Forests contribution to the global development and climate change agenda

Why forests matter…

Robert Nasi, Brussels, Feb 2017

CIFOR

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CGIAR RESEARCH PROGRAM ON Forests, Trees and Agroforestry

PREAMBLE

We aim to show how forests and forestry can contribute to the achievement of the new climate and development agenda and how addressing development or climate change issues involve forests and forestry issues even when not defined as “forestry programs”…

- Introduction to the new climate and development agenda
- Role of forests and forestry
- Focus on a series of “non forestry” entry points, among others:
  - Resilience and safety nets
  - Inclusive growth and jobs
  - Climate change
  - Energy

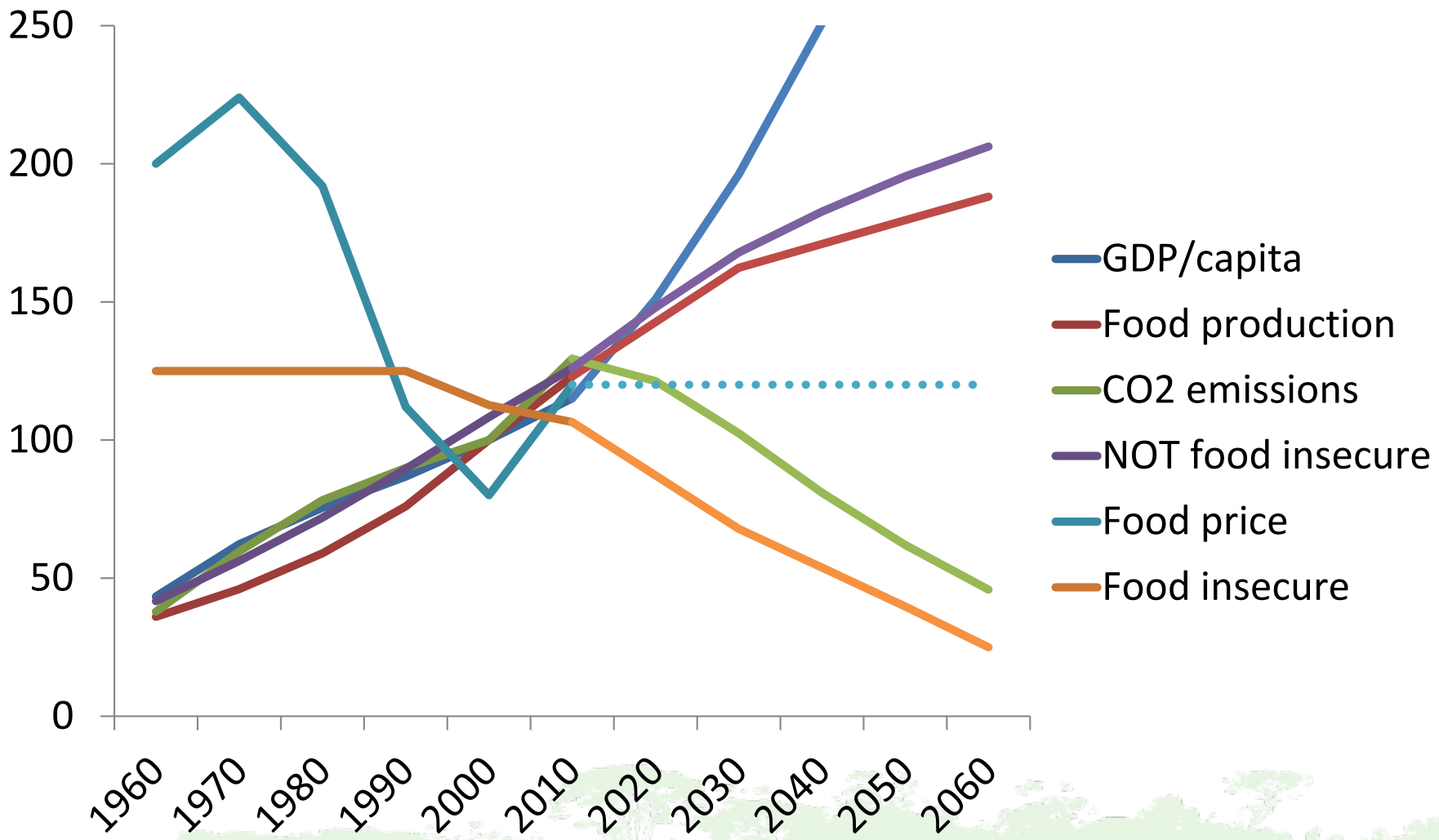
Caveat: we won’t cover FLEGT/VPA issues as they have been the topic of a previous session

2015: new global development frameworks

2016 context: a historic opportunity

- Sustainable Development Goals
- Post-2020 climate agreement
- New role of Finance, no-deforestation commitments

Forestry & Forests: ACHIEVING THE SDGs



Sources for 2010-2060 are OECD (GDP growth) UN (population growth) FAO (food insecure)and http://climateactiontracker.org/global.html for Co2 emissions to meet 2 degree target

The “classic” forest and forestry agenda

- Sustainable forest management
- Multiple use forestry
- Community forestry
- FLEGT/VPA
- REDD+
- Etc

