

Use and Socio-Economic Value of Wild Edible Plants by the Turumbu, Tshopo District, DR Congo



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Anonidium mannii
Wild fruit, rich in Vit.A
and locally very
appreciated



*Megaphrynium
macrostachyum*
Wild vegetable, a
culinary delicacy



Treculia africana
Flour from seeds
rich in proteins



Transport of *Gnetum
africanum*
Wild vegetable
Important source of
income



WEPs on the
Kisangani markets:
¹*Aframomum* spp.,
²*Cola acuminata*,
³*Piper guineense*,
⁴*Garcinia kola*

Research Questions

During actual and past crisis, the use and importance of Wild Edible Plants (WEPs) significantly increased in DR Congo in general and the Tshopo District in particular.

- Which are those WEPs?
- How are they used and managed?
- How important are they for food and livelihood security?
- Are they threatened by overexploitation or logging activities?
- What are the possibilities for domestication and income generation?

Research Area and Methodology

The Turumbu tribe (ca. 10 000 natives) occupies part of the Isangi territory and is one of the 13 major tribes of the Tshopo District, Oriental Province, DR Congo.

WEPs and uses were inventoried by focus group discussions ('free listing') and collected with local informants ('walk in the woods') for taxonomic identification within 3 villages. To determine their socio-economic value, household interviews were held with 30 households randomly chosen from each village. Collection and surveys continue in the other major tribes (Mbole, Bali, Soko, Ngando, Mbese, Lokele, Topoke, Boa, Manga, Ngelema, Kumu, Lengola).

A market survey identified those WEPs sold in the different markets of Kisangani including their volumes, price fluctuations and market chains.

