‘No Feed, no eggs’

*Scoping study on **feed supply** for the poultry sector in Kinshasa area, DRC*

May 2023

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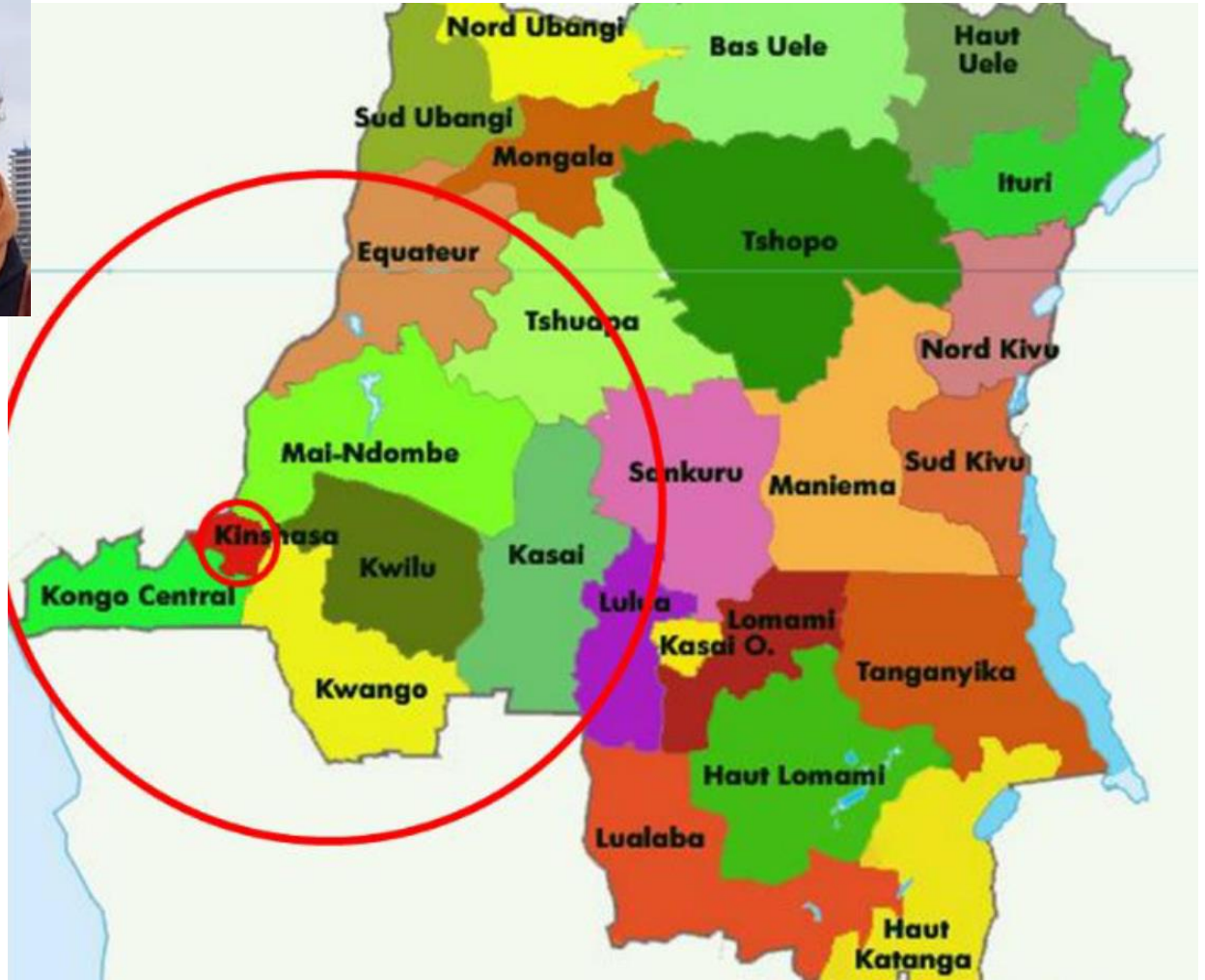
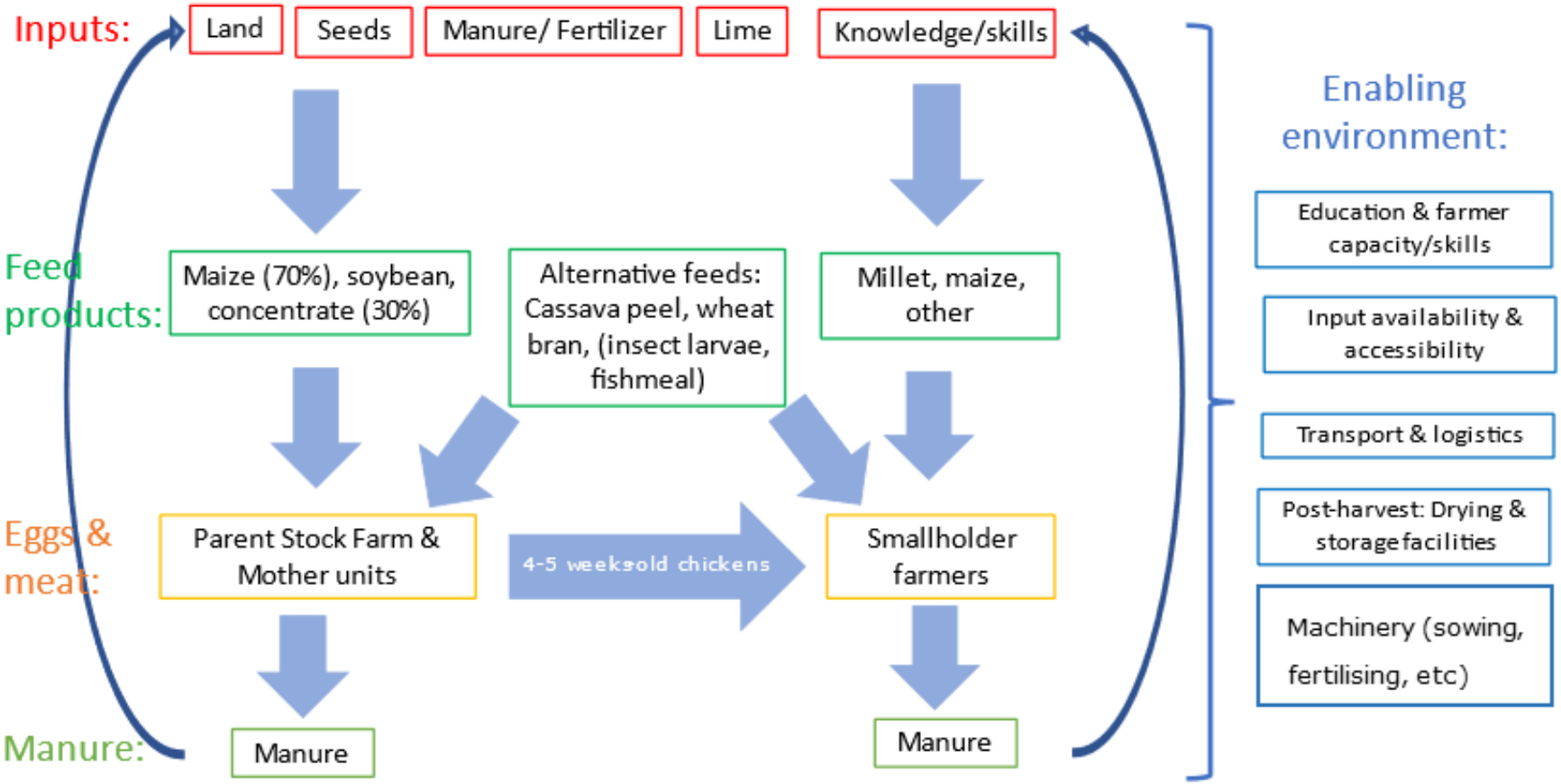


