



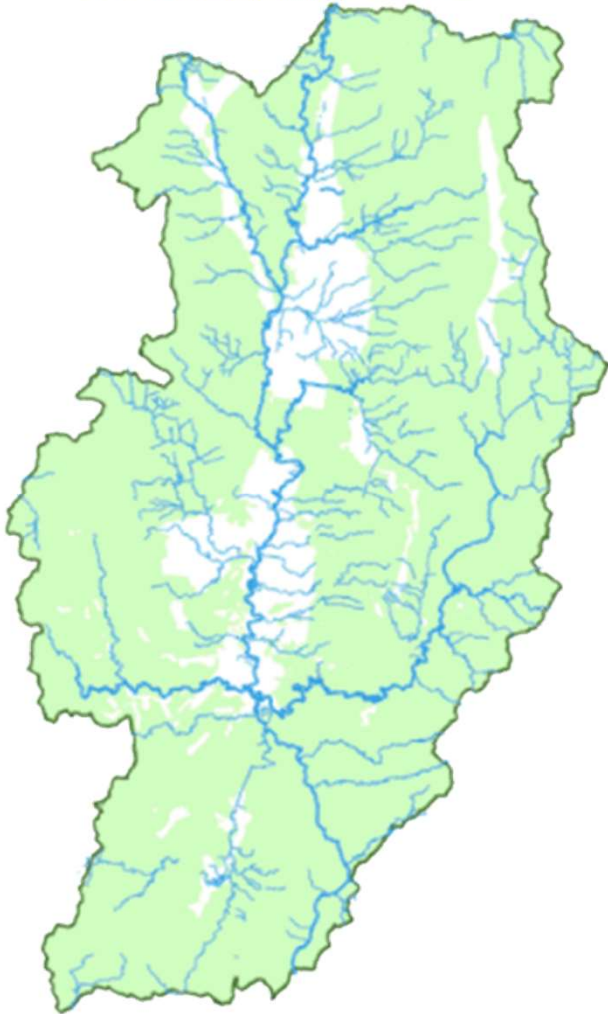
Mahidol University
Wisdom of the Land

การเลือกพืชสมุนไพรให้ตอบโจทย์เอกชน:

Case study โครงการ น่าน Sandbox ของบริษัท K-Agro Innovate

ภาณุพงษ์ พงษ์ชีวิน

คณะเภสัชศาสตร์



Nan Province

- **85%** of Nan Province declared a national forest
- **45%** of the Chao Phraya River originated in Nan
- **28%** of head water forest deforested

แม่น้ำสำคัญ

45% of the Chao Phraya River originated in Nan



Nan Sandbox



Our Mission

We envision a future where the government recognizes people's right to a robust livelihood in Nan Province, sustained by environmentally and economically supportive farming.

Approach

Our initial experimental region targets the 28% of depleted forest. Here's how it's divided:

10%

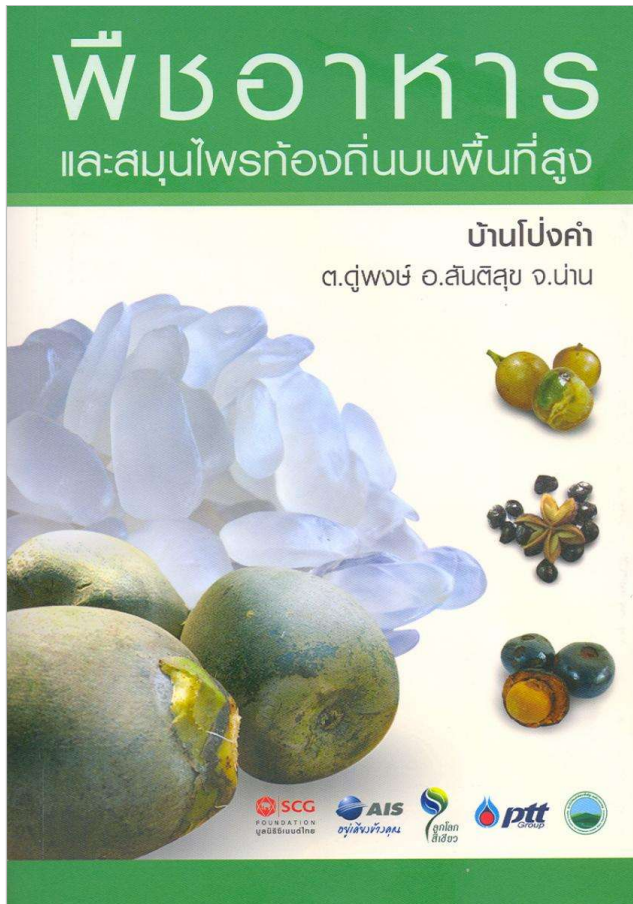
(พื้นที่ลุ่มน้ำชั้น 3-5)

will be fully dedicated to new strategic crops that are economically and environmentally viable to the area.

