

# Masarang Arenga Palm Sugar



# Comes from the *Arenga pinnata*



- Products: Sugar, palm wine, vinegar, yeast, ethanol, bio-fertilizer, facial scrubs, fiber, wood, starch and many more
- Category C4 tree: uses little water
- Deep roots of 5 – 8 meters deep: no competition with other crops, slow evaporation of water from the forest, prevents inundations and drying out of rivers
- Grows well on slopes: prevents erosion



The Arenga palm grows in Indonesia,  
in the rainforest.





# Farmers tap the juice



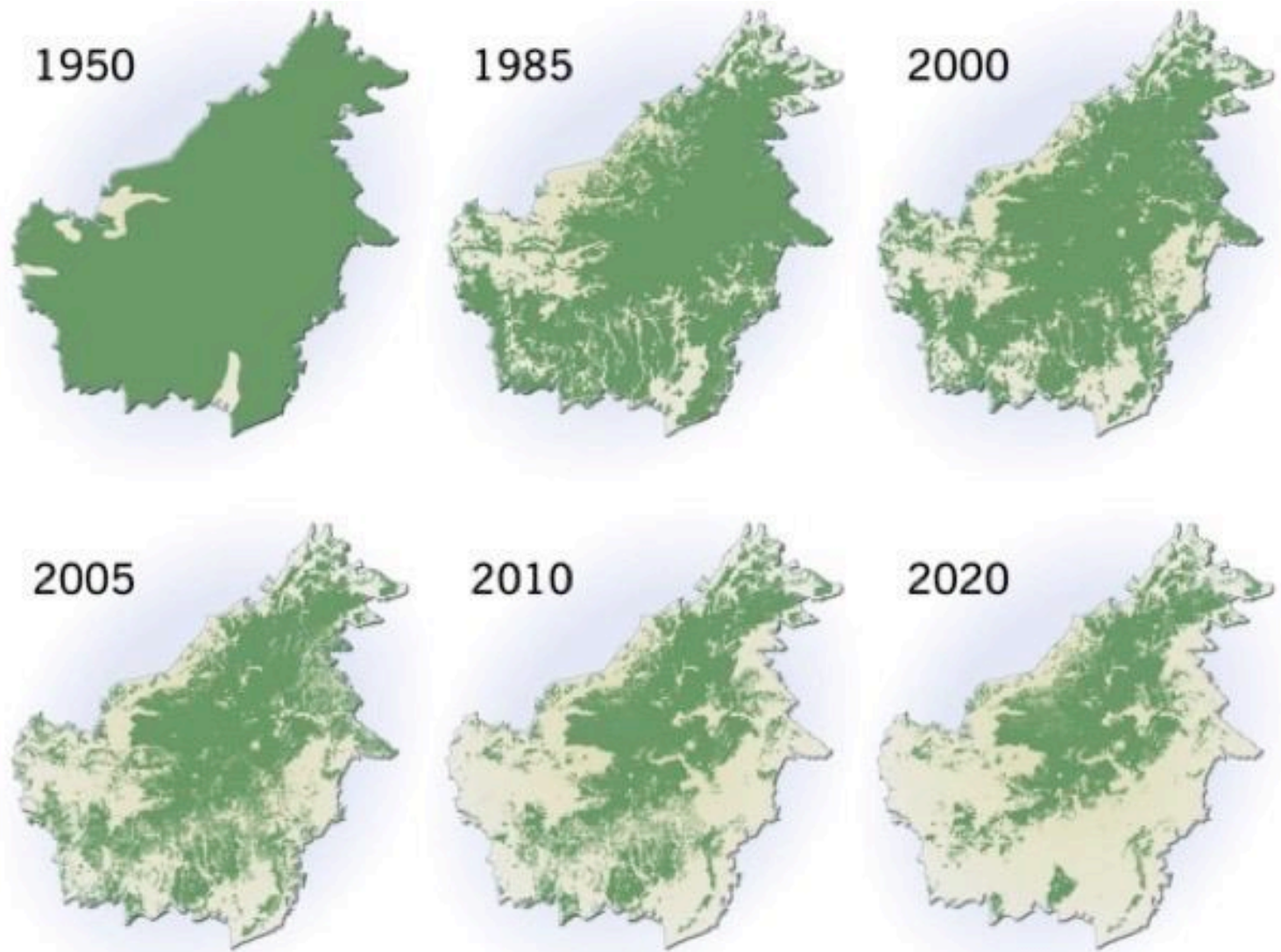


Communities around native forest preserve the forest with income from the tapped juice





