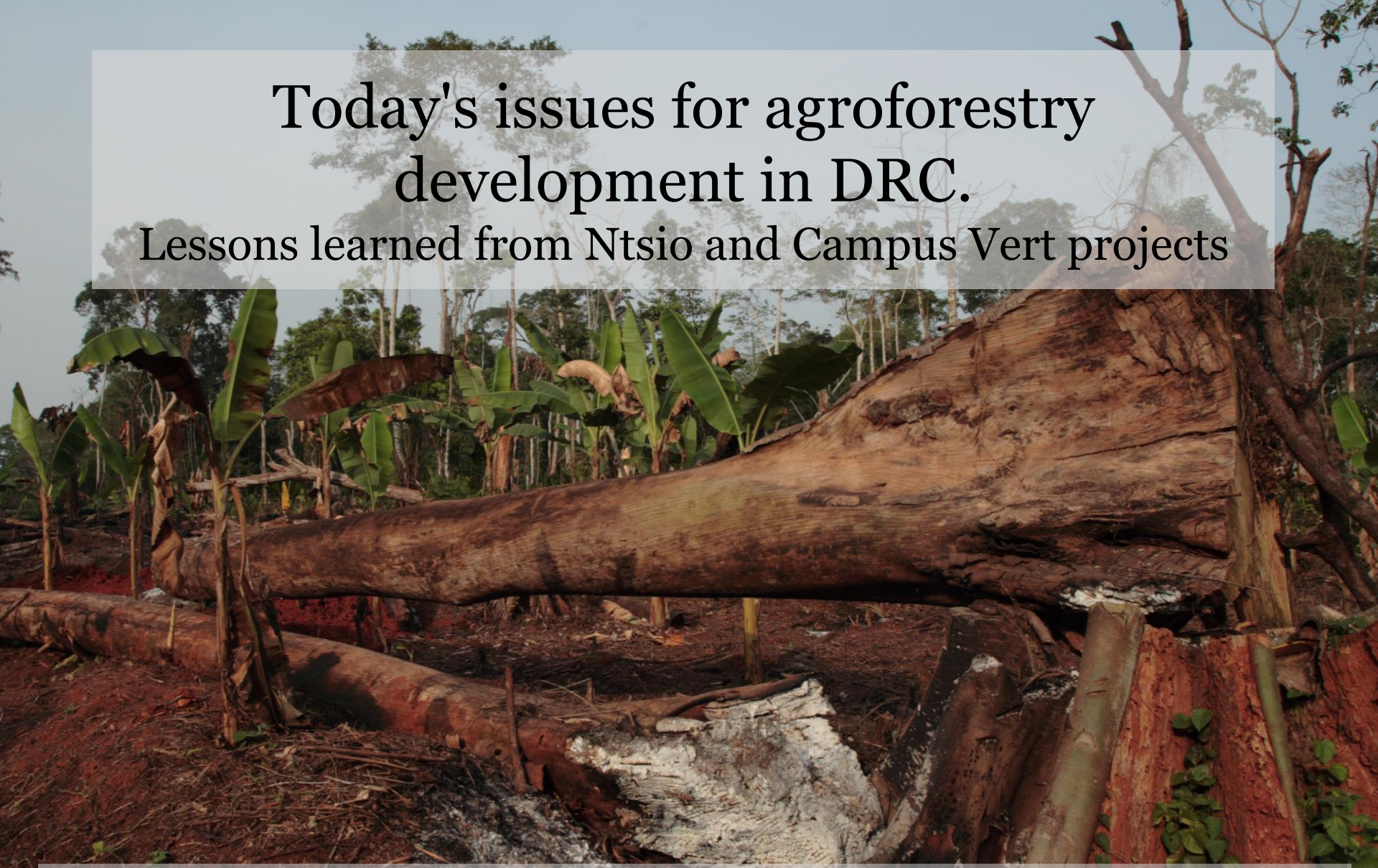
Today's issues for agroforestry development in DRC.

