

# Small-scale producers and standards in agrifood supply chains

## Key findings and policy recommendations

IIED and NRI



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## Introduction

### ***Project background***

The International Institute for Environment and Development (IIED) and the Natural Resources Institute (NRI) have been working with the Department for International Development (DFID) for the past three years to explore opportunities for more favourable outcomes for small producers in developing countries who participate in international horticultural supply chains, given the rise of private standards (project AG4272).

This paper summarises the major findings of the project and draws policy recommendations for retailers, exporters, donors, standards setters, service providers, and researchers. The summary links to source papers in two series: the two-page *Fresh Perspectives* and the full-length *Fresh Insights*, available at [www.agrifoodstandards.net](http://www.agrifoodstandards.net).

### ***International trade in fresh fruit and vegetables from sub-Saharan Africa***

International trade of fresh fruits and vegetables (FFV) to fulfil the demand for exotic and out-of-season products offers a lucrative marketing opportunity for growers in sub-Saharan Africa (SSA) and presents upgraded opportunities for rural economic development. Export horticulture also offers benefits at a macro level, including foreign exchange earnings, balance of trade, and cross-subsidisation of other forms of less valuable but important trades. It can also stimulate improvements in rural transport infrastructure and services provision.

The market opportunities offered by the European Union (EU) are some of the most financially attractive but also some of the most exacting. Accessing EU markets requires compliance with a strict regulatory framework of measures designed to ensure human and plant health. These measures go beyond the international requirements set under the sanitary, phyto-sanitary and technical barriers to trade agreements administered by the World Trade Organisation (WTO).

Although European legislation represents the minimum for market access, many of the larger retailers and some wholesalers and food service companies also require suppliers to demonstrate compliance with independently verifiable private standards, such as the European retailers' protocol for Good Agricultural Practice (GLOBALGAP, formerly known as EUREPGAP) for farms, and the British Retail Consortium (BRC) 'Global Standard – Food' for processors and the rest of the food supply chain. These so-called private voluntary standards (PVS) have extended the level of control by European retailers back along their supply chains to African farmers. The standards verify that producers and suppliers have the necessary management and control systems in place to ensure due diligence, and extra criteria can also be stipulated.

Apart from helping to minimise risk, PVS provide a framework for food trade into high-value markets. Often they also streamline and improve many aspects of production and supply, helping to maintain quality and increase business efficiency – through streamlining supply chains, reducing information barriers and guaranteeing supply. Against this there are costs to be borne, and these are usually paid by the supply chain participants rather than the retail organisations.

Export horticulture from Africa has grown significantly during the past 20 years. To date it has been dominated by small-scale growers (SSG), with exporters providing an important link between SSG and the valuable UK retail and wholesale markets. Kenyan farmers now plant to a schedule that means UK supermarket shelves are stocked with green beans every week of the year. Yet, owing to their small average farm size (less than two hectares), SSG increasingly cannot afford the costs and fees associated with PVS compliance. The high per-farm costs reflect the fact that the standards were originally developed for much larger farms in Europe. The risks of smallholder exclusion are well recognised, but there has been little empirical evidence of the degree of rates of exclusion or the costs and benefits to SSG of compliance, and little investigation of the opportunities to adapt PVS to the realities of smallholder production without compromising the standards. Neither was there much information on the importance of standards such as GLOBALGAP within the overall flow of horticulture trade from Africa to the UK. Filling these gaps has been the primary rationale for the current study by IIED and NRI.

During the course of the work, the research team encountered other major challenges to horticulture exports from sub-Saharan Africa, especially the growing critique of airfreight as an emblem of unsustainable consumption. To put this horticulture trade into a wider context and help to allay some

concerns that threatened to hit trade, data on the wider sustainable development context of horticultural trade was collected and publicised, with supplementary funding from DFID.

## 1. Trends in private agrifood standards

### Project outputs

Cooper, Jerry and Andrew Graffham (2007), 'EUREPGAP revisions 2007–2008: Implications of Version 3 for small-scale exporters of fresh fruit and vegetables in East Africa'. *Fresh Insights* no.14, DFID/IIED/NRI

Cooper, Jerry and Andrew Graffham (2007), 'GLOBALGAP Version 3: threat or opportunity for small-scale African growers?'. *Fresh Perspectives* no.10, DFID/IIED/NRI

Graffham, Andrew (2006), 'EU requirements for imports of fresh fruits and vegetables: a supplier's guide'. *Fresh Insights* no.1, DFID/IIED/NRI

MacGregor, James (2008), 'Understanding stakeholder drivers for introducing and complying with Private Voluntary Standards – a fresh produce example'. *Fresh Perspectives* no.8, DFID/IIED/NRI