Which is very much needed, as the forest is disappearing rapidly: here Kalimantan (Borneo), Indonesia's largest island





Primary forest in Indonesia is burned every year for

1. Wood plantations (for paper pulp)
2. Palm oil plantations
3. Ladangs (traditional Dayak rice fields)





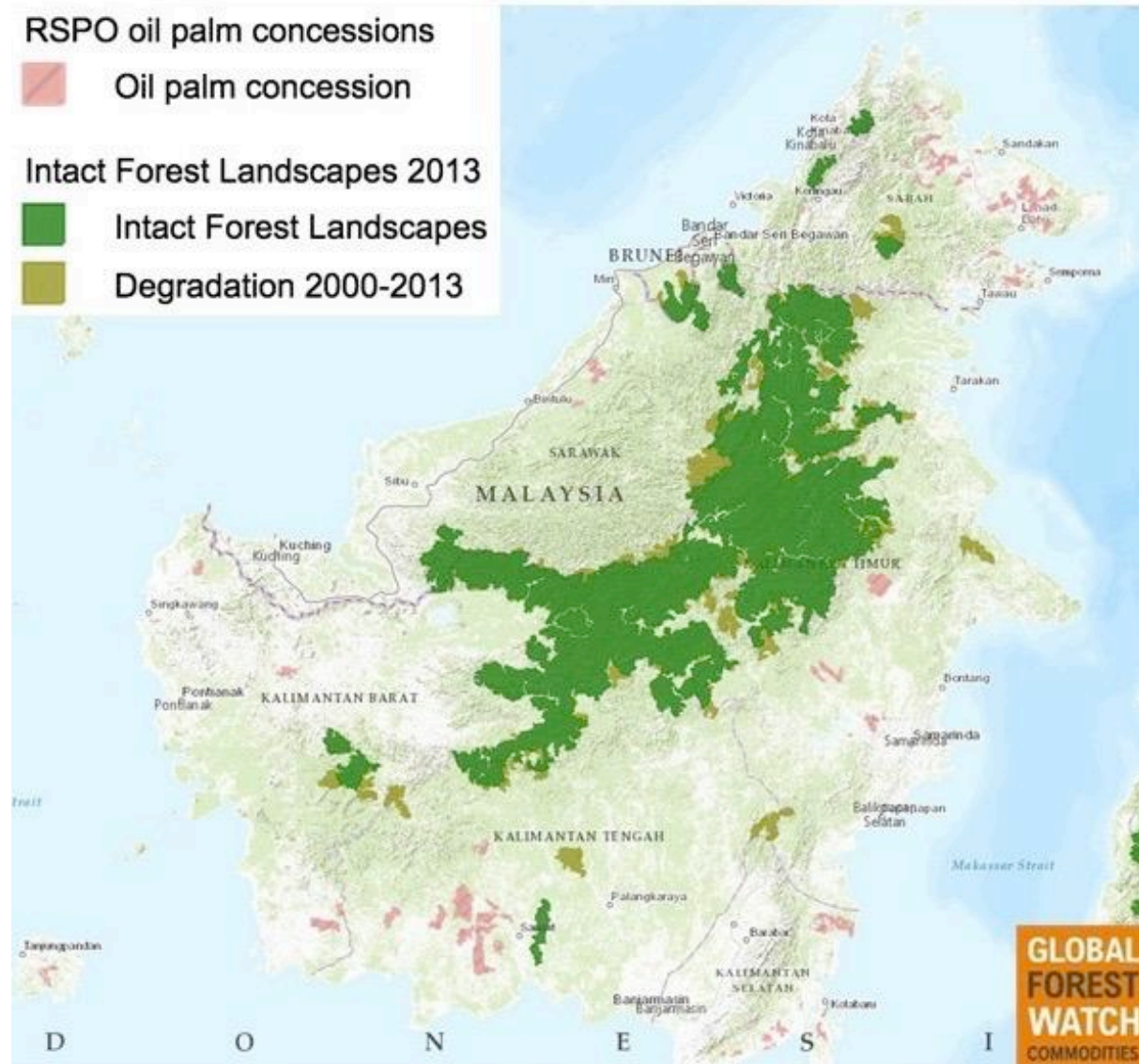
Or cut down, here for palm oil





# Palm oil activity 2000-2013

(RSPO does NOT prevent the deforestation!)