Results of the ethnobotanical study

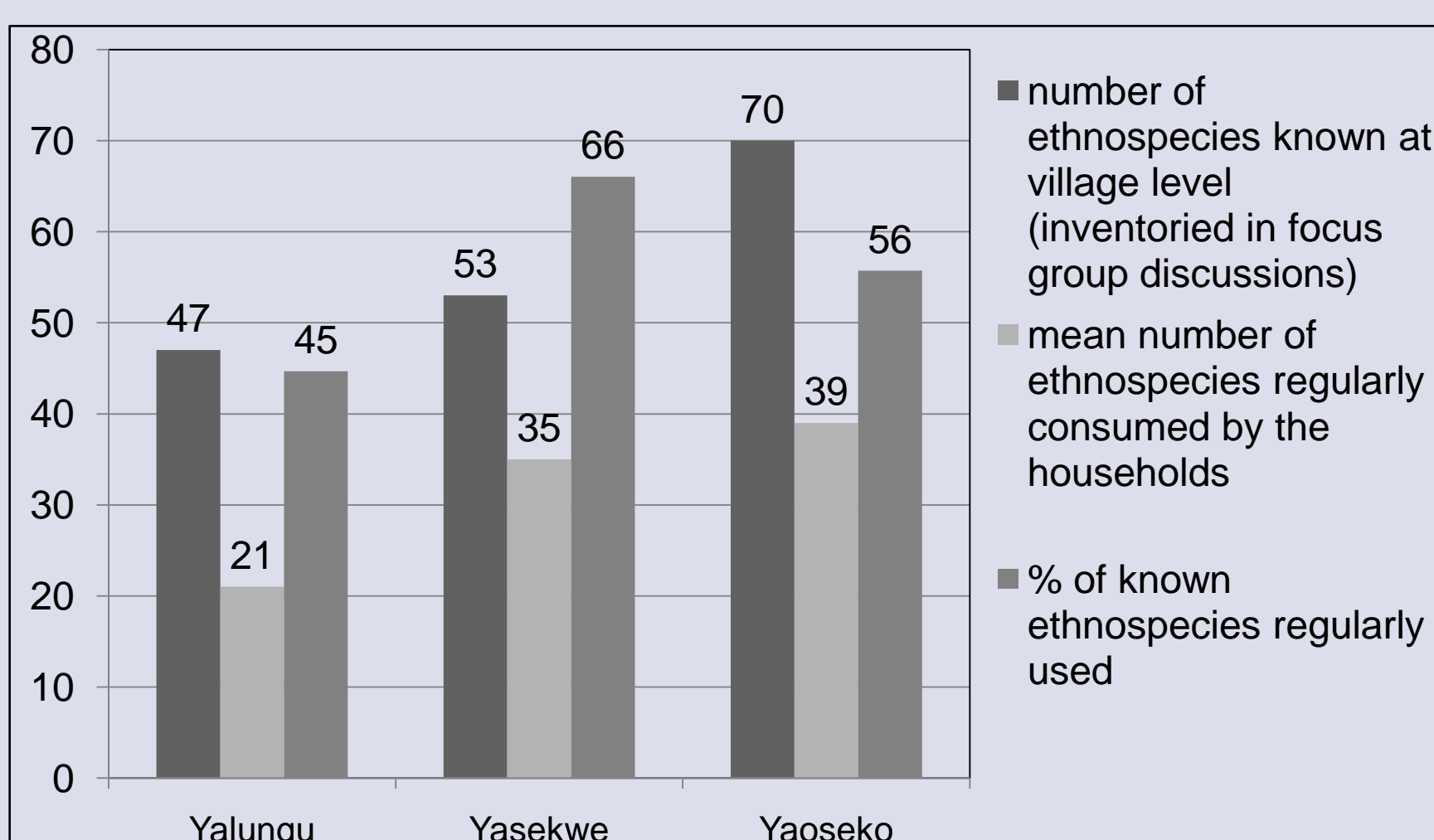
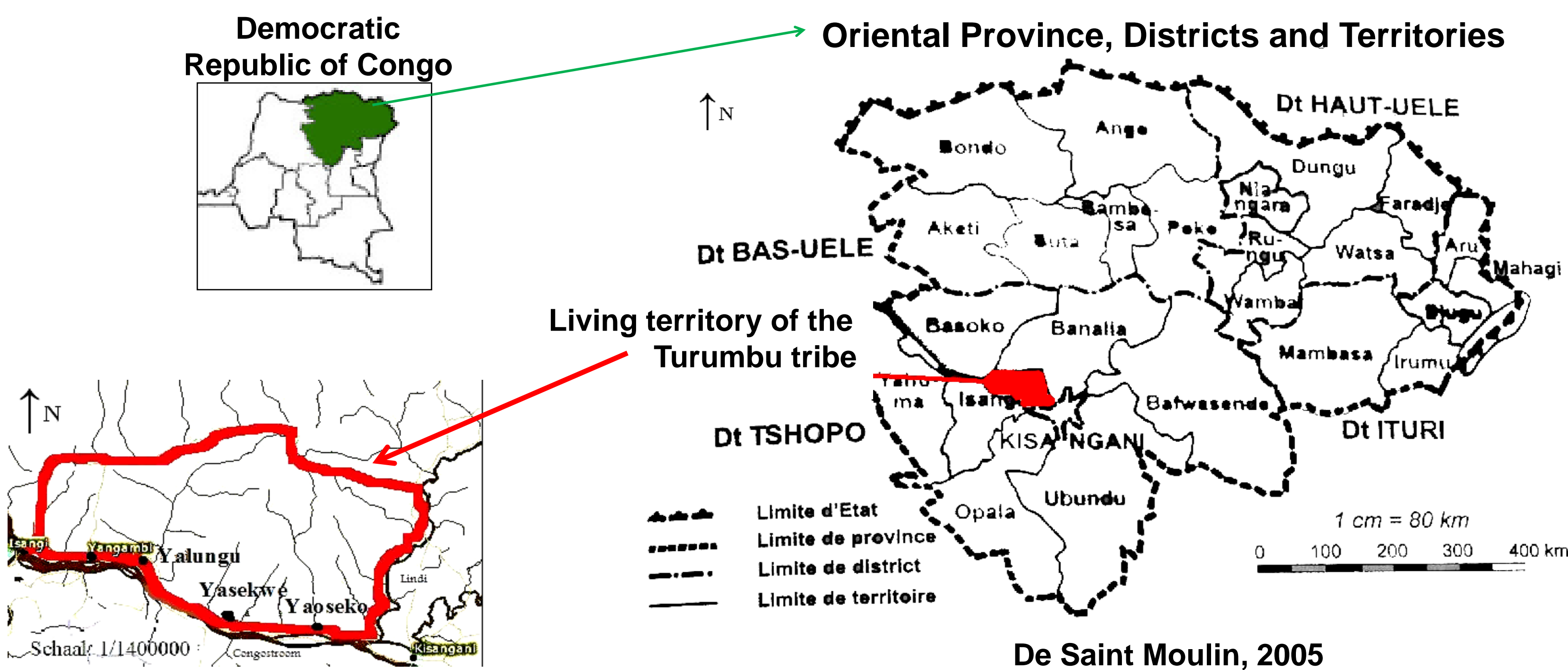
In total, 87 ethnospecies were inventoried. 138 specimens were collected and identified into 71 scientific species (good for 68 ethnospecies) in 38 families and 60 genera. In addition, 11 ethnospecies in 6 families (6 genera) were only identified down to genus level; 1 ethnospecies down to family level and 7 ethnospecies could not be identified. Most wild edible plants are member of the Apocynaceae or Malvaceae families (7 species each), followed by the Euphorbiaceae, Dioscoreaceae and Moraceae. 25 ethnospecies were known in the 3 villages, 12 in 2 villages and 34 in only 1 village. On average, households regularly consume 32 WEPs. Sales of WEPs are good for 14.7 % of the cash income of rural Turumbu households.