- Very important and need to be pursued but…

… we must redefine forestry for ACHIEVING THE SDG's

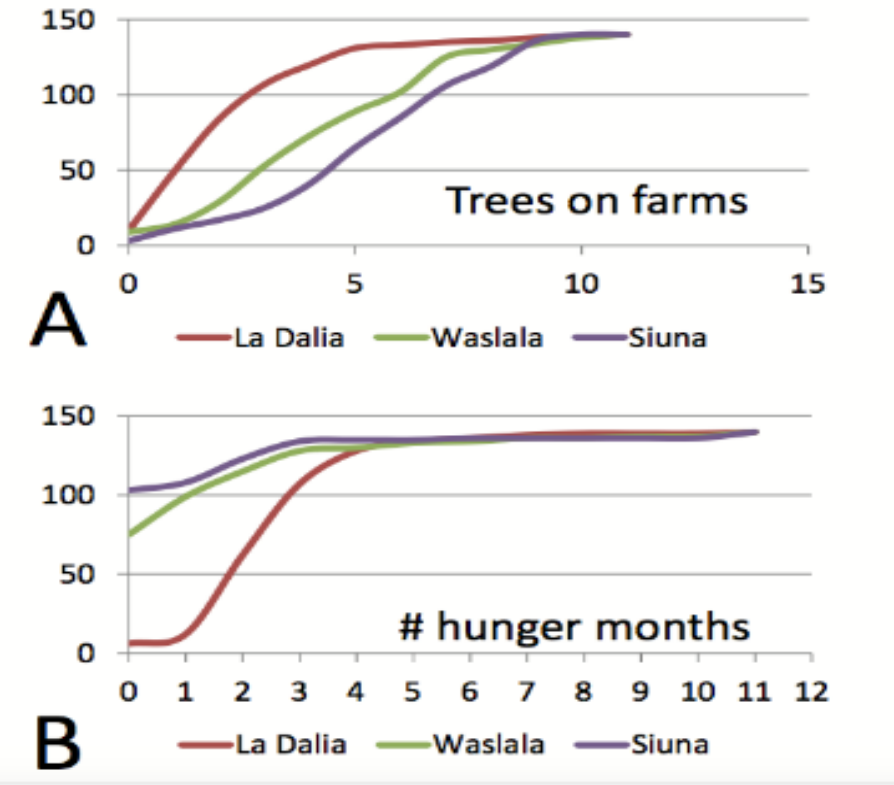
- Ecosystem Services (water, pollination, pest control…)
- Energy (biomass and biofuels)
- Livelihoods and employment
- Food, nutrition and health
- Climate change adaptation and mitigation
- Biodiversity conservation
- Resilience and safety net to environmental *and* economic external shocks

Non-traditional forestry "entry points"

RESILIENCE AND SAFETY NETS

Trees & Food Security

Example: Nicaragua-Honduras (rural)



Households with less tree cover (A) have more months of hunger (B) (Ordonez, 2014)

Example: Agincourt South Africa (peri-urban)

Households were 2.8 times more likely to have fed all members through the year from home gardens and fields if they have fruit trees in homestead yard and 2 times if they have fruit trees in their fields only

(after controlling for household size & dependency ratio, age & gender of household head, number of assets owned, & position on rainfall gradient)

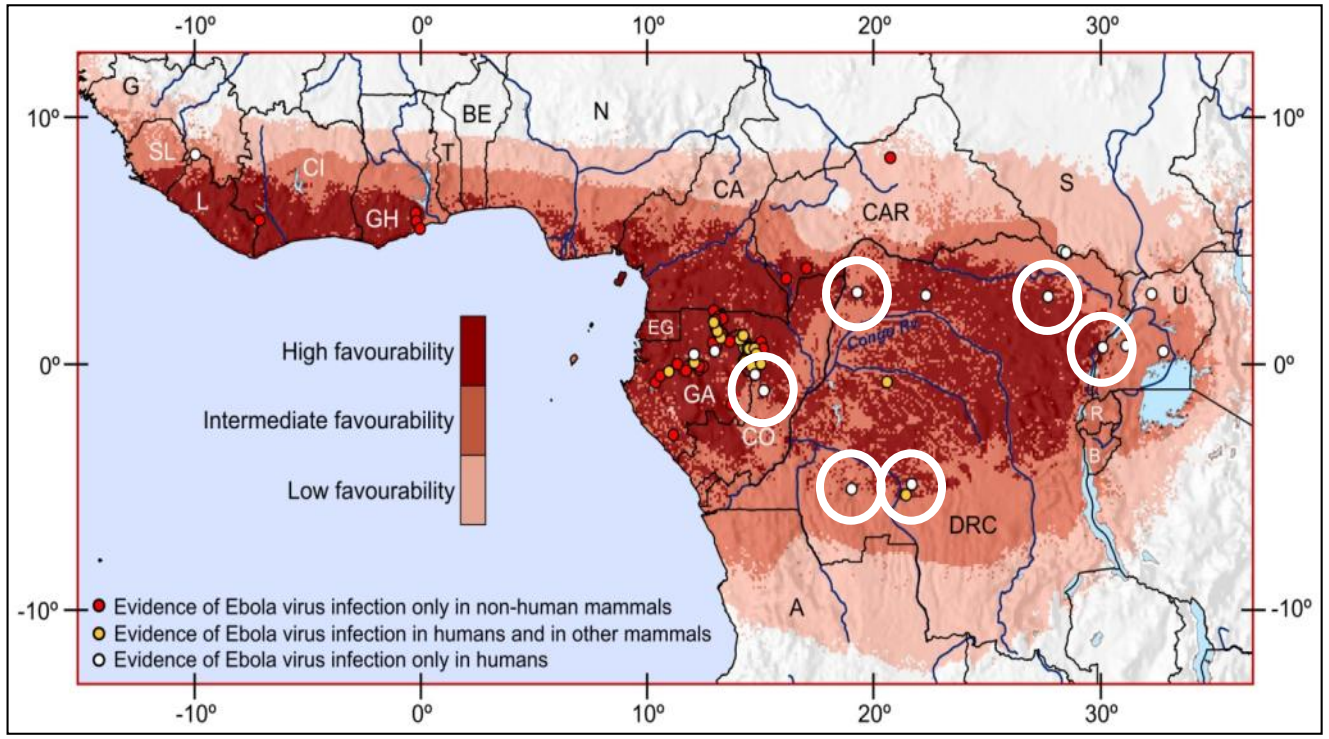
(Twine, Vagen, Gassner, Winowiecki, 2015)