- 1.1 Small-scale growers have been an important and cost-effective part of the export horticulture industry from sub-Saharan Africa. On the supply side, prior to 2003, the majority of the export companies relied on casual purchases of vegetables from large numbers of SSG via a system of brokers. Since then, the compliance framework for exports to the EU has been getting tighter, concurrent with growing indications of SSG difficulties in obtaining and maintaining compliance. GLOBALGAP was rolled out in Kenya from 2003 and in other SSA countries subsequently.
- 1.2 For a wide range of agricultural products, GLOBALGAP has become the most successful family of PVS covering primary production, with over 80,000 certified producers in 80 countries. In January 2005, GLOBALGAP's European supermarket members made certification obligatory for suppliers including all SSG suppliers of FFV from developing countries.
- 1.3 Overall the content of the fruit and vegetable modules is well designed and fit for purpose when applied to large-scale commercial growers. Compliance is divided into control points: 'Major Musts' where 100-per-cent compliance is required, and 'Minor Musts' where 95 –per cent compliance is required. To avoid the need for small farms to comply separately there is a collective certification scheme (GLOBALGAP 'Option 2') that allows a group of farmers to comply as a unit. GLOBALGAP is updated every three years. In addition, there are various regional GAPs where the GLOBALGAP scheme has been adapted more specifically to the country in question. For example, in Kenya, KenyaGAP has 'Option 3' and 'Option 4', which are locally tailored versions of GLOBALGAP's 'Option 1' and 'Option 2'.
- 1.4 PVS are not fixed but evolve to encompass additional criteria. In September 2005, GLOBALGAP Version 2 introduced a new feature for 'Option 2' of the protocol in the form of a quality management system (QMS) checklist.
- 1.5 Version 3 of GLOBALGAP, introduced in 2007, sets the bar higher and presents greater challenges to growers, with additional labelling, testing of water, facilities and certificated training for workers, more stringent standards for worker welfare, record keeping, and product recall systems. Furthermore, the single list of compliance criteria that comprised earlier versions of GLOBALGAP has now been split into three parts: growers must now comply with the All-Farm Base, the Crops Base, and the Fruit and Vegetables module. Compliance under Version 3 becomes significantly more complicated and demanding. Fifty-six control points are either new or have increased compliance of at least 95 per cent. There are 11 additional 'Major Musts' and 21 new 'Minor Musts', and the farmer can fail to comply with only six control points out of 199 in these two categories. Some of these are particularly difficult, both technically and financially, for SSG to comply with.
- 1.6 It is recognised that GLOBALGAP or PVS are not the sole reasons for structural change and do not fully explain the changing status and profile of SSG or developing countries in FFV export supply chains. Other industry-wide factors, such as innovation, fuel prices, wage rates, and productivity, have an attributable influence.

## 2. FFV exports from Africa to the UK – who grows, who trades, who sells?

### Project outputs

Accord Associates LLP (2007), 'Opportunities for sub-Saharan African small farmers to supply the UK fresh fruit and vegetable markets'. *Fresh Insights* no.12, DFID/IIED/NRI

Accord Associates LLP (2007), 'Markets for non-certified produce in the UK: limited options for sub-Saharan African small-scale exporters'. *Fresh Perspectives* no.13, DFID/IIED/NRI

Graffham, Andrew, Esther Karehu and James MacGregor (2007), 'Impact of EUREPGAP on small-scale fruit and vegetable growers in Kenya'. *Fresh Insights* no.6, DFID/IIED/NRI

Graffham, Andrew, Esther Karehu and James MacGregor (2007), 'Impact of EUREPGAP on small-scale vegetable growers in Kenya'. *Fresh Perspectives* no.2, DFID/IIED/NRI

Graffham, Andrew and James MacGregor (2007), 'Impact of EUREPGAP on small-scale vegetable growers in Zambia'. *Fresh Insights* no.5, DFID/IIED/NRI

Graffham, Andrew and James MacGregor (2007), 'Impact of EUREPGAP on small-scale vegetable growers in Zambia'. *Fresh Perspectives* no.3, DFID/IIED/NRI

Kleih, Ulrich, Fred Ssango, Florence Kyazze, Andrew Graffham and James MacGregor (2007), 'Impact of EUREPGAP on small-scale fruit and vegetable growers in Uganda'. *Fresh Insights* no.10, DFID/IIED/NRI

Kleih, Ulrich, Fred Ssango, Florence Kyazze, Andrew Graffham and James MacGregor (2007), 'Impact of EUREPGAP on small-scale vegetable growers in Uganda'. *Fresh Perspectives* no.4, DFID/IIED/NRI