Lessons learned from Ntsio and Campus Vert projects



Barbara Haurez, scientific collaborator, Uliège – Gembloux Agro-Bio Tech

Baudouin Michel, Professor of Economy, ULiège – Gembloux Agro-Bio Tech and Director of ERAIFT (DRC)

18th May 2019

AgriNatura Workshop

Presentation plan

1. Agroforestry in DRC
2. Ntsio project
3. Campus Vert project
4. Agroforests of tomorrow in DRC

Agroforestry in DRC

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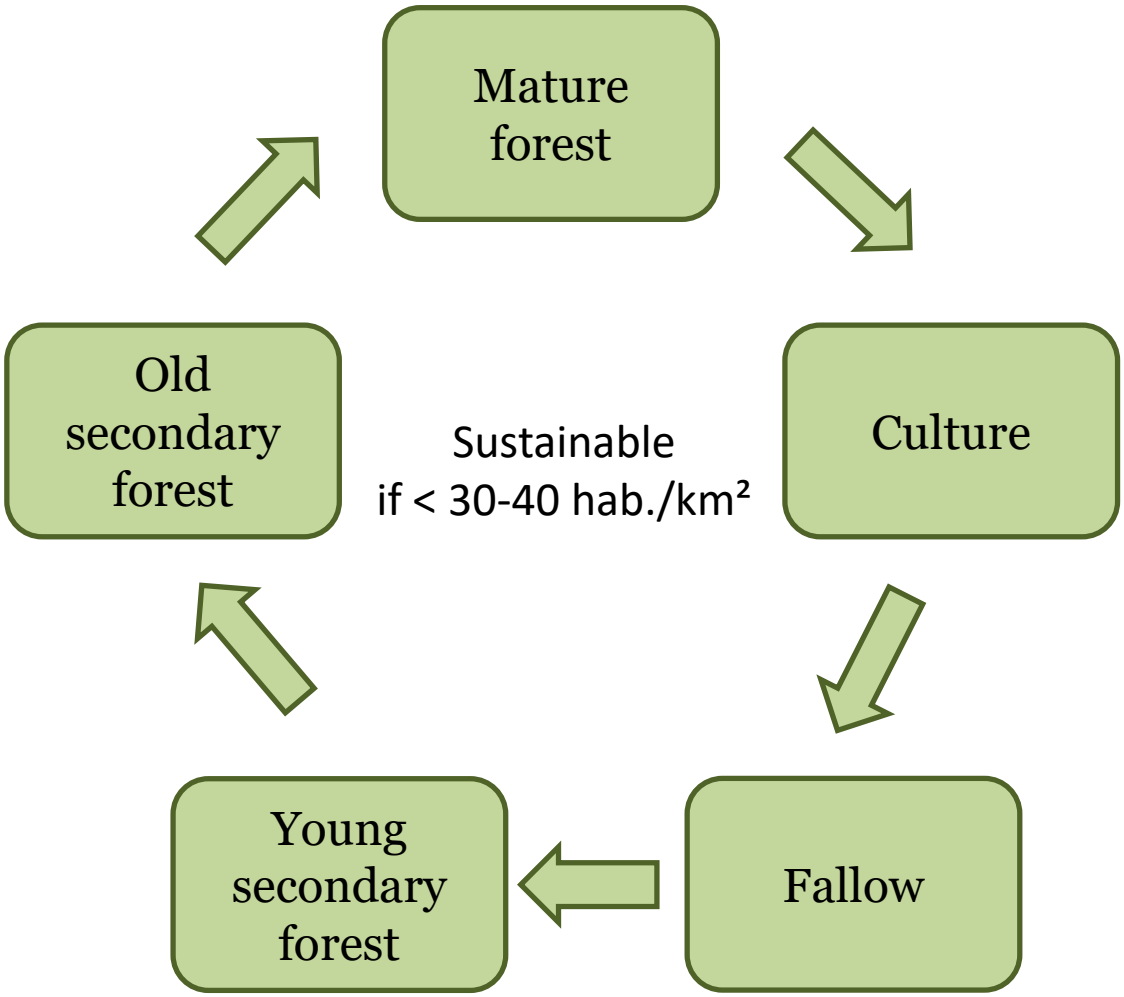
Agroforestry in DRC