Tree cover and dietary diversity

- There is a statistically significant **positive** relationship between % tree cover and **dietary diversity**
- **Fruit and vegetable consumption** first increases and then decreases with tree cover (peak tree cover is ca. 45%)
- There is **no** statistically significant relationship between tree cover and **animal source foods**

(Ickowitz et al. 2014 Global Environmental Change)

Forests and public health



Links between Ebola and forest fragmentation in Africa

In the forest margins forest, favorability of EV much lower but the incidence of EVD is higher and seemingly related to changes in forest cover during the 2 year previous to EVD

Emerging diseases

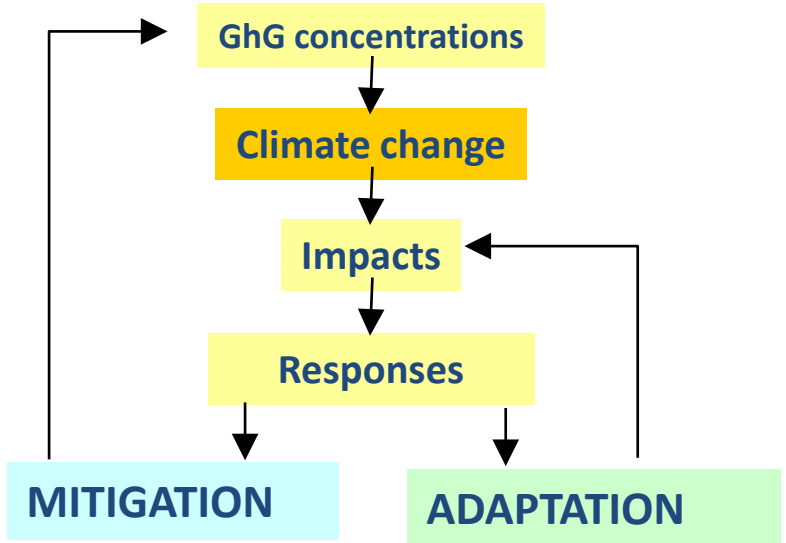
- 70% of human diseases are zoonoses
- SRAS, Marburg, Lassa, Nypah, Ebola
- 75% of world's population rely on biodiversity for primary health care

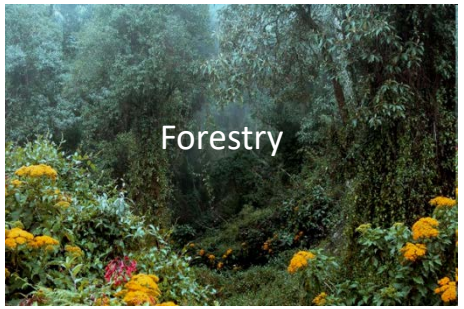
Nutrition

- Wild food (greens, meat, fish) rich in essential micro-nutrients
- Availability of wild meat or fish from diet linked to anemia and stunting rates in rural populations

CLIMATE CHANGE MITIGATION AND ADAPTATION

Unlike most economic sectors, forestry is relevant to both climate change adaptation and mitigation