Simplified feed model EFC project



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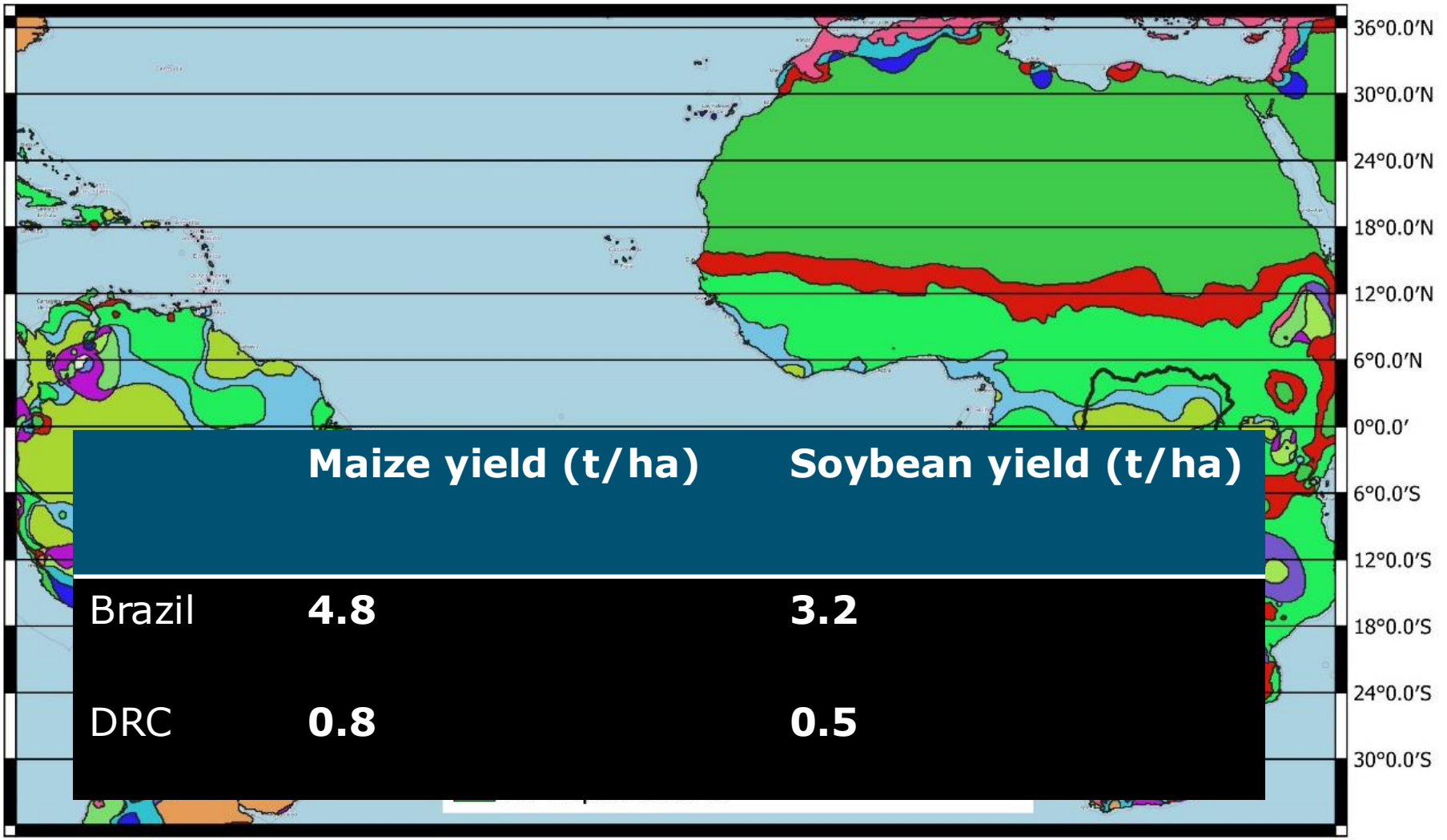
2023: Agronomic EFC goals

- Produce enough **local feed grains** to boost **local poultry** production *and* **human food** production
- Create long-term partnerships to improve local feed production

Climatic zone similar to Northeast Brazil



	Maize yield (t/ha)	Soybean yield (t/ha)
Brazil	**4.8**	**3.2**
DRC	**0.8**	**0.5**

Source: Kottek et al., 2006

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Three scenarios and expected yields

Productivity in tons per hectare per year

Year	Scenario 1: Status quo		Scenario 2: EFC	Scenario 3: Kinshasa -> Brazil	
	Maize	Soybean	Feed ingredients	Maize	Soybean
2023	**0.8**	**0.5**	2.0	0.8	0.5
2026	0.8	0.5	2.0	2.7	1.9
2030	0.8	0.5	3.4	**4.8**	**3.2**

1) Current yields in Kinshasa (total 1.3t/ha/yr)
2) EFC business proposition 2023
3) Reach Northeast Brazil yield levels by 2030