Preliminary Results of the Market Survey

Usually, gatherers collect WEPs in the forest and sell them occasionally in their villages without any idea about consumer preferences or demand in the market. In a few cases, retailers place an order in the village, so that gatherers' harvest sales are assured. This is locally called 'bosasele'.

Conclusion

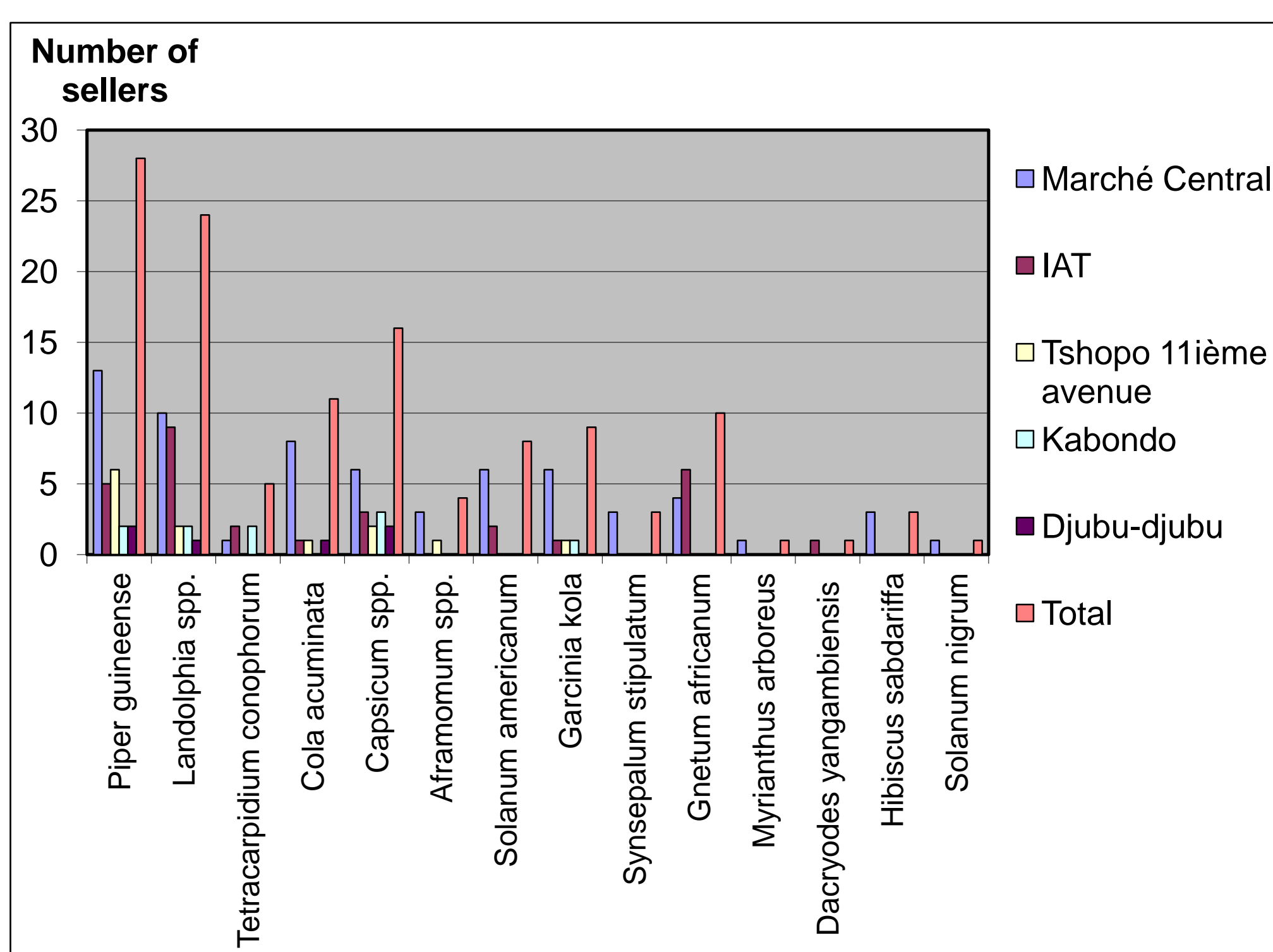
Logging is very fast expanding in the DRC due to recent peace and road reconstruction. However, very little is known about DRC's rainforests. More ethnobotanical knowledge is urgently needed to determine the importance of this natural resources for livelihood security of rural populations and to support policy makers in taking the right decisions. WEPs constitute an important food source in difficult periods (e.g. *Dioscorea* spp.), whereas some of them are becoming a culinary delicacy (e.g. *Megaphrynium macrostachyum*) or an interesting source of income (e.g. *Gnetum africanum*). Valorising and domesticating culturally accepted WEPs, with good economic and nutritional potential will increase food security and income generation and will also protect forests from overexploitation.