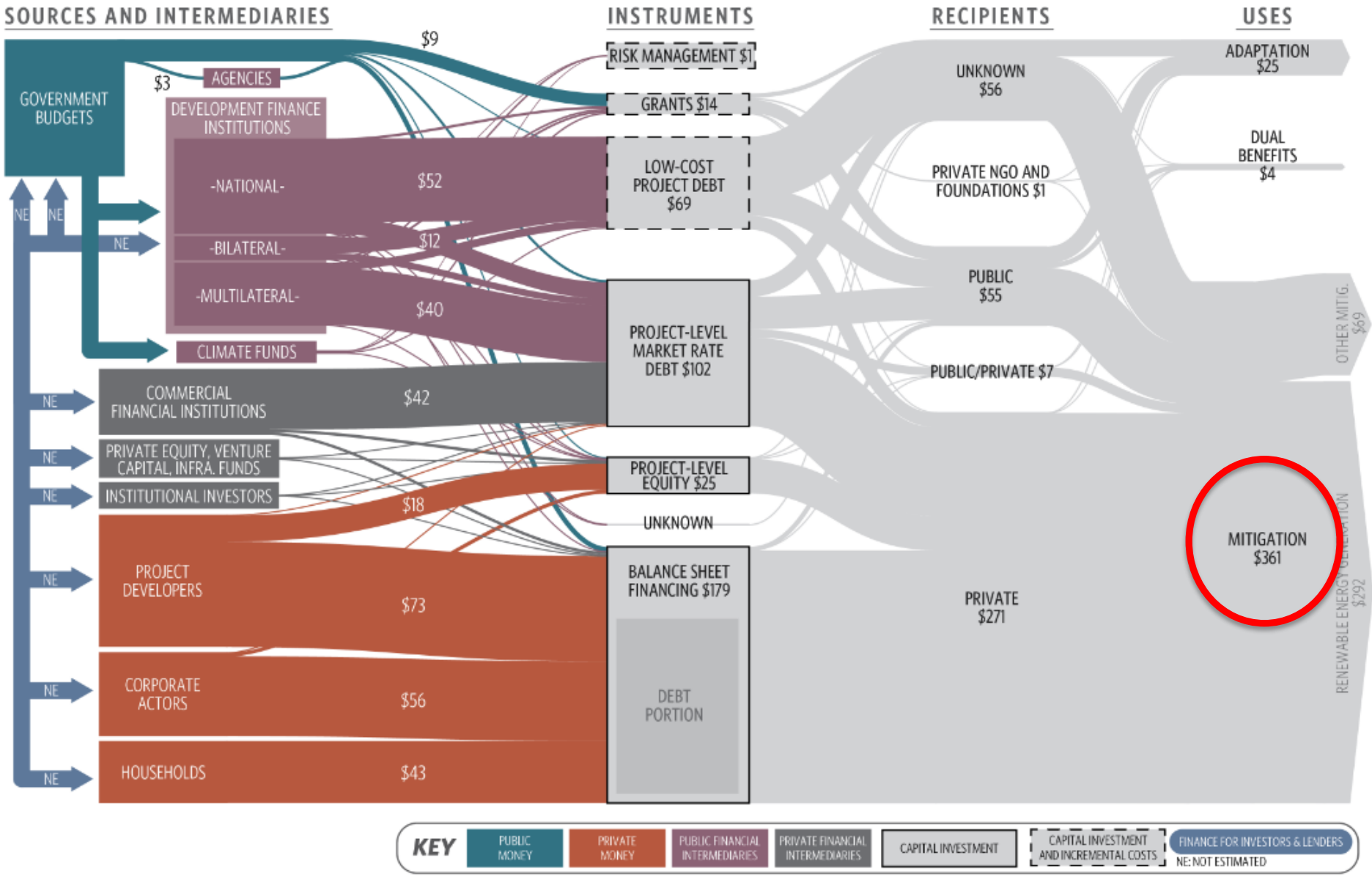
Ecosystem-Based Mitigation

- Global ecosystem service: Carbon sequestration.
- Policies: CDM REDD+

Ecosystem-Based Adaptation

- Local ecosystem services: water regulation, provision of diverse goods...
- Policies: EBA (Ecosystem-based Adaptation).

CLIMATE FINANCE

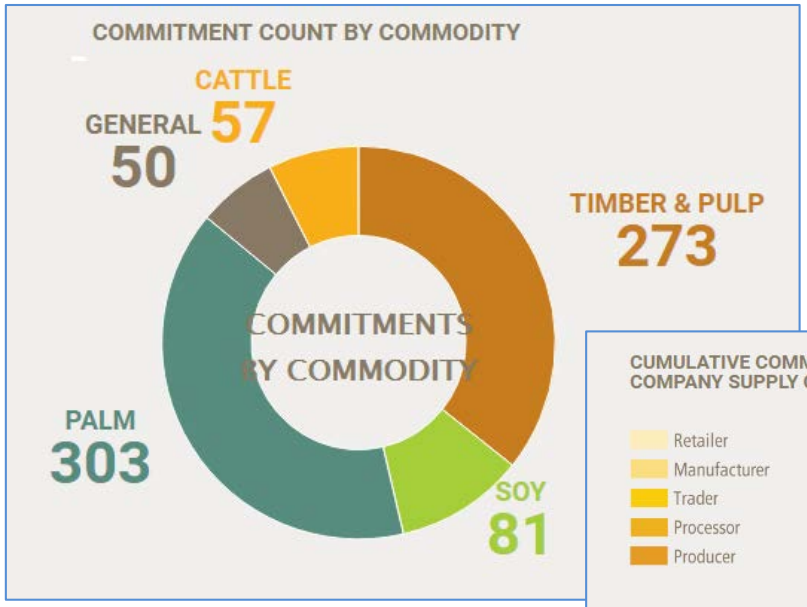


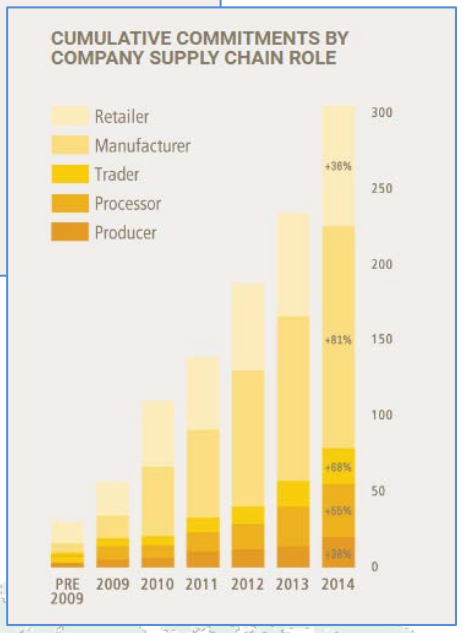
Commitments to deforestation-free commodities

The EU27 is consuming 732 kha (2004) or 10% of the global embodied deforestation consumption (7,290,000 ha per year).

European Commission, 2013. The impact of EU consumption on deforestation: Comprehensive analysis of the impact of EU consumption on deforestation.