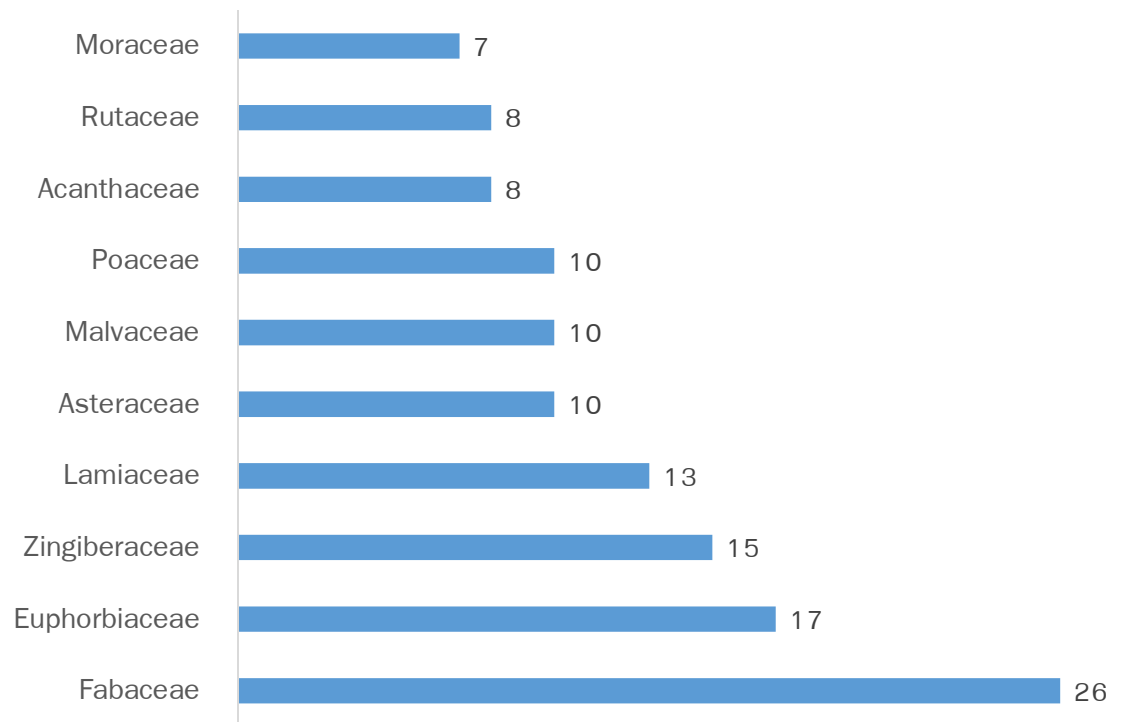
18%

(พื้นที่ลุ่มน้ำชั้น 1, 2)

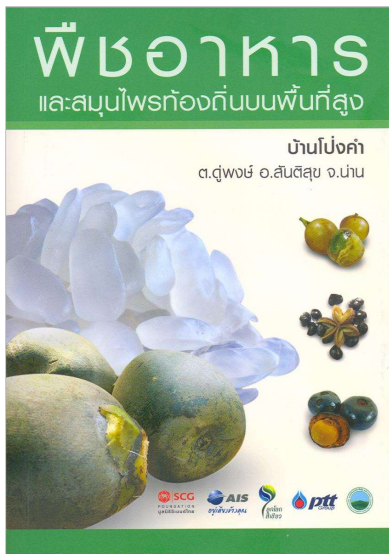
will be replanted with trees from government support. Under those trees, locals can grow new crops for earned income.



Inventory list of 256 species, 81 families



ตัวอย่างพืชที่ root / available in Nan



+ การสำรวจพืชในพื้นที่จังหวัดน่าน =

- สะค้าน
- มะแขว่น
- มะไฟจีน
- Asiatic Edelweiss
- *Elsholtzia* species

Asiatic Edelweiss

Leontopodium andersonii C.B.Clarke

Asteraceae

Edel (Ger) – noble; Weiss (Ger) – white

- High altitude herbs
- Whole plants of European Edelweiss: rheumatic pains, respiratory diseases, anti-aging, antibacterial, cosmetics
- Phytochemicals: Phenolic acids, Flavonoids, tannins, phenylpropanoids
- European Edelweiss [*L. nivale* (Ten.) A.Huet ex Hand.-Mazz.]



A



B



C

<https://www.fleurancenature.com>



<http://www.swiss-cream.net/>



<https://www.amazon.com>



<https://www.edelweiss-kosmetik.de/en/home/>



Elshotzia spp., ผักฮ้าน

Lamiaceae



E. blanda



E. griffithii



E. kachinensis



E. stachyodes

Herbs with **strong odours**. Introduced to Thailand by hill tribes.

Leaves: common cold, anti-acne inducing bacterial activity (volatile oils), side vegetables in local cuisine



สะค้าน จะค่าน

Piper spp., Piperaceae

- Woody climber
- Stems: rheumatoid arthritis, anti-inflammatory, antithrombotic activity, muscle pain, local cuisine (แกงแค, แกงคั่วไก่, แกงคั่วจิ้น)
- Phytochemistry: Lignans (stems), volatile oils
- Wild common species in Nan



มะแขว่น กำจัดต้น

Zanthoxylum rhetsa (Roxb.) DC.

Rutaceae

- Small trees
- Fl. Apr–May; Fr. Jul–Aug
- Native in China, northern Vietnam; cultivated in Thailand
- Fruits (volatile oils): flavouring agent, dental care, bloating, antibacterial activities



มะไฟจีน, wampee

Clausena lansium (Lour.) Skeels

Rutaceae

- Small tree, fairly fast-growing
- Fruit: bronchitis, bloating
- Leaf: hair tonic
- Phytochemistry: carbazole alkaloids (twigs, stems), coumarins (fruits), volatile oils (leaves, flowers, fruits)



<https://biggo.co.th>



มะไฟจีนเชื่อมแห้ง เอกลักษณ์จังหวัดน่าน

Thank you
for your attention



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