Global Forest Watch map showing RSPO-certified plantations on the island of Borneo.



Willie Smits therefore started the Masarang Foundation. For almost 40 years Willie has fought to save rainforest and its orangutans [TED Talk 1](#), [TED Talk 2](#)





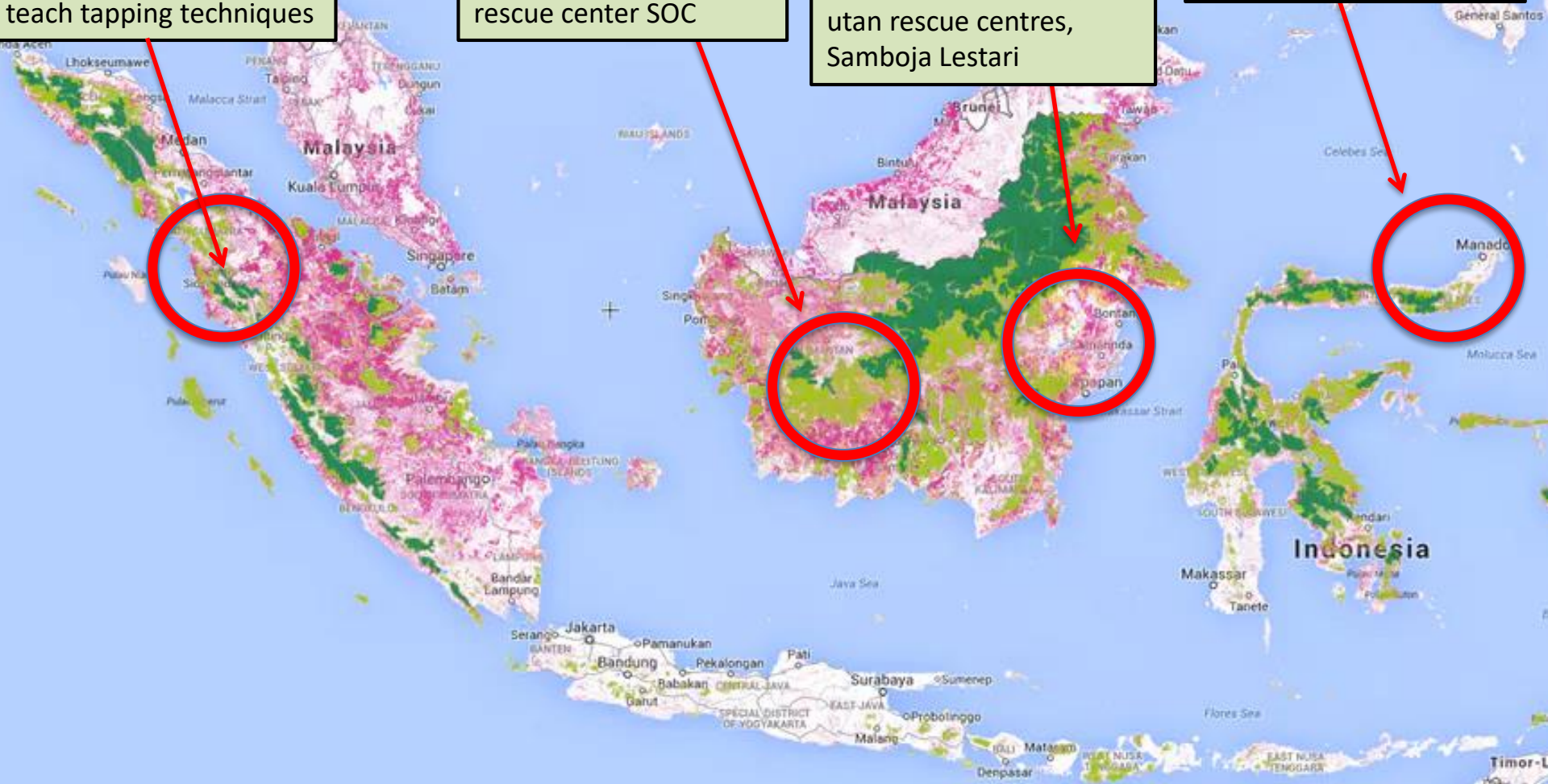
# Masarang Foundation trains communities to tap Arenga juice, reforest and respect nature