Legge, Alan, John Orchard, Andy Graffham, Peter Greenhalgh, Ulrich Kleih, and James MacGregor (2008), 'Mapping different supply chains of fresh produce exports from Africa to the UK'. *Fresh Perspectives* no.12, DFID/IIED/NRI

Legge, Alan, John Orchard, Andy Graffham, Peter Greenhalgh, Ulrich Kleih, and James MacGregor (2007), 'Mapping different supply chains of fresh produce exports from Africa to the UK'. *Fresh Insights* no.7, DFID/IIED/NRI

- 2.1 In the UK, 60 per cent of FFV is sold through a retail sector that is dominated by the multiple retailers (82 per cent of retail volume). The remaining 40 per cent goes through wholesale and food services sectors; over 60 per cent of produce now entering the non-retail market is destined for the catering sector.
- 2.2 UK consumers spend at least £1 million per day on FFV from SSA, with at least £400 million spent at retail on export horticulture from SSA during 2005. FFV imports grew by an estimated 6 per cent per annum from 1996 to 2004. Supermarkets are the key driver for all airfreighted, high-value fresh produce that is imported to the UK from SSA. Although a significant minority of this produce (around 16 per cent) is sold in the UK wholesale and food service markets, this is mostly a spill-over effect from supermarket procurement.
- 2.3 In 2005 SSA as a whole supplied over 650,000 tonnes of all categories of FFV to the UK. If South Africa is excluded from the data, then in that year SSA countries exported 73,788 tonnes of vegetables to the UK, worth £105 million, and 209,555 tonnes of fruit worth £89 million.
- 2.4 Among five significant fruit and vegetable exporting countries in SSA (excluding South Africa), Kenya dominates the vegetables trade and Ivory Coast the fruit trade. Forty per cent of all airfreighted FFV imports to the UK are from SSA. Kenya airfreights over 90 per cent of its exported green beans to the UK. The majority of FFV exported by air is carried in the hold of passenger planes not in dedicated freighter planes.
- 2.5 SSG have been an important and cost-effective part of the FFV export horticulture industry from SSA. The number of farmers, workers, their dependents and ancillary workers reliant on export



horticulture for a living in SSA (excluding South Africa) is estimated at 715,390. Including South African produce would take this figure to at least 1–1.5 million. The figure is significantly higher when the export of cut flowers is included.

- 2.6** In the 1990s, researchers estimated that three-quarters of horticultural export production from Kenya came from SSG. Indeed, SSG may be preferred because they produce superior-quality produce in the case of some vegetables such as green beans, peas, and baby corn, which require more management time per unit of land or are not well suited to large-scale production. Yet, quality is not the only consideration and often logistical issues of sourcing from many SSG increase costs and lower the net benefits to buyers.
- 2.7** Uganda's horticulture exports to the UK, worth around £3 million in 2005, are directed mainly to wholesale, with less than 10 per cent sold in supermarkets. Export growth from Uganda to overseas markets is mainly from SSG. This trade grew steadily from the 1990s until 2005 but then fell abruptly by 16 per cent in 2006. Our research indicates that the number of smallholders supplying the export sector fell by 40 per cent in one year. The reasons are complex, but exporters identify two chief factors: rising fuel costs and the emergence of increasingly stringent food standards in export markets – in particular GLOBALGAP. Experience from Uganda indicates that the costs of GLOBALGAP compliance, along with opportunities in other markets, led the only two GLOBALGAP-certified exporters to let their certification lapse. One exporter stated that it had moved into cut flower export as the margin was far more lucrative. The dropping of GLOBALGAP by these exporters has been seen to deter other exporters and farmers from seeking certification.
- 2.8** The ability of SSG to access the high-value markets dominated by supermarkets has declined dramatically since the implementation of GLOBALGAP. Economies of scale matter, with compliance being easier for larger firms and relatively more expensive for smaller participants in the market. The economics of the system are currently pushing SSG away from export markets that demand GLOBALGAP compliance. A survey of top exporters in Kenya found that in 2003, when GLOBALGAP implementation started, the exporters sourced produce from 9,342 SSG and that this would have provided livelihoods for around 70,000 dependent family members and employees. By 2006, 60 per cent of these growers had been dropped (or had excluded themselves) from the GLOBALGAP compliance schemes, with the chief reason stated as being due to problems with implementation of the standard. This decline appears to reflect the increased costs and managerial burden associated with meeting private-sector standards and a fall in available external funds to maintain SSG participation.
- 2.9** Interviews with importers revealed policies of not working with SSG owing to difficulties of securing due diligence, as SSG were perceived to have higher incentives to free-ride, since the wholesale market or domestic/local markets could be used to dispose of unsold produce, and because of the difficulties of getting smallholders to group together to supply.

