

Bio prospecting of the local wild edible plants to address the issue of malnourishment

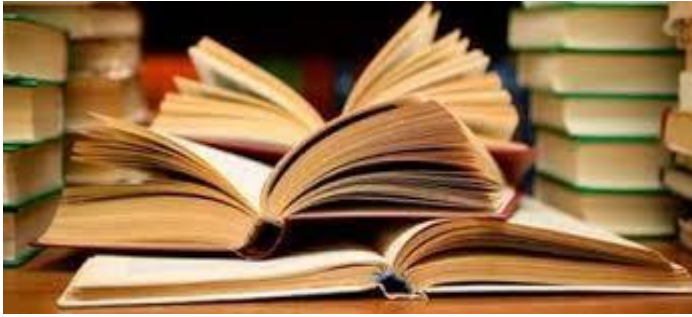
The Energy and Resources Institute (TERI)
Western Regional Centre

Rationale

- ▶ Malnourishment is a serious issue in rural as well as urban areas.
- ▶ The key reasons is due to lack of diversity in the diet and proper awareness about it.
- ▶ Rural communities have the resources but do not have proper awareness about it regarding its nutritional aspects while the urban dwellers have the capital resources but lack the knowledge.
- ▶ These common issue of concern be are complementary to each other.
- ▶ Urban people are unaware of the wild edibles and possess lack of confidence to consume it due to scanty information on it.
- ▶ Lack of transfer of the traditional knowledge from the elder generation to the young. Traditional knowledge would die off if not documented properly.

How could we bridge the information gap on wild edibles and make it available was the question faced?

Approach: Documentation and scientific validation of the species



Literature review



Transect and Quadrat surveys



Discussions with tribal communities and botanists



Nutritional analysis

Source:

1 https://www.google.co.in/search?q=review+of+literature&rlz=1C2GIGM_enIN666IN666&biw=1366&bih=667&source=lnms&tbm=isch&sa=X&sqi=2&ved=0ahUKEwja7Z_11o_LAhULWI4KHUnzBx0Q_AUIBigB#tbm=isch&q=proximate+analysis&imgc=OnleDwzQfxcWsM%3A

2. https://www.google.co.in/search?q=review+of+literature&rlz=1C2GIGM_enIN666IN666&biw=1366&bih=667&source=lnms&tbm=isch&sa=X&sqi=2&ved=0ahUKEwja7Z_11o_LAhULWI4KHUnzBx0Q_AUIBigB#imgc=xeRw3PVGF_FWjM%3A

Impacts of the Project

- Documentation of 160+ species of dietary as well as medicinal significance.



Nutritional Analysis of the species

Parameters Assessed

1. Total Fat
2. Proteins
3. Carbohydrates
4. Calorific Value
5. Moisture
6. Ash
7. Crude Fiber
8. Free Sugars
9. Calcium
10. Phosphorous
11. Magnesium
12. Potassium
13. Vitamin A
14. Vitamin C
15. Iron
16. Starch

D. wallichii



S. sweitenoides



J. procumbens



L. macrophylla



A. peltata



A. hohenakarianum



Wild plant nursery

Conservation of germplasm of around 70 species of wild edible plants



Development of a Digital library on wild edible plants

Launaea intybacea

- Taxonomy
- Geographical distribution and Habitat
- Identification guide
- Nutritional potential
 - Preparation method
- Pharmaceutical potential.
 - Preparation method
- Propagation and planting
- Prospects
- Photo library



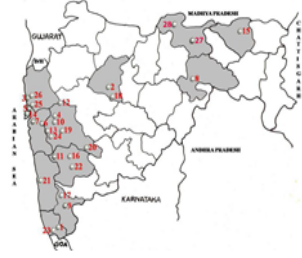
Launaea intybacea
Photo credits: _____

<http://www.first-nature.com/fungi/armillaria-gallica.php>

Launaea intybacea

Geographical distribution

Habitat
It grows singly or in clusters, on rocky soil and as a ruderal plant on plains and uplands up to 1000m above sea level (Hallier 1887, Hegi 1929, Bremer 1994). Grassy places by roads, canals, etc. and on banks near the sea, usually on calcareous soils. It requires well-drained moist medium soils, a light sandy loam and a sunny position. It cannot grow in the shade. The plant prefers acidic, neutral and basic (alkaline) soils. As a weed this plant usually grows on farm fields and germinates earlier than the planted crop. I




https://drugs-forum.com/forum/showwiki.php?title=Wild_Lettuce

Launaea intybacea

Identification guide

- Perennial herb up to 150 cm tall, with creeping root system; stem erect, often woody at base.
- Leaves at base of plant in a rosette, alternate on stem, without stipules, sessile, spatulate to elliptical in outline, 4–20 cm × (0.5–)1–9 cm, simple to pinnatifid, lower leaves tapering at base, higher ones auriculate, toothed.
- Inflorescence a 12–22-flowered head arranged in a branched synflorescence; peduncle up to 1 cm long; involucre with imbricate outer bracts and a single row of 5 longer, linear-lanceolate inner bracts 8–12 mm long.
- Flowers all ligulate; corolla with tube c. 5 mm long and ligule 6–7 mm long, golden yellow; stamens 5, anthers united into a tube; ovary inferior, 1-celled, style 2-branched.
- Fruit a cylindrical to fusiform achene 3–5 mm long, slightly beaked, ribbed, crowned by white pappus hairs 5–8 mm long.