Helping Conservation International in sugar palm reforestation, providing plus trees and teach tapping techniques

West Kalimantan: Protection of 25.000 ha forest, reforestation projects, orang-utan rescue center SOC

East Kalimantan: Regeneration of almost 200.000 ha of degraded forest, various orang-utan rescue centres, Samboja Lestari

North Sulawesi: Reforestation of 200.000 ha of forest, orang-utan rescue centers Tasikoki





# 1. PROTECTION OF STILL REMAINING FOREST

PALMOIL  
COMPANYBEDRIJF



VILLAGE



VILLAGE



PALMOIL  
COMPANYBEDRIJF

VILLAGE

Primary  
Forest

VILLAGE



VILLAGE



VILLAGE



Secondary Forest



VILLAGE

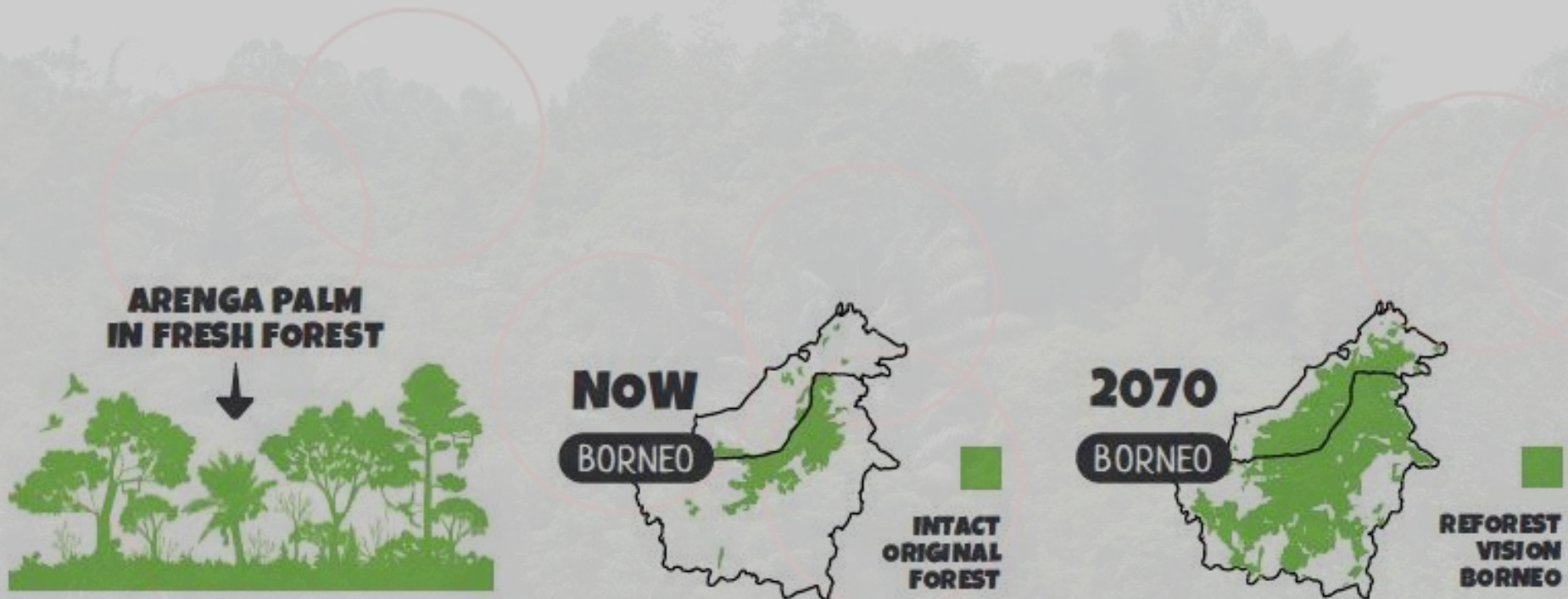


PALMOIL  
COMPANY

PALMOIL  
COMPANY



## 2. Could this become reality?





# Back to the farmers: the juice is collected by Masarang-trained staff





The juice is converted into sugar in a  
CO<sub>2</sub>-neutral, zero waste factory









