

**DEALING WITH CARBON STANDARDS-  
HOW HAS IT BEEN FOR SUNRIPE LIMITED ?**

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**CARBON AND WATER MANAGEMENT IN HORTICULTURAL EXPORTS  
FROM EAST AFRICA**

**8TH AND 9TH DECEMBER 2011  
NAIVASHA**

# OVERVIEW

- The genesis
- The methodology dilemma
- The challenges
- The Foot prints controversies
- Our views on the standards
- Opportunities for fresh vegetables producers, flowers producers, manufacturers and the service industry.



# THE DRIVERS

- European retailers /customers
- Food Airfreight debate
- Governments/lobby groups/NEMA/LEAF standard
- Operation efficiency
- Global climate change
- Food insecurity



The Feeding of the Nine Billion  
Global Food Security  
for the 21st Century



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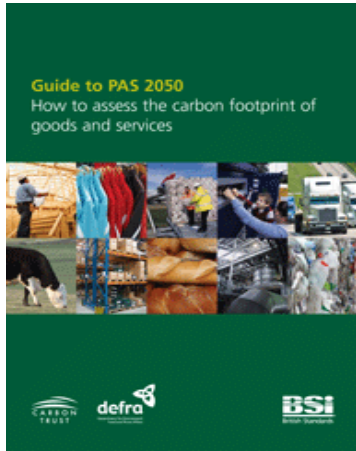


# THE JOURNEY

- Project (Carbon foot print) launch-January 2010
- Organic and conventional products
- Emissions comparison
- Emissions & cost reduction strategies
- Monitor emissions -continuous improvement
- Share experience



# METHODOLOGY DILEMMA; WHICH STANDARD?



- 1 public standard-PAS 2050:2008/11
- Pipeline-ISO:14067-040/44
- GHG protocol -2004/2011
- DHCP (Netherlands), JTS, CarbonZero
- Many private schemes
- No standard for Africa



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# THE LIFE CYCLE ASSESSMENT PROCESS

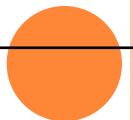
Phases		Issues/challenges	Impact on process
1. Flow charts/process maps	'Cradle to gate' or 'Cradle to grave'	<ul style="list-style-type: none"> <li>-Raw materials extraction</li> <li>-Imports of inputs -fertilizer components, packaging materials, pesticides</li> <li>-Inputs Transportation emissions</li> <li>-Consumption and disposal stages</li> </ul>	Increase
2. Boundaries	Prioritize the significant stages	-Product category rules as in PAS not available	Uncertainty
3. Data collection	Inputs/outputs quantification	<ul style="list-style-type: none"> <li>-12 months data collection</li> <li>-Upstream inputs data inaccessible e.g ferts origin, method of extraction,</li> <li>-Pesticides</li> <li>-Aircraft details</li> <li>-Imports mileage</li> <li>-staff training</li> </ul>	Uncertainty



Phases		Issues/challenges	Impact on the process
4. Data analysis	Activity data x Emission factors	<ul style="list-style-type: none"> <li>-No African based</li> <li>-UK &amp; Europe based Defra 09 &amp; 10, Ecoinvent database, etc</li> <li>-Soft wares-Open LCA, Gabi, Simapro</li> <li>-Software Expertise</li> <li>-Software and database costs- €11400</li> <li>-Training- €1500</li> <li>-Staff training</li> </ul>	<p>Increased e.g electricity</p> <p>Uncertainty</p> <p>Expensive</p> <p>Simplified</p>
5. The product carbon foot print	Sum of all emissions	<ul style="list-style-type: none"> <li>-Airfreight bellyhold/ cargo plane</li> <li>-Radiative forcing</li> <li>-Land use change</li> <li>-Tree planting for offset</li> <li>-Carbon credits</li> <li>-Exclude retail, consumer and disposal stages</li> </ul>	<p>Increase</p> <p>Uncertainty</p> <p>Increase</p> 

# THE MILESTONES ACHIEVED

<b>Product life Cycle stage</b>	<b>Cost savings achieved/product</b>	<b>% cost reduction</b>	<b>% emissions reduction</b>
1. Irrigation water	60940.00	50	50% reduc. Water foot print
2. Electricity	451896.00	50	50
3. Packaging	1,517,800.00	50	10
4. Freight	1,095,200.00	60	2
5. The water footprint of the products also identified alongside			
6. Staff capacity building on LCA data collection and analysis software			
7. Website developed to share experience			





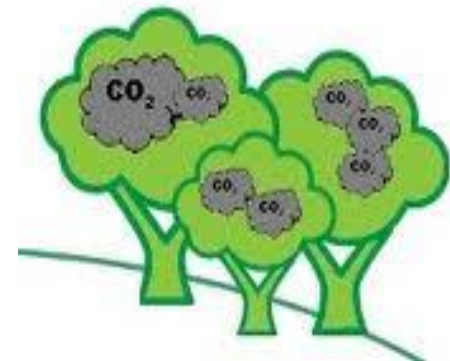
# OUR VIEWS ON CARBON STANDARDS

- Carbon standards- good environmental management tools
- Emissions hot spots and reduction strategies
- Decision making tool
- Benchmarks for operations efficiency
- Business profitability-cost saving
- Tools for environmental sustainability



# IMPORTANT CONSIDERATIONS

- Involvement in carbon standard setting-ISO 14067
- Significance of African specific Emission factors
- Involvement in software development
- Technical/capacity building needs
- Tree planting as an offset strategy
- Carbon credits



# PRODUCERS, MANUFACTURERS AND INDUSTRY OPPORTUNITIES

- Business profitability
- Operations efficiency
- Save in costs
- Competitive advantage
- Technical capacity/workers trainings
- Reliable climate in future



# THANK YOU

