


**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.
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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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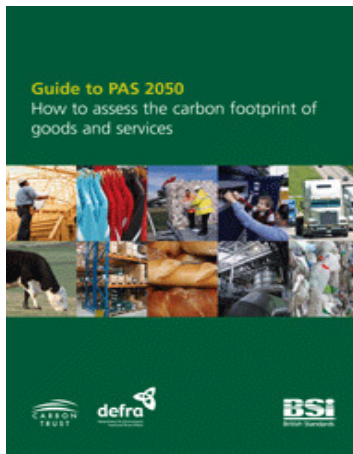


THE JOURNEY

- 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

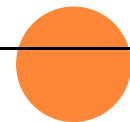
Phases		Issues/challenges	Impact on process
1. Flow charts/process maps	'Cradle to gate' or 'Cradle to grave'	<ul style="list-style-type: none"> -Raw materials extraction -Imports of inputs -fertilizer components, packaging materials, pesticides -Inputs Transportation emissions -Consumption and disposal stages 	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"> -12 months data collection -Upstream inputs data inaccessible e.g ferts origin, method of extraction, -Pesticides -Aircraft details -Imports mileage -staff training 	Uncertainty



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

THE MILESTONES ACHIEVED

Product life Cycle stage	Cost savings achieved/product	% cost reduction	% emissions reduction
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

