



“STUDY ON EXTENT, GROWTH AND IMPACT OF PROSOPIS JULIFLORA (SEEMA KARUVELAM)”

AASHINI ARSITHA M ¹

¹ (DEPARTMENT OF CIVIL 2020 BATCH), THIAGARAJAR COLLEGE OF ENGINEERING, (AN AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY) MADURAI – 625 0154

ABSTRACT:

In this case study, I have studied about the extent, growth and impact of *Prosopis juliflora* which is locally called as Seema Karuvelam in Madurai district. It is an invasive species which is brought to our country for the purpose of firewood i.e., as a fuel wood. Because on those days firewood was a major demand and by this they thought they could solve that issue on fire wood shortage but finally it resulted in some negative impacts on human and environment at the place of their growth. There is a lot of mystery and disputes that, is this tree a boon or bane? But till date we could not get the exact report of these species. The growth of seema karuvelam (*Prosopis juliflora*) on different types of soil are found. This plant species are useful even they considered to be harmful. We heard about lots of native species are vanished because of this species but we all must know that there are species of plants and animals can coexist with these species and also they even deplete the growth of these species.

Rai et al. (2004) have demonstrated that *P. juliflora* growing in fly ash contaminated soils amended with blue-green algae or rhizobia show higher bioaccumulation of iron, manganese, copper, zinc, and chromium in its tissues. It is also a suggested bio indicator for industrial smelter pollution (Gabriel and Patten, 1994). Due to its property of heavy metal accumulation, it has been suggested as a “green” solution for soils contaminated with cadmium, chromium, and copper (Senthilkumar et al., 2005).

Due to COVID-19, I took a measure to collect data of its spread and awareness among people. This study has made me realise the true face of this invader named *Prosopis juliflora*.

KEYWORDS:

OBJECTIVE OF THE STUDY:

We could find their growth along river side, in river tanks, waste land, sometimes in water flowing region of river and so on (fig 1.1). Till date there is no clear study on this plant species and its contribution to this environment is confusing because this is a plant with more benefits but with fewer negative impacts that cause serious threat to environment.

The study here is to know about the extent of this plant species in Madurai city. Due to this pandemic I have submitted the descriptive report collected by google forms from people around me.

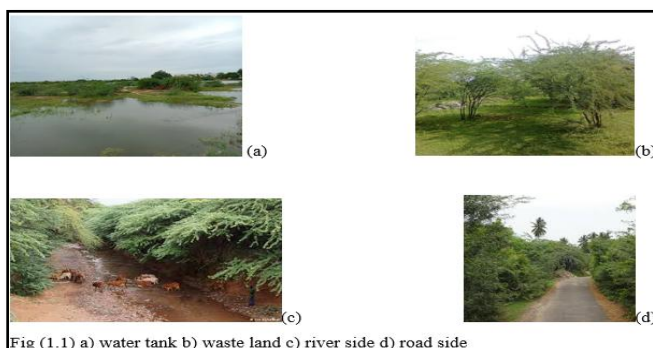


Fig (1.1) a) water tank b) waste land c) river side d) road side

MATERIALS AND METHODS:

METHOD OF THE STUDY AND SAMPLE:

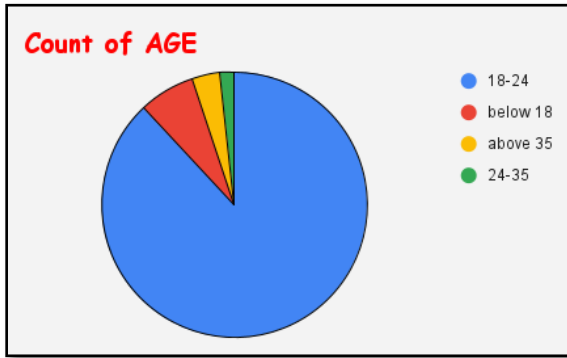
The researcher was adopted the survey method to study the extent and impact of *Prosopis juliflora* in Madurai city among youngsters. The respondents of youngster were college students. Both genders of the students are the respondents. The researcher has used simple random sampling technique for collecting data from 59 respondents.

SAMPLING TECHNIQUES:

The study has used a structured questionnaire which was prepared for the purpose of collecting the primary data. A part from variables likes gender, age, and some questions are used for this study.