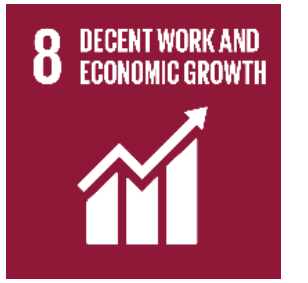
- By Jan 2016, 447 companies with operations at different states of the value chain have made 764 pledges to reduce their impacts on forests
- The commitments are very diverse, and are not necessarily comparable
- Most of the commitments have been made by companies that produce palm oil and wood products. For soy and cattle, the proportion is considerably lower.
- Most are manufacturers and retailers, nearly 90% of which are headquartered in Europe, North America, or Australia





Source: Taken from Climate Focus (2016), with information updated from supply change http://www.supply-change.org/

INCLUSIVE GROWTH & JOBS

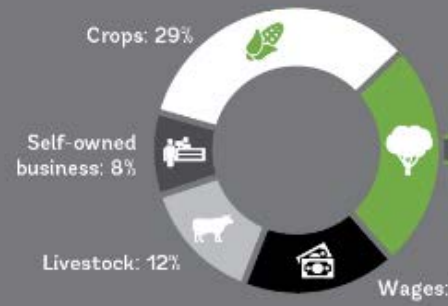


FORESTS AND TREES REDUCE POVERTY

Forests and trees provide vital resources to 1.3 billion people.

FORESTS ARE AN IMPORTANT SOURCE OF INCOME

In developing countries, forest income is second only to crops for rural communities with access to forests.



FORESTS: 22%

A "HIDDEN HARVEST"

About 50% of forest income is non-cash or a "hidden harvest" that provides food, fuel, fodder and construction material.

1 IN 11 PEOPLE

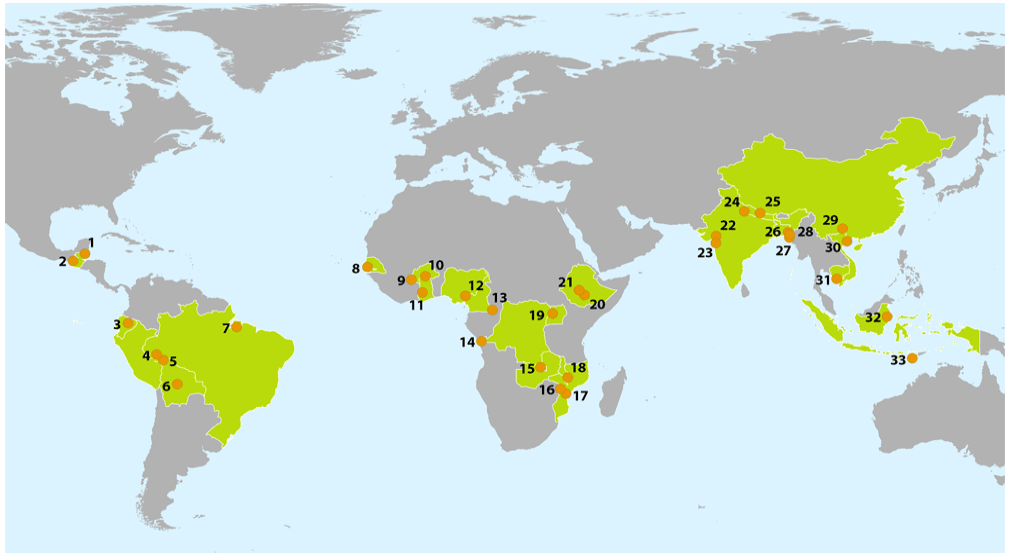
with access to forests are lifted **OUT OF EXTREME POVERTY** thanks to forest resources.

FOREST INCOME REDUCES INEQUALITY

Regions lower their scores for the Gini coefficient – a measure of inequality – by several percentage points when income from forests is included.

Sources: FAO (2014). *State of the World's Forests 2014*; Noack, F. et al. (2015). *Responses to Weather and Climate: A Cross-Section Analysis of Rural Incomes*. World Bank Background Paper.

Poverty and Environment Network



CIFOR, 2015, "CIFOR's Poverty and Environment Network (PEN) global dataset", http://hdl.handle.net/11463/10060 Center for International Forestry Research [Distributor] V2 [Version]

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Informality: in many laws, policies and statistics artisanal loggers remain invisible or are branded criminals.