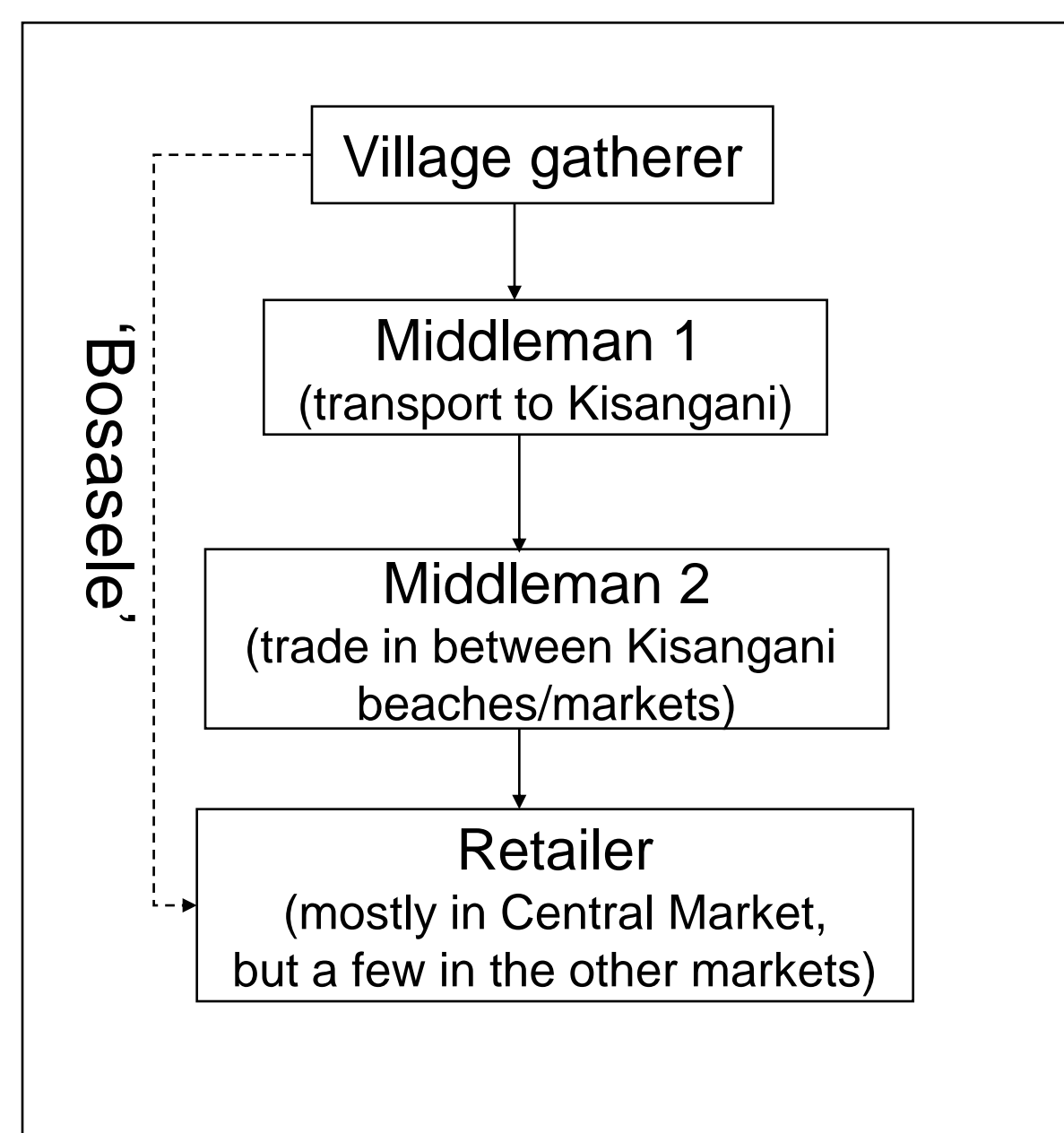
Graph 1: ethnospecies known at village level and regularly used by the households

plant parts used	Yalungu	Yasekwe	Yaoseko
fruit	59.2	60.8	63.8
leaves	31.0	27.5	27.7
tubers	7.0	7.8	6.4
bark	1.4	0.0	2.1
flower	2.8	0.0	0.0
stem	1.4	0.0	2.1
roots	1.4	3.9	0.0
young buds	4.2	2.0	4.3

Table 1: Plant parts used as % of total number of ethnospecies known at village level



Graph 2: WEP on the Kisangani markets sept-oct 2007



Graph 3: Simplified Market Chain

Acknowledgements

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