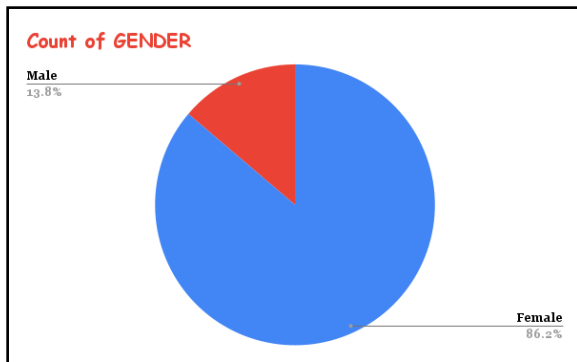
RESULTS

1. AGE



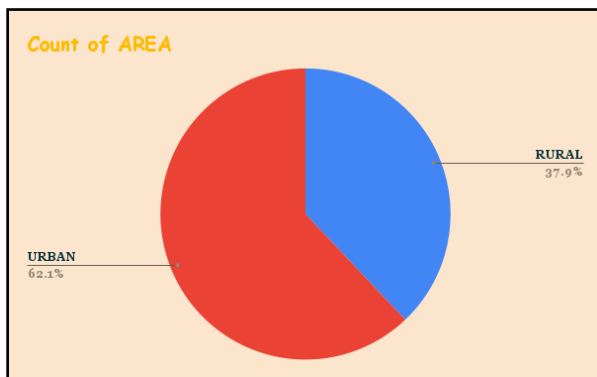
We could observe that the respondent of the questionnaire contains the maximum number of youngsters who are from age 18-24. They are most probably the college going students.

2. GENDER



We could observe that the most of the respondents are female.

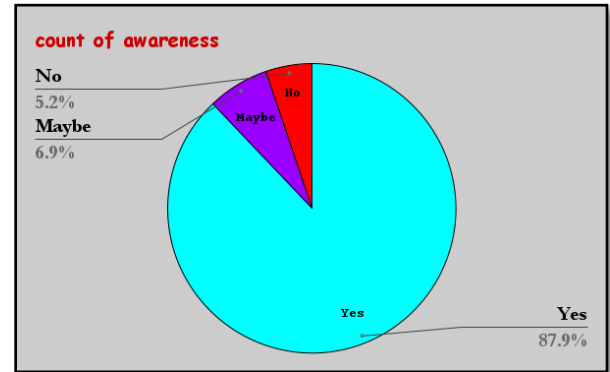
3. REGION



We could observe that the most of the data collected are from urban people. Even though the rural people have ideas about seema karuvelam but from the datum we have we could know about the ideas of urban people on seema karuvelam.

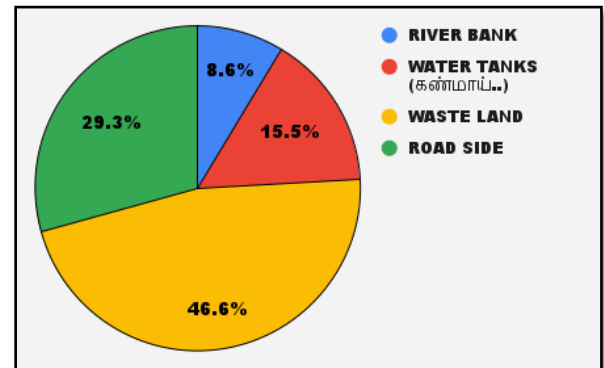
ANALYSIS

1. AWARENESS ON SEEMA KARUVELAM



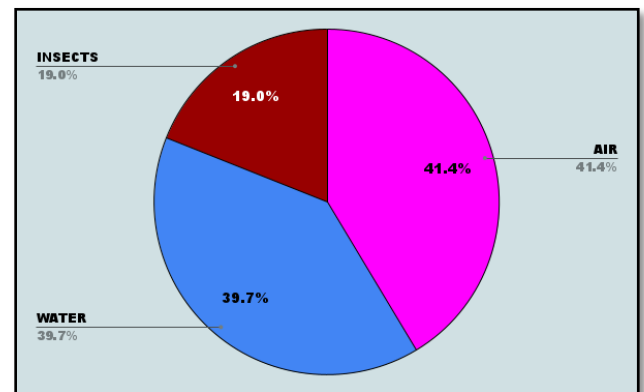
Most of the students gave yes as their answer but still few are not aware of this tree.