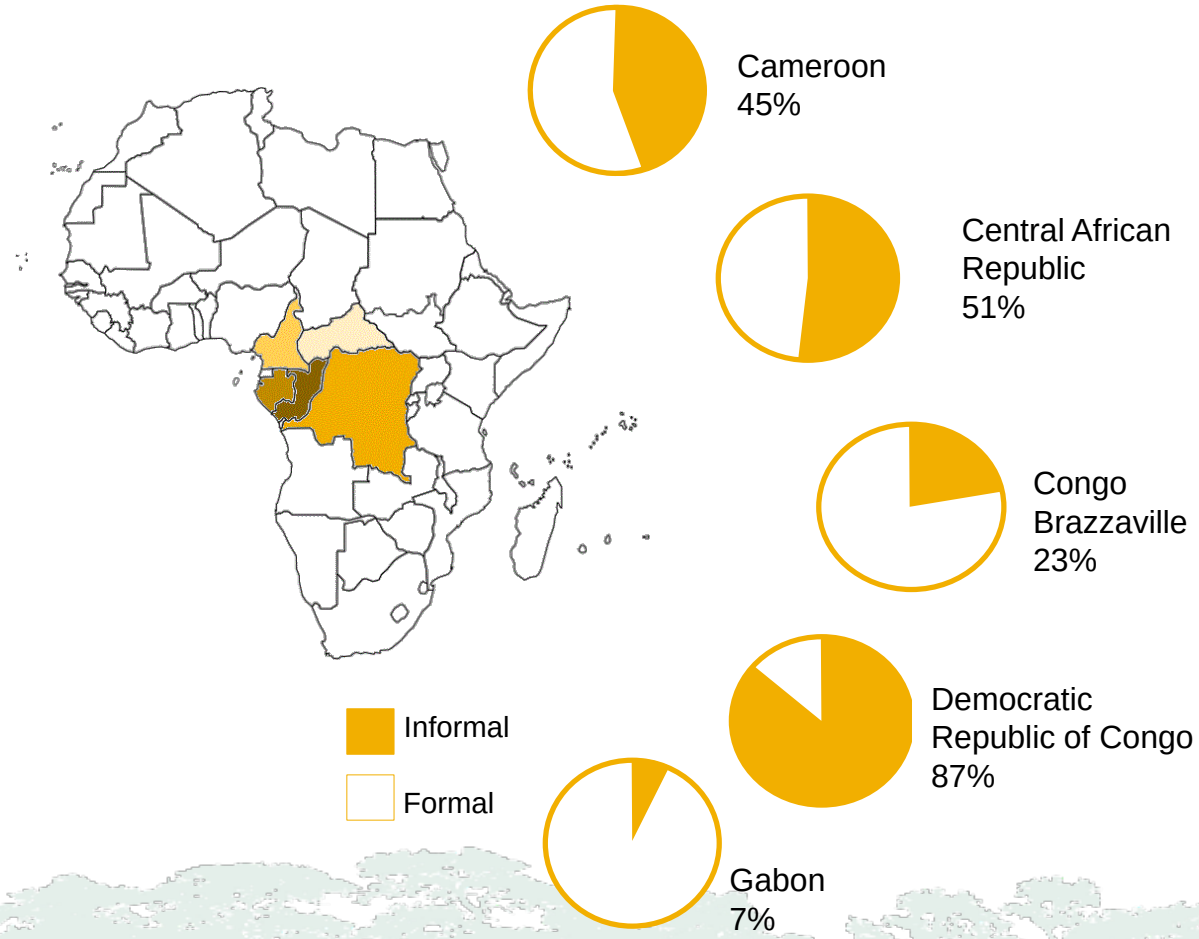
The artisanal timber sector is made up of carpenters, cabinetmakers, wood sellers, transporters and loggers.

They operate on a **very small scale**, cutting trees down at the edge of the forest with chain-saws and loading them and transporting them to open or hidden markets.

Despite operating on a completely different scale, with completely different motive, artisanal loggers are often tarred with the same **illegality** brush as the industrial sector that is responsible for large-scale deforestation and that is the real target of the worldwide push for ‘legal timber’

“Small-scale informal logging is different to 90% of the rainforest logging done by illegal loggers, which is organised crime.”
Paolo Cerutti, CIFOR

Yet in some countries, the ‘invisible’ timber production is as significant as the formal sector .



Proportion of formal/informal timber production for selected African countries

“[Artisanal loggers] don’t exist-- not in the laws or in the policies that affect them. The law is wrong .” *Paolo Cerutti, CIFOR*

ENERGY


7
AFFORDABLE AND CLEAN ENERGY
13
CLIMATE ACTION
12
RESPONSIBLE CONSUMPTION AND PRODUCTION
2
ZERO HUNGER
1
NO POVERTY
3
GOOD HEALTH AND WELL-BEING

Wood energy (fuelwood and charcoal)

Key data for selected cities and their woodfuel supply zones.

Key data	Central Africa					West Africa			
	Cameroon Yaoundé[c]	DRC Kinshasa [a]	DRC Kisangani [a]	Congo Brazzaville[b]	CAR Bangui [d]	Burkina Faso Ouagadougou	Senegal r·	Niger Niamey[l]	Mali Bamako
Year of data	2009	2010	2010	1994	2010	*2006	*2006	*2006	*2007 **1994
Dependence upon woodfuel by urban consumers (%)	–	87%	95%	90%	92%	95%[h]	84%[k*]	95%[l*]	97%[m*]
Volume charcoal sector (1000 tons per year)	(214)	490	16	(25)	30	(23)[g*]	150[f]	(200)[i]	38[e**]
Value woodfuel sector (million USD)	(380)	143	2.5	(16)	6	(425)[h]	60[f]	15[i]	30[j]

Sources: [a](Schure et al., 2011a), [b](Lamouroux and Boundzanga, 1994); figure for four main cities together (Brazzaville, Pointe-Noire, Dolisie and Nkayi), [c](Ministère de l'Energie et de l'Eau, 2010); figure for the entire country, [d](Drigo, 2009), [e](Hautdidier, 2007), [f](Denton, 2004), [g](DURADEVE Consulting Group, 2011), [h] (Ministère de l'Environnement et du Cadre de Vie, 2010), [i]Matly, 2003 cited by (Ichaou, 2004); figure is for entire woodfuel volume, [j](Heuraux et al., 2011), [k](Ministère de l'Energie, 2007), [l](Ministère des Mines et de l'Energie, 2007), [m](Ministère de l'Energie et de l'Eau, 2007).