### 3. Benefits and costs of compliance with GLOBALGAP – smallholder and exporter perspectives

#### Project outputs

Graffham, Andrew, Esther Karehu and James MacGregor (2007), 'Impact of EUREPGAP on small-scale vegetable growers in Kenya'. *Fresh Insights* no.6, DFID/IIED/NRI

Graffham, Andrew, Esther Karehu and James MacGregor (2007), 'Impact of EUREPGAP on small-scale vegetable growers in Kenya'. *Fresh Perspectives* no.2, DFID/IIED/NRI

Graffham, Andrew and James MacGregor (2007), 'Impact of EUREPGAP on small-scale vegetable growers in Zambia'. *Fresh Insights* no.5, DFID/IIED/NRI

Graffham, Andrew and James MacGregor (2007), 'Impact of EurepGAP on small-scale vegetable growers in Zambia'. *Fresh Perspectives* no.3, DFID/IIED/NRI

IIED and NRI (2007), 'Costs and benefits of EUREPGAP compliance for African smallholders: a synthesis of surveys in three countries'. *Fresh Insights* no.13, DFID/IIED/NRI

IIED and NRI (2008), 'Costs and benefits of GLOBALGAP compliance for smallholders: synthesised findings'. *Fresh Perspectives* no.7, DFID/IIED/NRI

Kleih, Ulrich, Fred Ssango, Florence Kyazze, Andrew Graffham and James MacGregor (2007), 'Impact of EUREPGAP on small-scale vegetable growers in Uganda'. *Fresh Insights* no.10, DFID/IIED/NRI

Kleih, Ulrich, Fred Ssango, Florence Kyazze, Andrew Graffham and James MacGregor (2007), 'Impact of EUREPGAP on small-scale vegetable growers in Uganda'. *Fresh Perspectives* no.4, DFID/IIED/NRI

- 3.1 A central objective of this project was an understanding of the viability of SSG in export horticulture chains that include GLOBALGAP compliance criteria. There were considerable concerns that PVS would negatively affect the competitiveness of producers in developing countries. Following these concerns, a methodology employing a survey tool that looked at understanding the costs and benefits of GLOBALGAP compliance was devised and piloted in Zambia. Surveys of the outline costs and benefits of producing export crops were also conducted in Kenya and Uganda with the aim of answering this cost-benefit question. They indicate trends and illustrate incentives for SSG to continue being part of GLOBALGAP.
- 3.2 All SSG interviewed for this project that were GLOBALGAP-certified reported general satisfaction with this standard reporting the greatest reported benefit being in opportunities for preferential market access. This includes access to produce markets, credit, trade credit, and quality inputs (high-germination seeds, high-nitrate fertiliser, etc.). In addition, SSG perceived considerable 'non-financial' benefits, and it seems that to some extent the use of income or profit margin as an indicator of success or failure in the market is misplaced. Perceived non-financial advantages of GLOBALGAP include quality produce, improved field hygiene, better knowledge of pesticide use, and wider farm management benefits.
- 3.3 GLOBALGAP compliance requires higher threshold levels of capitalisation than many SSG can afford. In Kenya, the average initial per-farm costs of compliance with GLOBALGAP in 2006 were measured at £1,145, of which 36 per cent was paid by the SSG. Annual recurrent costs were £175, with farmers paying on average 14 per cent of recurrent costs associated with GLOBALGAP and exporters (and/or donors) paying the rest. The average maintenance costs of compliance exceed half of the margin for SSG.
- 3.4 Implementing GLOBALGAP properly is also a major investment for exporters. A survey of companies who control over 50 per cent of the Kenyan export horticulture market revealed that over £2.2 million has been invested in getting 1,948 farms to a position where they can be audited for GLOBALGAP compliance.
- 3.5 A key role for the exporter is as a provider of both managerial and technical support for the growers. The largest of the export companies had well-staffed and well-resourced outgrower

management teams, comprehensive annual training programmes, internal auditors and programmes for sampling and laboratory analysis. There is an economic threshold for the size of a smallholder scheme that exporters are willing to work with, related to the perceived high cost of technical support per farm.