# Once shipped to destiny, the applications of the Arenga sugar are diverse!

- Sugar bags for consumers
- Nice in coffee or tea (caramel taste)
- Great for chocolate
- Excellent for baking





# USPs

- Good for the environment: protection of forest, reforestation, saving the orangutan, absorbing CO<sub>2</sub>
- Organic (BRC and Fair trade certification in process)
- Tasty (caramel notes)
- Low glycemic index  
(around 50; comparable with whole wheat bread or brown rice)



We demonstrate the G.I. of the Arenga with results from accredited laboratories. (Don't believe claims from companies that cannot prove it!)



**SILLIKER. Inc.**  
**Illinois Laboratory**

3600 Eagle Nest Drive, North Building, Crete, IL 60417  
Tel. 877-777-6375 Fax. 312-729-1320

**CERTIFICATE OF ANALYSIS**

COA No:	CHG-37495664-0
Supersedes:	None
COA Date	10/31/14
Page 1 of 1	

**TO:**

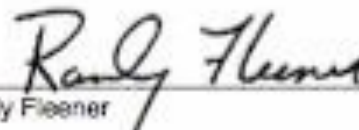
Mr. Jeroen Krift  
Managing Director  
Amigos International  
Agro Business Park 52  
Wageningen, NLS 6708PW

Received From:	Wageningen, NLS
Received Date:	10/13/14

Location of Test: (except where noted)  
Crete, IL

**Analytical Results**

Desc. 1:	001-SIL-GI-test	Laboratory ID:	349000317		
Desc. 2:	Organic Masarang Arenga Palm Sugar	Condition Rec'd:	NORMAL		
		Temp Rec'd (°C):	18.9		
Analyte	Result	Units	Method Reference	Test Date	Loc.
In Vitro Estimate of Glycemic Index	52.46	-	Pat. Pending	10/31/14	

  
Randy Fleener

Laboratory Director



# According to EU-regulation, Arenga is considered “rich in” Potassium, iron, magnesium

Lab	TC	Analyse	Eenheid	Resultaat
Q EUNLHE	HEMD7	Calcium (ICP-MS) Eigen methode Calcium (Ca)	mg/kg	34
Q EUNLHE	HEC2M	Fructose Eigen methode Fructose	% (m/m)	0.96
Q EUNLHE	HEC2L	Glucose Eigen methode Glucose	% (m/m)	0.59
Q EUNLHE	HEMD9	IJzer (ICP-MS) Eigen methode IJzer (Fe)	mg/kg	190
Q EUNLHE	HEME2	Kalium (ICP-MS) Eigen methode Kalium (K)	mg/kg	11000
Q EUNLHE	HEMD8	Koper (ICP-MS) Eigen methode Koper (Cu)	mg/kg	3.8
Q EUNLHE	HEC2N	Lactose Eigen methode Lactose	% (m/m)	<0.1
Q EUNLHE	HEME3	Magnesium (ICP-MS) Eigen methode Magnesium (Mg)	mg/kg	320
Q EUNLHE	HEC2Q	Maltose Eigen methode Maltose	% (m/m)	<0.1
EUNLHE	HEC65	Reducerende suikers als glucose Eigen methode Reducerende suikers als glucose	% (m/m)	2.29
Q EUNLHE	HEC2P	Sacharose Eigen methode Sacharose	% (m/m)	88.9
Q EUNLHE	HEME6	Zink (ICP-MS) Eigen methode Zink (Zn)	mg/kg	1.0
Q EUDAKG	DJA64	Vitamine B12 Biacore (µg/100g) Biacore Vitamine B12	µg/100 g	0.660



Meanwhile, Willie is on Indonesian TV to continue addressing the environmental challenges in Indonesia...





... and young rescued orangutans are driven to a “practice-forest”...

















Local communities surrounding the forest are involved and witness (and enjoy!) the release