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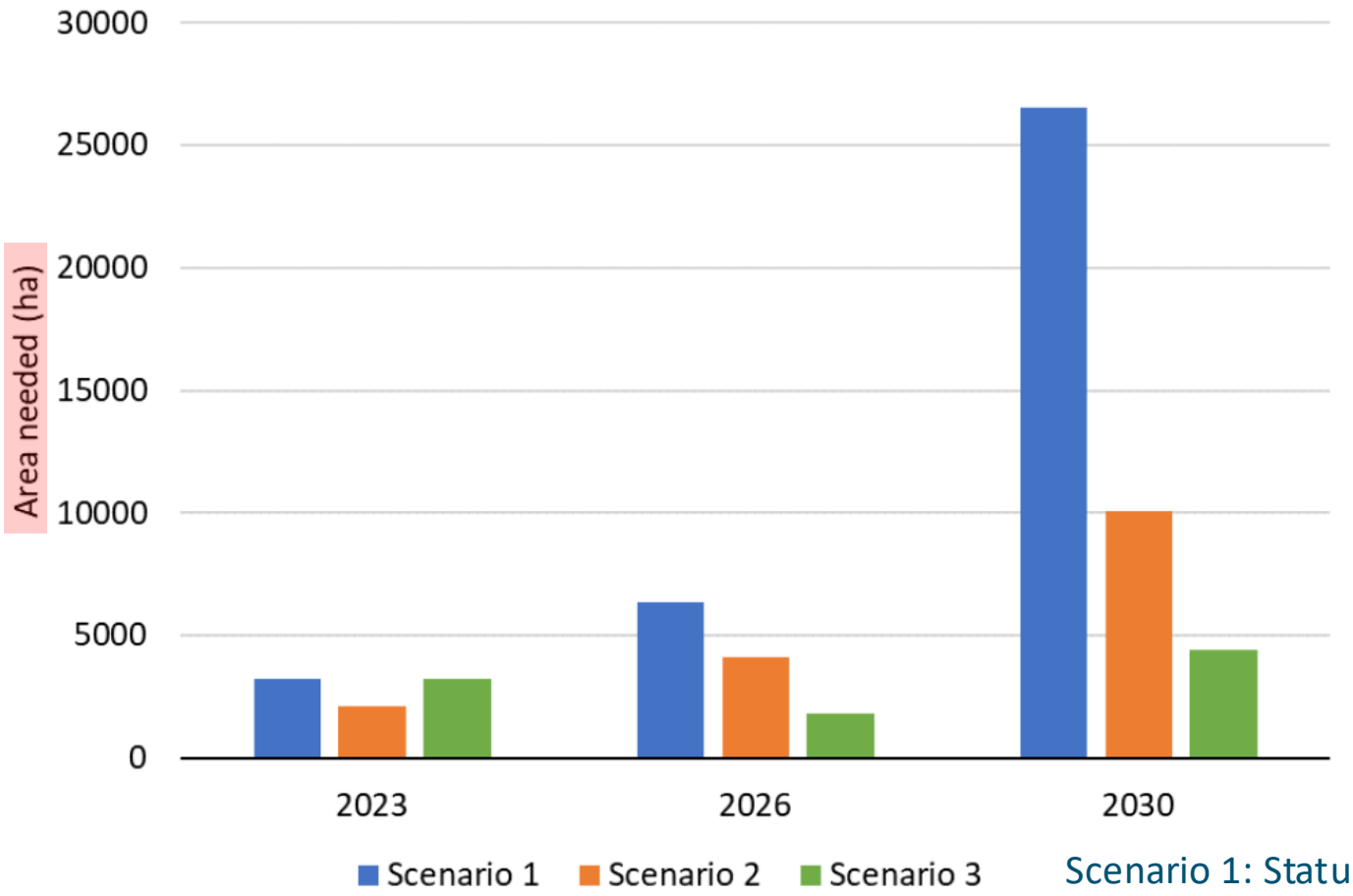
How many hectares needed per scenario?

*Number of **hectares needed to meet EFC's increasing feed needs** under each scenario*



Scenario 1: Status quo
Scenario 2: EFC
Scenario 3: Kinshasa > Brazil

Observations

+ **Climate** allows for a considerable **yield increase**

- **Soils** are **sandy, acidic**, low in **organic matter** and **nutrients**

- **Organic matter** resources are scarce

- **Suitable varieties** (maize soy) hardly available

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How can we improve soil fertility?

- Liming
- Fertilizer application
- Add organic matter: Cover crops, compost, organic (chicken) manure

Liming by hand

Crop sown in cover crop rests

Sounds good, but…

How much should we apply?

When?

- Optimal **crop productivity** ← Optimal crop care
- Optimal **crop care** ← Informed decisions
- **Informed decisions** ← possible when we **know our soil** & climate.