History of agroforestry

Slash and burn agriculture



Agroforestry plantations in DRC

Kinzono (1980-1990) 500 ha

Agroforestry plantations in DRC

Mampu (1987-1991) 8,000 ha

Agroforestry plantations in DRC

Ibi Village (2008-2019) 1,200 ha

Ntsio

- Hanns Seidel Foundation, Strategic Institute for Sustainable Development (ISDD)
- European Union funding, total budget of 9.5 million euros
- 2012-2018
- Bateké Plateau

Fondation Hanns Seidel

Ntsio

- General objective: Reduce poverty through provisioning of food and charcoal to Kinshasa
- Specific objective: Development of agroforestry and community structuration on a 5,500 ha site in the Bateké Plateau

Ntsio

Farmer

1.5ha	1.5ha
1.5ha	1.5ha
1.5ha	1.5ha
1.5ha	1.5ha
1.5ha	1.5ha

15-hectare land unit

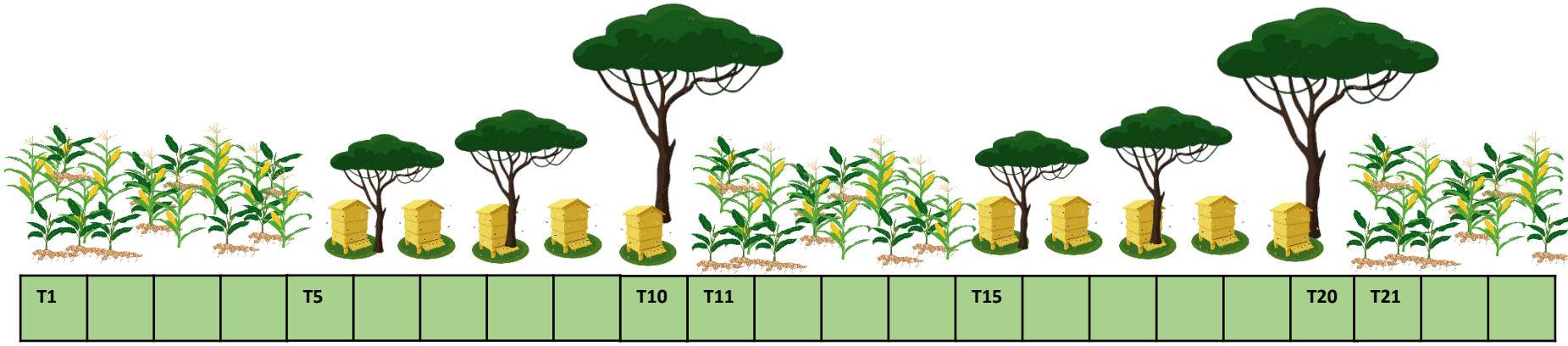
Annually 1.5 ha cultivated plot

Each 15ha land unit is divided in 10 plots, and submitted to a rotational production cycle (Annual rotation of 10 plots of 1.5 ha over 10 years)

Agricultural production

Cassava and corn = annual production for 3-5 years
Honey = 8-year production cycle with growing yields
Acacia = 10-year production cycle, production starts at year 10

Ntsio



Exploitation of the *Acacia*
Balanced year

Installation of beehives and production of *Acacia* honey
End of tha cassava and corn culture

Installation of the cultural plot
Cassava and corn production
Plantation of the *Acacia* seedlings

Plot 1
T1
T5
T10
T11
T15
T20
T21
Plot 2
T1
T5
T10
T11
T15
T20
T21
Plot 3
T1
T5
T10
T11
T15
T20
• • •

Ntsio – Results

- 5,500 ha secured and built with facilities

Ntsio – Results

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Ntsio – Results

- Low production of cassava, legumes, cereals, garden and livestock products

Ntsio – Results

- Valorisation on the carbon market

Ntsio – Financial evaluation

Annual exploitation counts for a balanced year for one farmer (15 ha)