- 3.6** Successful exporters provide positive incentives to maximise the number of SSG supplying their export trade. Furthermore, the total investment by the exporter is a predictor of the health of the GLOBALGAP-certified SSG supplying it. Large export companies fulfil the role of primary marketing organisation (PMO) for the growers and are capable not only of providing the necessary managerial, technical and logistical support but also of representing the growers effectively during the certification audit.
- 3.7** Donor support has also been a significant factor in encouraging attempts to comply with GLOBALGAP. This is especially true for smaller export companies, who have relied heavily on donor support – amounting to 40–100 per cent of establishment costs as compared with 15–28 per cent for the larger companies. Smaller companies are more likely to push more of the costs of compliance on to the farmer and to operate a cheaper system with many inefficient or technically unsustainable features simply to reduce costs. Some of these companies were frank in saying that they cannot see how the system can be maintained once donor support is withdrawn.
- 3.8** All of the failed and failing schemes are associated with smaller companies who lack the necessary resources to operate an efficient and sustainable GLOBALGAP-compliant scheme. The smaller exporters have very limited outgrower management teams and in some cases the team is virtually non-existent. Interviews with farmers associated with these schemes showed how such farmers, compared with those supplying large companies, are more aware of the very high costs of compliance and cannot see how a compliant system can be maintained without a dramatic increase in income.

## 4. Opportunities for cost reduction

### Project outputs

Graffham, Andrew and Jerry Cooper (2008), 'Making GLOBALGAP smallholder friendly'. *Fresh Insights* no.16, DFID/IIED/NRI

Graffham, Andrew and Jerry Cooper (2008), 'Making GLOBALGAP smallholder friendly – can GlobalGAP be made simpler and less costly without compromising integrity?'. *Fresh Perspectives* no.11, DFID/IIED/NRI

- 4.1 An assessment of GLOBALGAP control points and compliance criteria, in addition to feedback from stakeholders in Kenya, has revealed opportunities for very significant costs reductions for SSG compliance.
- 4.2 The overall costs of compliance could be reduced if the level of control was based on a clear understanding of the risks associated with different crop types and production practices. Most small-scale production in SSA would fall into low-risk categories and thus merit a reduced level of control with consequent savings on compliance costs.
- 4.3 Opportunities also exist for cost reduction in the areas of first aid, pesticide-residue testing, plant-protection product stores, and field toilets, as well as by reducing the frequency of inspection and/or reducing the number of farm sites visited under 'Option 2' for growers with low-risk operations, and by taking vertical traceability to the level of the producer group rather than expecting farm- or plot-level traceability where individual growers produce very small volumes.
- 4.4 GLOBALGAP has an interest in the widespread acceptance of its standard, and efforts to modify it to local conditions, such as by establishing equivalent local standards (e.g. KenyaGAP) have helped reduce the costs of certification.

## 5. What happens to 'excluded' producers?

### Project outputs

Graffham, Andrew, Jerry Cooper, Henry Wainwright and James MacGregor (2007), 'Small-scale farmers who withdraw from GLOBALGAP: Results of a survey in Kenya'. *Fresh Insights* no.15, DFID/IIED/NRI

- 5.1 A survey of 102 SSG, all of whom had participated in the GLOBALGAP compliance process but who had dropped out of GLOBALGAP certification, was conducted.
- 5.2 Eighty-three per cent were still in export business, but with severed linkages to their buyers. Farmers outside of GLOBALGAP received a much lower level of advice and support from the buyer, were paid a lower price per kilo, grew and sold smaller volumes, and derived much less of their household income from sales of export crops. However, revenue and income (per kilo) was still higher for export crops than for crops grown for national markets.
- 5.3 The main reasons given for dropping out of GLOBALGAP compliance were high investment and running costs and lack of or inadequate price premiums for certified crops. The most common cause of individual grower withdrawals from GLOBALGAP was an inability to deal with the complexities of the standard and the high costs associated with compliance. Even growers linked to large export companies have lost out, as the high costs associated with testing for pesticide residues on every farm site and farm, or plot-level traceability systems for very small production volumes, can make continued procurement from smallholders unattractive.
- 5.4 Exposure to private standards in itself has benefits for SSG. There is emerging evidence that excluded producers who have received some training can find this expertise useful in alternative production and marketing environments, such as for local or regional trade.