More soil data is needed

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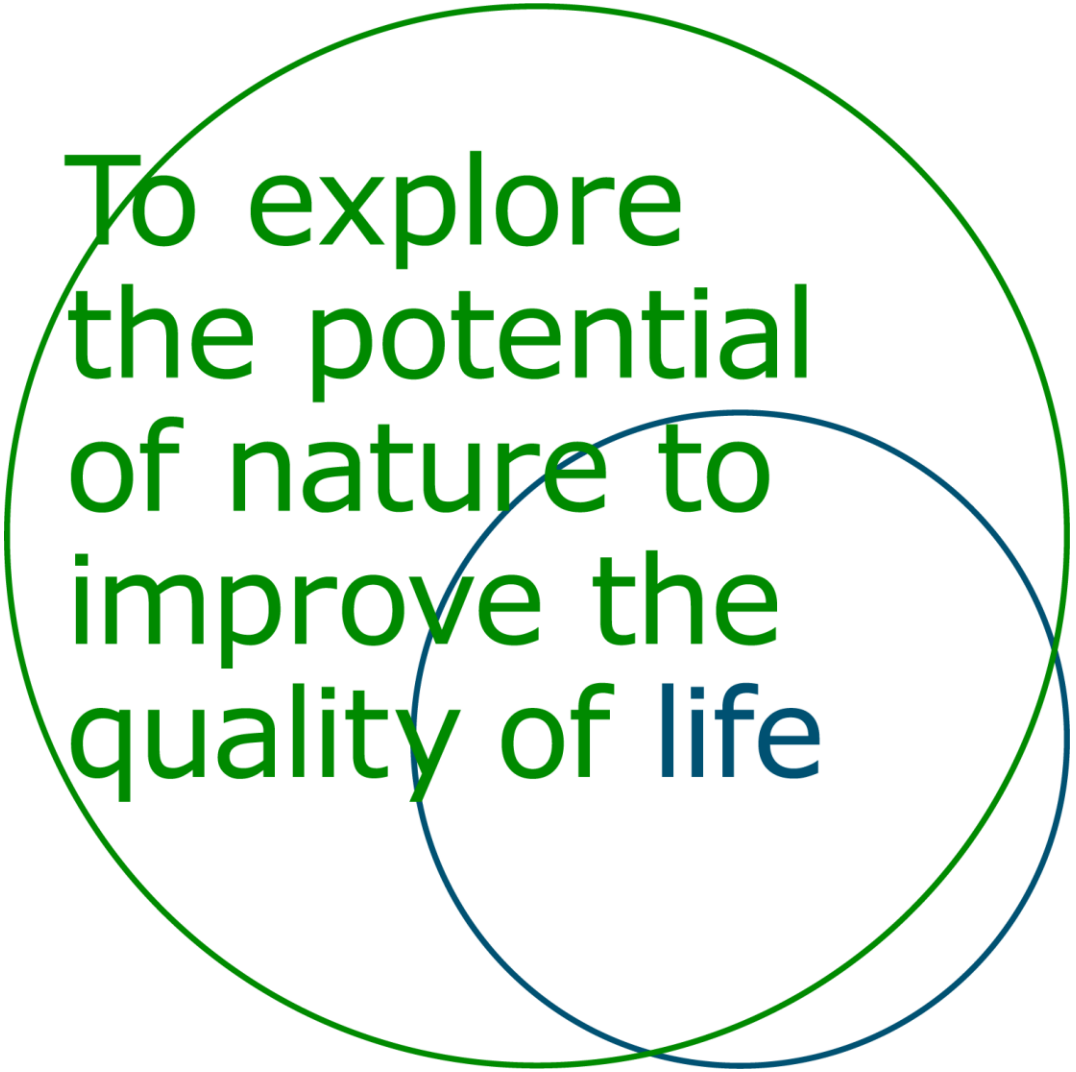
Recommendations

- **Soil sampling**: Geo-referenced soil analyses (chemistry or NIR). More is better.
- **Field trials** at a local university in 2024. Test:
  - Lime
  - Fertilizer & manure
  - Cover crop mixtures
  - Hybrid and open-pollinated maize variety testing: input for cost-benefit analysis for the farmer.
  - Monoculture and intercropping

> 2026: WUR can advise for next steps based on soil data

Thank you for your attention!

Merci beaucoup pour votre attention!



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