2. AREA OF GROWTH OF SEMA KARUVELAM



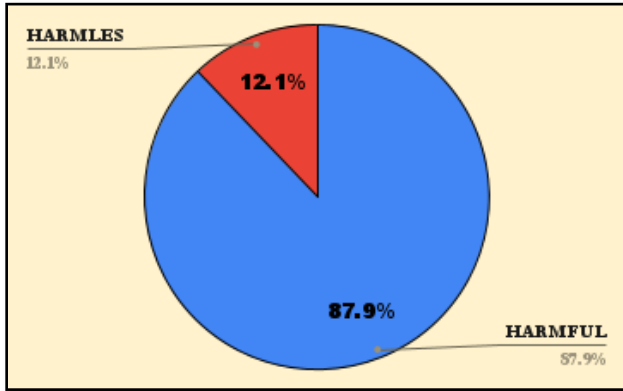
Most of our respondents have found its growth in waste land and also the number of trees that is found along road side is seemed to be also found along the water bodies.

3. DISPERSION METHOD OF PROSOPIS JULIFLORA



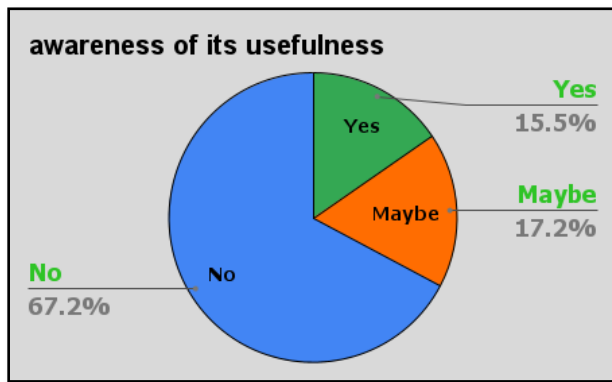
The Seema Karuvelam spread by means of air, and some are still need to be made aware that the spread by air.

4. HARMFUL OR HARMLESS



Most of them answered harmful.

5. USEFULNESS OF SEEMA KARUVELAM



Many of them answered it to be useless.

CONCLUSION

In this study we have discussed about the history, the ecology, uses, positive effect, and negative effect of Prosopis juliflora (Seema Karuvelam).

By the responses of Google form generated we came to know how aware people are about Seema karuvelam both positive and negative effects. It illustrated that they only know the negative side of seema karuvelam but other researchers and study tells that this plant species is not only to destruct everything at their area of growth but even coexist with other plant and animal species and even they enrich the quality of soil and even other benefits as medicine too.

I would like to conclude that, it is beneficial for environment if we destroy seema karuvelam but they have some positive effects also. We should prevent their growth and spread at the areas where they cause negative effect such as water depletion in Ramanathapuram district. And we can utilize the positive benefits of those trees and promote its growth at the areas where they are actually useful(example : At Aravalli hills it is hard to grow any kind of trees because of its hard soil and rocks but Prosopis Juliflora can prevail there).

REFERENCES

- https://en.wikipedia.org/wiki/Prosopis_juliflora
- Water use of Prosopis juliflora and its impacts on catchment water budget and rural livelihoods in Afar Region, Ethiopia.
- Prosopis (Prosopis juliflora): Blessing and bane. **AUTHORS:** Prathiksha patnaik and S.A.Abbasi.
- Seema karuvelam, a saviour-turned-villain whose tentacles spread far and wide, B. Kolappan (THE HINDU article).
- <https://www.thenewsminute.com/article/why-tn-government-uprooting-thousands-trees-prevent-water-bodies-drying-35549>
- PROSOPIS JULIFLORA (Sw,) DC. (SEEMAI KARUVELAM) IN TAMIL NADU, INDIA: BOON OR BANE? **AUTHORS:** Arumugam Nagarajan (Indian Institute of Technology Madras); Boobalan Thulasinathan (Alagappa University); Kavitha Tangavel; Alagarsamy Arun (Alagappa University).

GOOGLE FORM QUESTIONNAIRE LINK:
<https://forms.gle/3omoNqs6u47mJuNM7>