## 6. International opportunities for non-certified produce?

### Project outputs

Accord Associates LLP (2007), 'Opportunities for sub-Saharan African small farmers to supply the UK fresh fruit and vegetable markets'. *Fresh Insights* no.12, DFID/IIED/NRI

Accord Associates LLP (2007), 'Markets for non-certified produce in the UK: limited options for sub-Saharan African small-scale exporters'. *Fresh Perspectives* no.13, DFID/IIED/NRI

- 6.1 The project sought to quantify the scale of the UK market for non-certified (i.e. non-GLOBALGAP) produce and to identify the main drivers of the FFV market. This will help to determine whether SSA producers could increase their sales of non-certified produce to less stringent non-supermarket chains – especially to wholesale, food service and ethnic markets – which could provide a significant refuge for smallholder production in the long term.
- 6.2 Wholesale markets, and food service and independent retailers can provide greater sales opportunities for smallholders because their standards for traceability and food safety are closer to the legal maxima, without the more stringent private-sector standards required by multiple supermarkets.
- 6.3 The UK market for non-private-sector-certified fresh fruit and vegetables is estimated to be in the region of £1.71 billion, comprising £1.34 billion into retail and £0.37 billion used in the food service industry. The cost and freight value is estimated to be in excess of £750 million. However, research indicated that only about £30 million per year (i.e. about 4 per cent) was supplied by SSA SSG, mainly directed to independent stores. It is predicted that the overall market for non-certified produce will decline and that the opportunities for new SSA suppliers are very limited.
- 6.4 There is increasing demand by the food service industry for suppliers to have the same standards as those demanded by the supermarkets. Also, because of concerns over due diligence, many catering supply companies are auditing suppliers to ensure that they are implementing standards higher than the legal maximum for imported produce. Consolidation in the food service industry will result in fewer, and bigger, catering supply companies. Larger catering supply companies are more likely to demand higher standards of certification.

## 7. The sustainable development context

### Project outputs

- Garside, Ben, James MacGregor and Bill Vorley (2007), 'Miles better? How "fair miles" stack up in the sustainable market'. *Fresh Perspectives* no.9, DFID/IIED/NRI
- Groom, Ben and James MacGregor (2007), 'Air-freighted fresh food: guilty pleasure or sustainable development champion?'. *Fresh Perspectives* no.6, DFID/IIED/NRI
- Groom, Ben and James MacGregor (2007), 'Trade, development and poverty: the role of air-freighted horticultural products'. *Fresh Insights* no.11, DFID/IIED/NRI
- Jones, Andrew (2006), 'A lifecycle analysis of UK supermarket imported green beans from Kenya'. *Fresh Insights* no.4, DFID/IIED/NRI
- MacGregor, James (2006), 'Ecological space and a low-carbon future: crafting space for equitable economic development in Africa'. *Fresh Insights* no.8, DFID/IIED/NRI
- MacGregor, James and Muyeye Chambwera (2007), 'Room to move: "ecological space" and emissions equity'. *Fresh Perspectives* no.14, DFID/IIED/NRI
- MacGregor, James and Bill Vorley (2006), 'Fair Miles? Weighing environmental and social impacts of fresh produce exports from sub-Saharan Africa to the UK'. *Fresh Insights* no.9, DFID/IIED/NRI
- MacGregor, James and Bill Vorley (2007), "'Fair miles": the concept of "food miles" through a sustainable development lens'. *Fresh Perspectives* no.1, DFID/IIED/NRI
- Orr, Stuart and Ashok Chapagain (2006), 'Virtual water trade: a case study of green beans and flowers exported to the UK from Africa'. *Fresh Insights* no.3, DFID/IIED/NRI
- Orr, Stuart and Ashok Chapagain (2007), 'African air-freight of fresh produce: is transport of "virtual" water causing drought?'. *Fresh Perspectives* no.5, DFID/IIED/NRI
- Wangler, Zoë Lelah (2006), 'Sub-Saharan African horticultural exports to the UK and climate change'. *Fresh Insights* no.2, DFID/IIED/NRI

- 7.1** Private-sector standards are not the only factor affecting the long-term involvement of African horticulture exports in markets. Airfreight, as one of the Department for Environment, Food and Rural Affairs (DEFRA)'s sustainable development indicators for transportation in the food sector (<http://statistics.defra.gov.uk/esg/pdf/MethodologyNote.pdf>), is another. In early 2007, two major UK retailers responded to a rapid change in consumer polling on environmental issues – especially on climate change and 'food miles' – by announcing that they would label airfreighted products and stock more locally produced food. The Soil Association announced a review of organic certification of airfreighted food, with a view to a possible total ban.
- 7.2** Assessed on environmental criteria, airfreighted produce usually scores poorly compared with locally grown produce. When the energy consumption in transporting beans from Kenya to the UK by plane is included, the difference between the two supply chains becomes considerable. Energy use is 12 to 13 times greater when beans are sourced in Kenya rather than in the UK. For the whole of the UK, only 1.5 per cent of imported fruits and vegetables arrive by air transportation but that portion produces 50 per cent of all emissions from fruit and vegetable transportation (excluding consumer travel). However, airfreight of FFV from SSA accounts for less than 0.1 per cent of total UK carbon emissions. Africa accounts for 5 per cent of global airfreight. Overall, the environmental cost of international food transport is trivial compared with UK domestic food miles.
- 7.3** Airfreight has considerable benefits too. It is the only possible mode of transport for some highly perishable produce where no other infrastructure exists; it enables rapid responses to unforeseen changes, such as the weather; it overcomes some costs of trade; it expands land-use options in developing countries; and it induces structural changes to the horticulture industry.
- 7.4** The data on virtual water indicate that production of green beans in Africa for the UK market uses