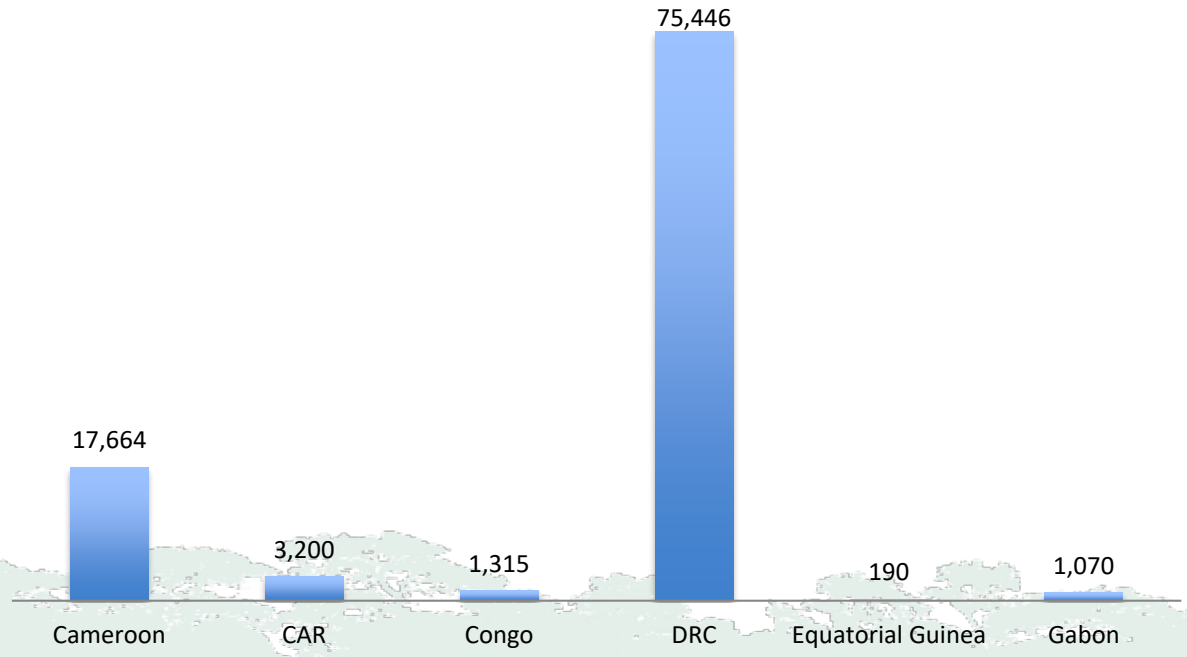
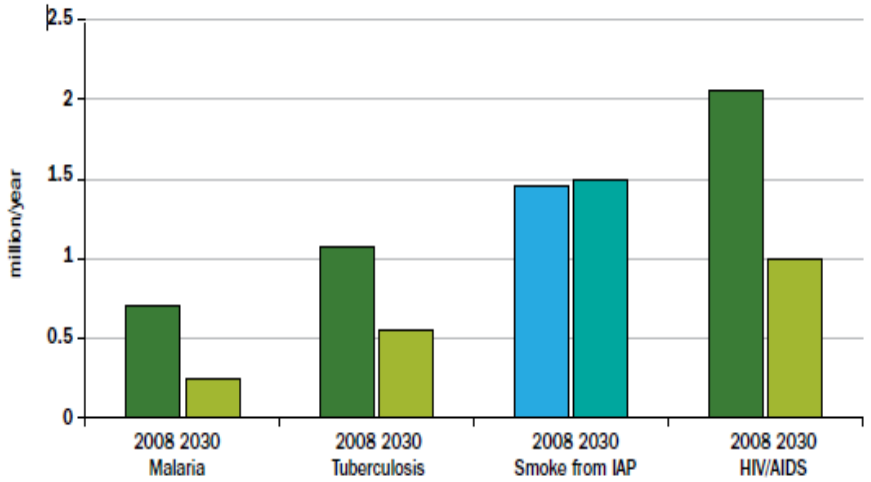


Figure 3 | Number of Deaths from Indoor Air Pollution-Related Health Complications



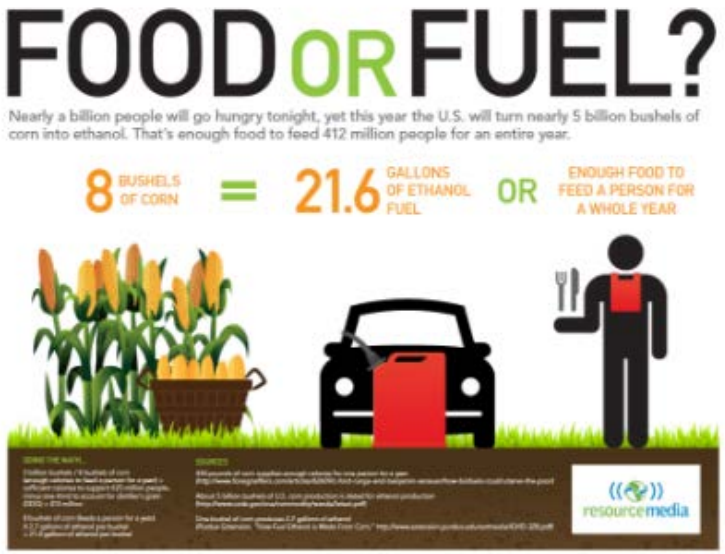
Source: IEA and WHO, 2010.

Energy

Do Biofuels Reduce Greenhouse Gases?

A new study fuels the debate over the impact of growing crops for fuel.

by Kevin Bullis May 20, 2011



Study: Biofuels increase, rather than decrease, heat-trapping carbon dioxide emissions

Aug 25, 2016 Contact Jim Erickson

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Biofuels

Biofuels and bioliquids are instrumental in helping EU countries meet their 10% renewables target in transport (RED, Directive 2009/28/EC).

