

# Processing Cashew Nut By-Products. Environmental Awareness: discussions resulting from an ACA Study on By-Product Processing

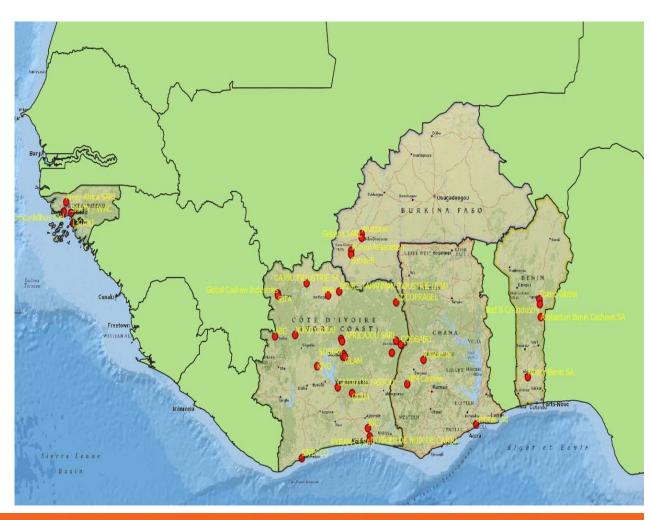


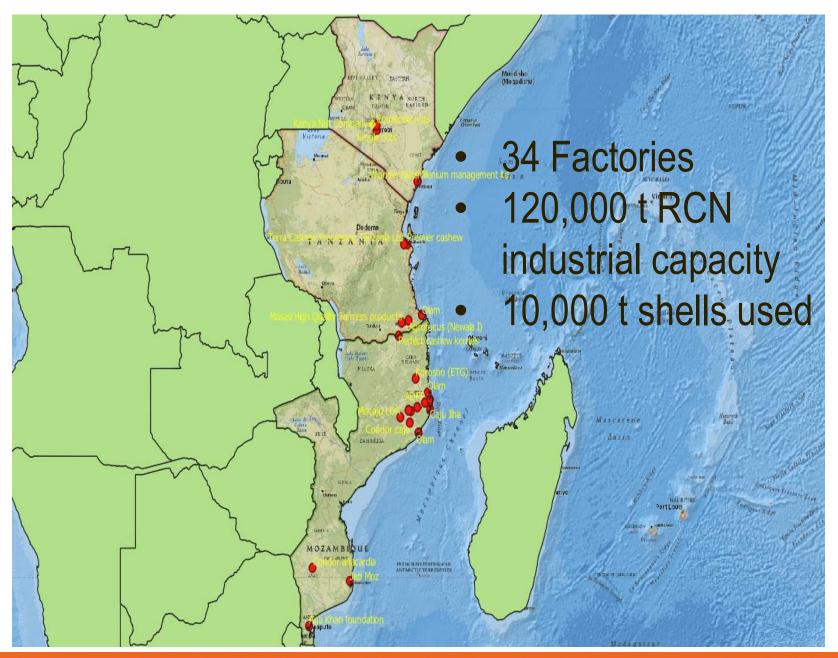
Installations and Consultancy



# **Environmental Management Study on Cashew Nut Waste**

- 46 Factories
- 250,000 t RCN industrial capacity
- 14,000 t of shells used





### Use of the Shell at a Glance

RCN Production	Estimated RCN Production (t)	Processing Capacity (t)	RCN Processed in 2017 (t)	Quantity of Shells Recovered (t)
Benin	110,000	23,500	14,553	9,136
Burkina Faso	75,000	15,500	4,874	1,400
Côte d'Ivoire	650,000	175,400	52,280	462
Ghana	70,000	23,000	536	375
Guinea Bissau	100,000	12,950	5,950	2,331
Kenya	6,000	30,000	3,440	458
Mozambique	130,000	76,100	56,100	8,687
Tanzania	250,000	13,500	10,900	620
Total	1,391,000	369,950	148,633	23,468
% of RCN Production	100%	27%	11%	2%

#### 3 out of 4 shells are lost!

Either because they are exported or because they are not recycled

#### **The Current Situation**

- Currently, low added value from the raw nut
- Large volumes of waste: 75-80% of the RCN weight
- Shell consumption for thermal needs: 5-25%.
- 1.4 Million t RCN Produced → ~10% Processed → 100,000 Mt of Shells
- But only 25,000 Mt of shells are recovered, by 14 Factories

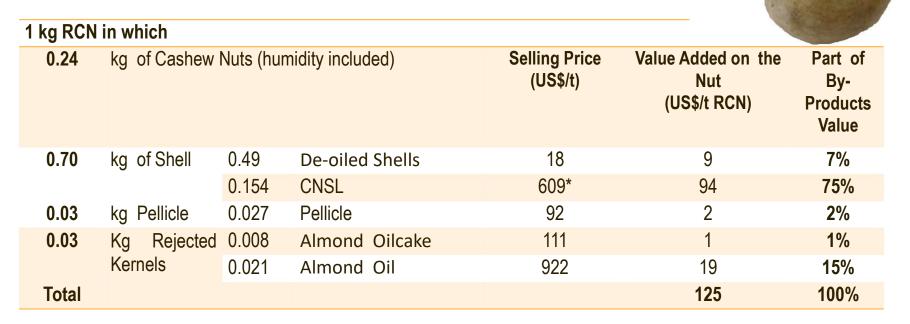
In West Africa: out of 78,100 tonnes of shells produced in factories, only 13,704 tonnes were recovered (17.5%)

#### But, in addition to that....

- Virtually no recovering of the pellicle, despite its potential
- Little added value of rejected kernels
- Low compliance with Environmental Gas Emission Standards....

#### **A Cashew Nut**

It's not just the kernel that's valuable!



## There is approximately \$125/ tonne of RCN income shortfall to be gained through the recycling of by-products

<sup>\*</sup> Local sale, with reference to 50% of the local fuel price; in the current situation, the CNSL export price at US\$350-400/t CNSL CIF does not represent an interesting added value.

#### **How to Capture this Added Value?**

It's not just the kernel that's valuable!



- Small Scale: Pyrolysis Ovens, Carbonizers, (Compost), Pellicles for Animal Feed/Poultry Bed...
- Medium and Large Scale: Extraction of CNSL, sale of fuel cake....
- Very Large Scale: Electricity Production (>20,000 t RCN/year)
- New Processors: Plan from the beginning "Is this a separate activity or do you integrate it into your factory?"
- Staff training
- Search for Partnerships
  - Factory- Factory (Cashew Nut- Cashew Nut)
  - Factory- Factory (Cashew Nut Drying of Fruits, Oil Mill...)
  - Factory- Entrepreneur (Cashew Nut-CNSL, Cashew Nut Livestock breeder...)
- Institutional Support: if it is not known, it is not promoted, it is not financed!



And glad to hear your questions



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