the same amount of water as would supply 13 million Kenyan people for one year. However, the link with national water resource management in Kenya is indirect, since the water used for agriculture is not diverted from the majority of the population.

- 7.5** There is currently global inequality in how 'ecological space' is used (i.e. the per-capita right to natural resources such as energy, food, land, and water). The Kyoto Protocol recognises the need for equity and non-restrictive economic development for developing countries in the transition to a low-carbon future. Economic development for the poorest in a low-carbon future necessarily means expanding emissions for some. The global per-capita average is 3.6 tonnes of carbon. The UK average is 9.2. The average in Kenya is 0.2 tonnes and in Uganda 0.1 tonnes. Under current calculations for a sustainable carbon future, the equitable ecological space per capita for carbon emissions is 1.8 tonnes.
- 7.6** If environmental harm is to be weighed against developmental gains, it is essential that: (1) the degree of harm is quantified and put into the context of other food choices, (2) the degree of harm is put into the context of Africa's current use of 'ecological space', and (3) the degree of development gain is quantified, to demonstrate whether this trade really benefits those living in poverty.
- 7.7** Informed debate in the UK on 'food miles' versus 'fair miles' is now allowing supermarkets to move away from token gestures and move towards a balanced response based on sustainable development principles.



## 8. Awareness raising among supermarket buyers

### **Project outputs**

Anstey, Chris, (2008), 'Buyer training. International development and pro-poor procurement: Final report', DFID/IIED/NRI

- 8.1** A new activity identified during the mid-term review was the development of a training programme for buyers to inform and build knowledge about international development issues. The programme was developed, and piloted in two stages, led by Chris Anstey Ltd in association with IMPACTT, and tested with two major UK retailers. This has revealed broad support among non-governmental organisations and business stakeholders in the UK and Europe for developing material for raising buyer awareness. Initial discussions with manufacturers have identified a positive interest in developing sector-specific models. It is clear that training and awareness raising needs to be tailored to the business model of each company.

## 9. Recommendations for exporters

- 9.1** Exporters should compile evidence of the development impact of their export horticulture operations and develop an understanding of the involvement of SSG in their supply network. They should also look for ways to minimise the carbon footprint and maximise the development benefits of FFV trade between Africa and UK. This is the best form of defence against accusations of the unsustainability of moving luxury food products by air from food-insecure countries to the UK. Exporters and their associations should develop and implement best-practice guidelines for reduced-greenhouse-gas freight, which could include greater use of hold freight in passenger aircraft, use of modern aircraft technology, day flights, etc. Developing and implementing best practice for increasing the long-term rural development (producer) and urban development (packer) impacts of operations will be beneficial.
- 9.2** Exporters should work with retailer customers to innovate with a package of measures to increase the numbers of smallholders in their supply networks, with thorough attention to the compliance costs of standards. Exporters need to rethink the concept of 'costs'. Rather than exporter investments in SSG compliance being labelled as 'unsustainable', it can be argued that this investment illustrates a healthy and functioning system with the two private-sector investors sharing the costs and benefits as part of a sustainable business model. The most successful GLOBALGAP-compliant smallholder schemes have several common factors. The farmers in the scheme are highly committed to a commercial approach to farming, are well organised in strongly managed producer groups, and are linked to a large, well-resourced export company. The exporter does more than just buy the produce; it also provides extensive technical support and cost sharing. Typically, the bulk of the compliance costs are met by the exporter. The exporter also manages the more complex parts of the standard, such as the operation of the 'Option 2' QMS scheme, risk assessments, and much of the organisation behind the documentation and traceability components of the system.
- 9.3** Some of the most successful smallholder schemes are also the most paternalistic, with GLOBALGAP certificates held by the exporter rather than the producer organisation. While it is understandable that exporter investments in producer organisations should be matched with some exclusivity and loyalty, buyer-organised sourcing can create dependence rather than empowerment among producers in the chain. Producers will accept paternalism when it is compensated for by certainty of sales, rapid and guaranteed payment, and technical and financial support. However, exporters and their retailer customers can encourage their producers to organise into more autonomous groups and thus construct a partnership rather than an exclusive buyer-driven supply network. One of the key factors for success for SSG organisations in export markets is the ability to deal with membership heterogeneity by introducing new management models, such as supplier differentiation and supplier clusters. There are lessons to be shared with other projects, including Regoverning Markets ([www.regoverningmarkets.org](http://www.regoverningmarkets.org)).
- 9.4** The industry should promote self-regulation to create fertile enabling conditions for investment in upgrading opportunities such as GLOBALGAP compliance. In particular, there is a need to explore how to leverage common incentives to reduce undermining practices such as poaching of products.