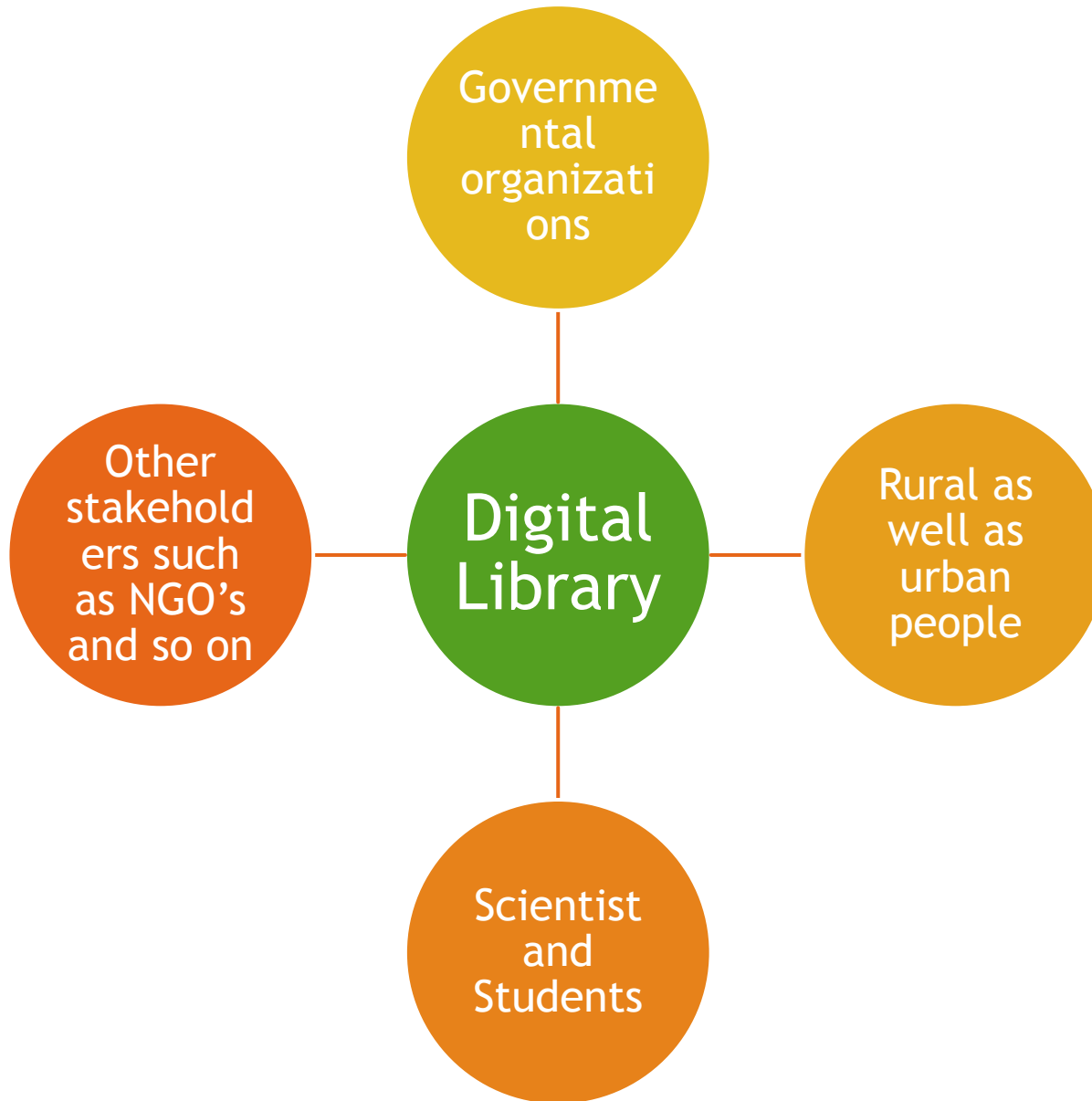
http://database.prota.org/PROTAnfm/Launaea%20araxacifolia_En.nfm

www.wildedibles.teriin.org

➤ Nutritional and medicinal information

- Map
- Uses
 - Method of cultivation
 - Method of preservation
 - Toxicity and so on

Beneficiaries



Impacts of Digital Library

► Tribal communities

Benefited by the project as their traditional knowledge would be conserved in digital repository.

► Government and Non-Governmental organisations

- Understanding the significance of the wild would help them address issues such as nutrition more effectively.
- Integration of this concept of wild plant in their initiatives by developing nutritional products, spreading awareness among the tribal communities and so on which shall benefit the tribal communities.

► Students and Scientists

- Directly use of the information on wild plant species for research/ study purposes related to nutrition which could of benefit to tribes.

► Urban dwellers

- Directly access to the information on wild plant species.
- The information shall increase their confidence on the consumption of the wild plant species and increase the diversity of nutrition in their diet of the urban dwellers as well.

Thank you

