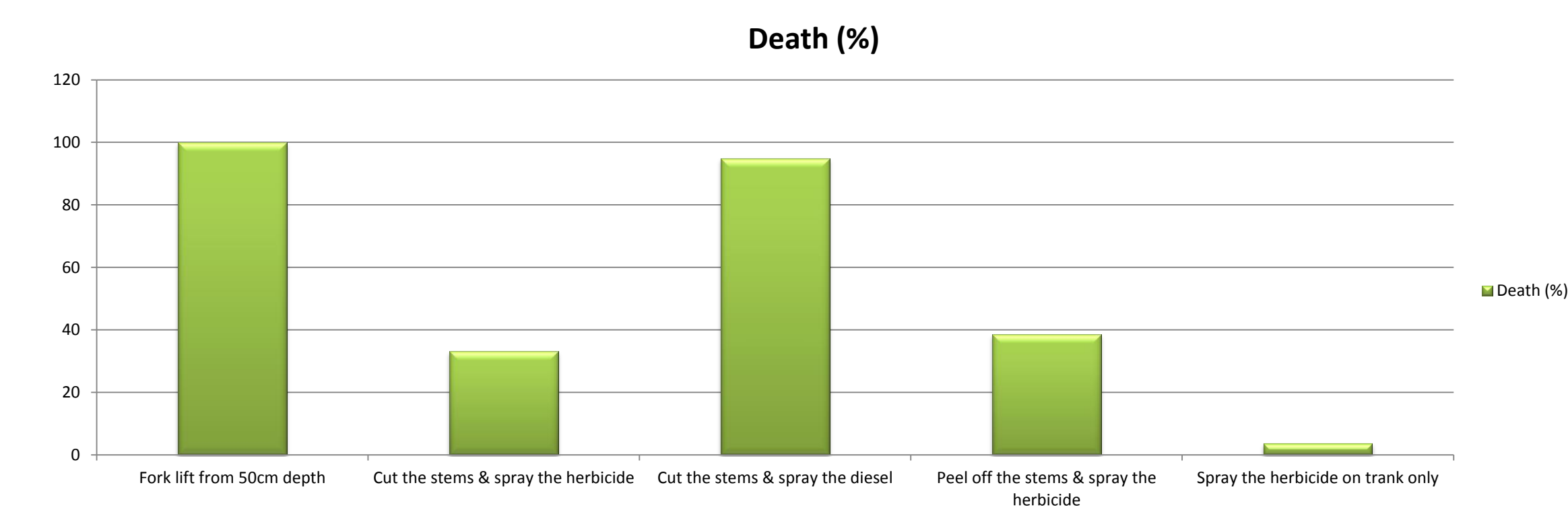
MESQUITE OCCURRENCE IN OMAN



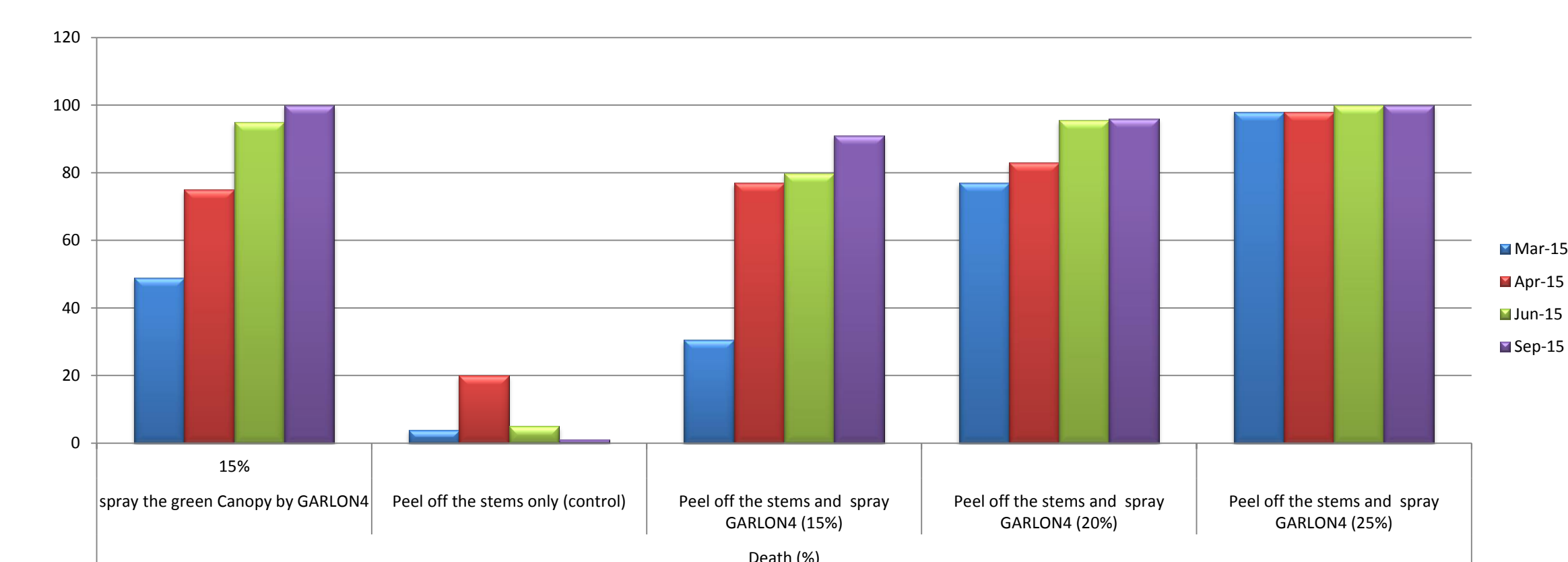
RESULTS

The nine practices were monitored for a seven months to record the death and the regrowth percentage. The main findings leading to 100% mortality of the mesquite trees are:

1. Fork lifting of trees from at least 50 cm depth was found giving 100% death and 0% re-growth from growing points of tree.



2. Peeling off the mesquite tree stems and spraying Garlon4 mixture (25% Garlon4 + 25% Mineral oil + 50% water) on the naked stems did kill trees completely within 30 days.



RECOMMENDATIONS

1. The fork practice of the mesquite tree from a depth of 50 cm has to be established in the selected zones as a tender and contract around a country level.
2. Peel off the mesquite tree stems and spray immediately by GARLON4 at (25% Garlon4: 25% Mineral oil : 50% water) practice can be implemented in non reachable place by excavators.
3. An Integrated Mesquite Management Program of Oman (IMMPO) needs to be evolved during the next stage of the project.