	Balanced year **without fund**	Balanced year **with fund**
Resources		
Cassava production	**2,301,360**	**4,832,720**
Corn production	30,000	30,000
Honey production	**874,000**	**1,632,360**
Acacia production	**450,000**	**602,057**
Cassava transformation	**5,942,000**	**6,198,000**
Corn transformation	378,000	378,000
Honay transformation	912,000	912,000
Acacia transformation	7,470,000	7,470,000
Cassava selling	6,814,360	6,814,360
Corn selling	28,000	28,000
Honey selling	134,400	134,400
Wood coal selling	594,000	594,000
Total Resources	**25,928,120**	**29,625,897**
Costs		
Cassava harvesting	5,047,396	5,047,396
Corn harvesting	53,400	53,400
Honey harvesting	1,310,889	1,310,889
Wood coal harvesting	8,670,990	8,670,990
Total costs	**15,082,675**	**15,082,675**
Operating surplus in FC	**10,845,445**	**14,543,222**
Operating surplus in USD	**6,633 USD**	**8,895 USD**

Ntsio – Financial evaluation

Public subvention with fixed financial IRR of 20%

Annual service payment per farmer (USD)	% of public subvention needed in the total investment
2200	38%
2000	44%
1500	58%
1000	72%

Ntsio – Recommendations

- Importance of land securisation
- Profitability of charcoal production projects

Ntsio – Recommendations

- Importance of land securisation
- Profitability of charcoal production projects

But…

- Development of agroforestry projects dedicated to food production closer to city centres
- Promotion of multi-use local tree species

Campus Vert

- Nature+, Regional Postgraduate Training School on Integrated Management of Tropical Forests and Lands (ERAIFT), ULiège – Gbx ABT
- Walloon Air and Climate Agency (AwAC) funding, 200,000 euros total budget
- 2016-2018
- Kinshasa

Wallonie | SPW Service public de Wallonie | Air Climat agence wallonne de l'air & du climat | Wallonie - Bruxelles International.be | Nature + | ERAIFT UNESCO - MAB | LIÈGE université Gembloux Agro-Bio Tech

Campus Vert

- General objectives: (1) Enhance food security and income generation

  (2) Reduce deforestation from charcoal production

- Specific objective: Promote agroforestry to reduce food insecurity, charcoal production driven deforestation and climate change