- Sustainable, biofuels must achieve GHG savings of at least 35% in comparison to fossil fuels. This savings requirement rises to 50% in 2017. In 2018, it rises again to 60% but only for new production plants. All life cycle emissions are taken into account when calculating greenhouse gas savings. This includes emissions from cultivation, processing, and transport.
- Biofuels cannot be grown in areas converted from land with previously high carbon stock such as wetlands or forests.
- Biofuels cannot be produced from raw materials obtained from land with high biodiversity such as primary forests or highly biodiverse grasslands.

Others.. but not least important

Gender matters in forestry

- Intrinsic – gender equality and women's empowerment as a goal for forestry sector in its own right.
- Gender inequality pervasive in terms of women's lack of voice and influence in decision making, access and command over resources, distribution of benefits. Women's contribution (e.g. unpaid labor) in forestry under-recognized.

- Instrumental - greater gender equality can have a catalytic effect on achieving other goals goals such as better forest management and conservation. But, win-win cannot be assumed.
- Focus must be on creating better synergies between sustainable forest management and gender equality.

Migration and remittances

- Globally, the number of migrants is growing significantly – in 2013 there were 247 m migrants (3.4% of the world population)
- The main migration corridors are Mexico-US, Russia-Ukraine, Bangladesh-India, Ukraine-Russia, North Africa-Europe and Turkey-Europe
- Migrants send remittances that are contributing to the national economies many countries, including many in sub-Saharan Africa
- In 2015, remittances reached $ 601 billion, and $ 441 billion went to developing countries, nearly three times the amount of ODA

Fig. 1. Number of International Migrants Originating from Ethiopia, Kenya and Uganda

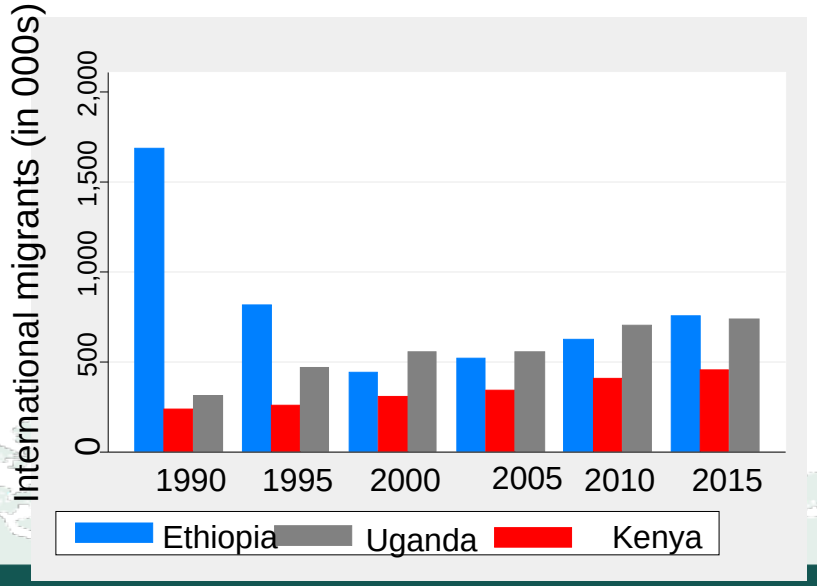
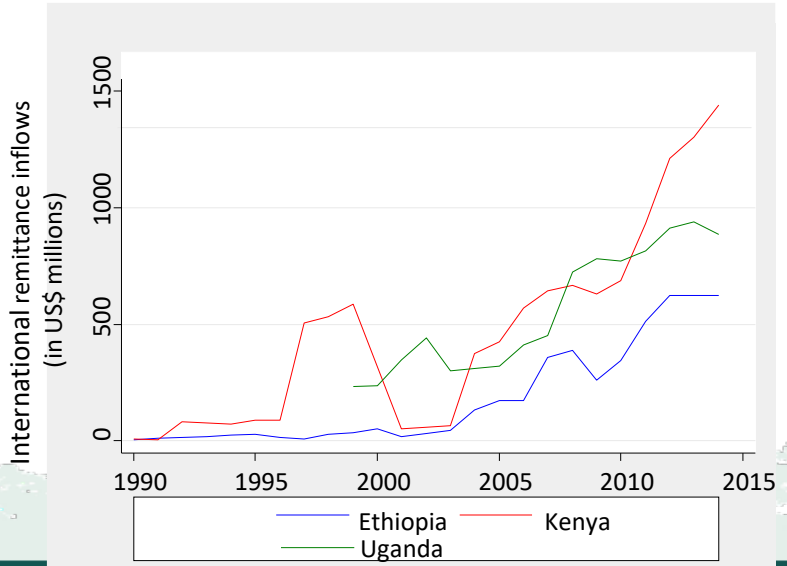


Fig. 2 International Remittance Inflows to Eastern African Countries



Refugee camps and forests

- The number of refugees is also increasing, in 2014 it reached 14.4 million
- 86% of refugees are hosted by developing countries – Turkey, Pakistan, Lebanon (in Asia), Ethiopia, Kenya, Uganda and Chad (in Africa)
- In Africa, Kenya, Uganda, Ethiopia alone hosted 1.8 million refugees housed in camps; over 780,000 for Ethiopia (UNHCR, 2016). Unless adequate mitigation measures are put in place, refugee camps will have long-term environmental impacts (World Bank, 2010; UNEP, 2015). Studies reported negative social and economic impacts on local communities long after the camps were closed (e.g. Wosen, 2013).

People flee into forests during crisis times (Yida in South Sudan)
Source: http://www.unhcr.org/afr/ethiopia

Akula camp in Gambella (Ethiopia) hosting South Sudan refugees

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