Campus Vert – Results

- 11 ha of degraded savana converted into an agroforestry demonstration site

Multi-stage tree garden

Association cassava and local and exotic tree species

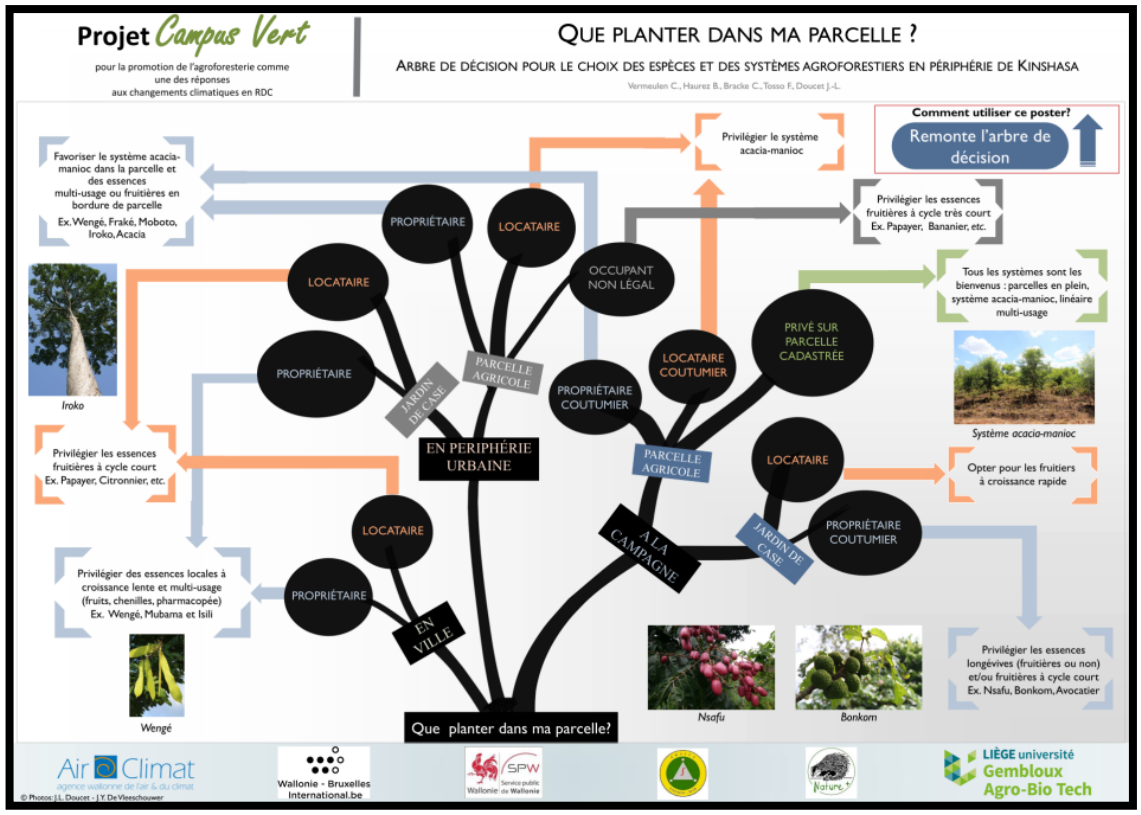
Campus Vert – Results

- Involvement and training of local women farmers

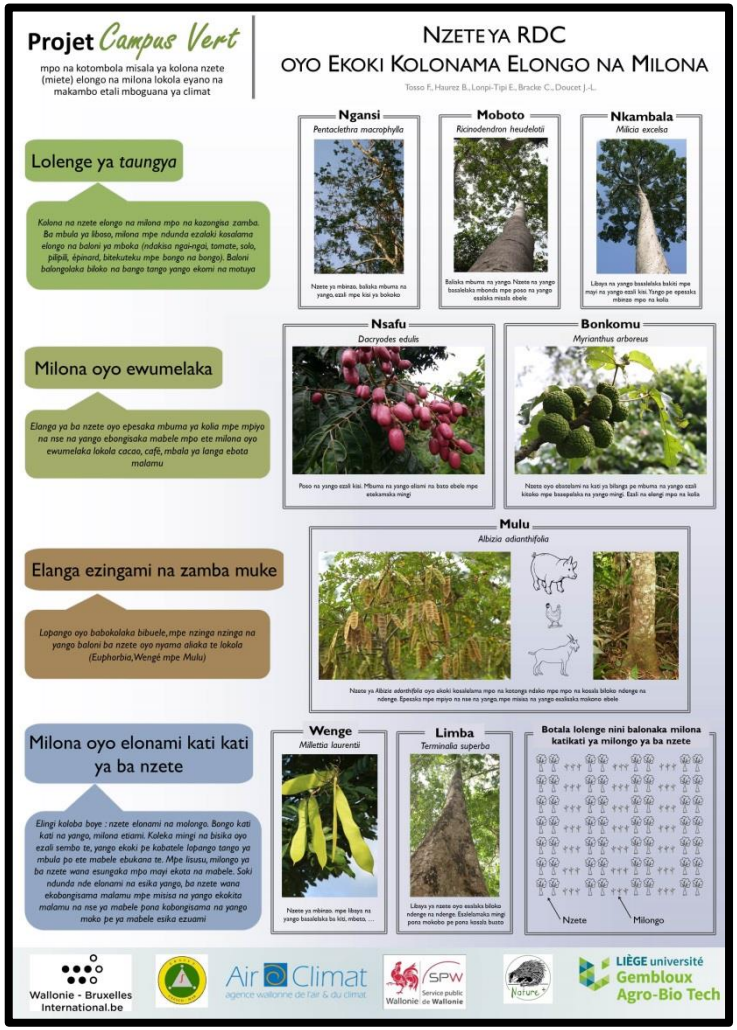
Campus Vert – Results

- Production of capitalisation tools

Decision tool to choose agroforestry system and species depending on land tenure



Agroforestry trees from DRC



Campus Vert – Results

- Information and awareness raising of administrations, civil society, local communities and students

Campus Vert – Recommendations

- Developing capacity building projects targeting local NGOs
- Gender matters

Agroforests of tomorrow in DRC

- Promoting local species
- Diversifying the species and products used in agroforestry projects

Agroforests of tomorrow in DRC

- Simplest is best!

Barbara Haurez, haurez.b@gmail.com

Pictures by Jean-Louis Doucet, Ernestine Lonpi Tipi, Hervé Mishidi, Régis Peltier, Hanns Seidel Stiftung