## **10. Recommendations for retailers and their associations**

- 10.1** Retailers should work with their suppliers to map out where smallholders are in their supply chains. This is an existing recommendation of the Ethical Trading Initiative (ETI) smallholder guidelines ([www.ethicaltrade.org/Z/lib/2005/09/smhldr-gls/index.shtml](http://www.ethicaltrade.org/Z/lib/2005/09/smhldr-gls/index.shtml), section 4.3).
- 10.2** Retailers should work with their suppliers and standard setters to pilot ways to create a level playing field for smallholders in supply networks, as far as compliance is concerned. Procurement needs only to be modified rather than transformed to enable SSG to be secured in these supply chains and to offer genuine opportunities (such as skills, opportunities, and financial benefits) to upgrade these existing SSG and expand the number of SSG participating in export markets.
- 10.3** Retailers should improve sector-wide collaboration and leadership on pro-poor procurement approaches. They should commit human resources to the new Procurement and Development Forum.
- 10.4** Retailers should exert influence over GLOBALGAP to reinforce the role of the Africa Observer.
- 10.5** Retailers should commit resources to buyer training and awareness building in development issues. This is not an issue for corporate social responsibility and issue management, and should be integrated within commercial functions. Chain-wide learning should be encouraged, bringing producers, exporters, importers and retailers together to understand the hotspots of exclusion and to work together to bring more development benefits from commercial horticulture trade.

## **11. Recommendations for standards setters**

- 11.1** Standards setters should appreciate that meeting supermarket standards has costs and benefits for all producers in developing countries. Costs are increasing and are squeezing poorer and smaller farmers out of this market. Standard setters should take opportunities for cost reduction seriously. Much can be done to improve the inclusiveness of procurement with minimal impact on risk.
- 11.2** Development testing is required for additions to standards. Additions to PVS are usually assessed in financial terms and from the viewpoint of the buyer/retailer. Hence, the views of producers, and the non-financial benefits accruing to producers and producer nations, might not be fully represented in a financial assessment of the additional criteria. A producer voice in standard setting is vital. It is strongly recommended that the position of the Africa Observer in GLOBALGAP is strengthened and supported by GLOBALGAP members, to be less reliant on donor subsidy.
- 11.3** Standards setters should guard against folding even more complexity into PVS. The future inclusion of Integrated Pest Management (IPM) requirements into GLOBALGAP, for example, would mean more complexity, more compliance costs, and further marginalisation of SSG. We recommend that GLOBALGAP focuses on food safety and assurance. IPM could be implemented via a public-private donor initiative to bring IPM to the general farming population in Africa, using bottom-up approaches. Standards setters can work with policy makers to improve the spill-over benefits from PVS to the wider farming community.

## **12. Recommendations for DFID and other donors**

- 12.1** Donors and retailers should support the role of SSG in export supply chains and champion their participation in the standards-setting process.
- 12.2** Donors also should guard against folding even more complexity into PVS, when the goal – of improved farm management practices – could be achieved more equitably outside of the PVS framework. As noted in 11.3 above, the future inclusion of Integrated Pest Management (IPM) requirements into GLOBALGAP, for example, would mean more complexity, more training and compliance costs, and further marginalisation of SSG. We recommend that GLOBALGAP focuses on food safety and assurance. IPM could be implemented via a public-private donor initiative to bring IPM to the general farming population in Africa, using bottom-up approaches.
- 12.3** DFID and other donors should be wary of promoting greater export volumes of non-certified produce from Africa to the UK. Any significant increase in non-certified produce being supplied to the wholesale markets could have a dramatic effect on prices. Instead, there are probably better opportunities for rural poverty reduction by helping small-scale horticultural farmers trade in markets where they have greater comparative and competitive advantages, e.g. local markets, neighbouring countries and possibly the Middle East.
- 12.4** Donors, including DFID, should invest in supporting and upgrading wholesale markets in SSA as important alternative markets for SSG. Pursuing opportunities to upgrade in regional and domestic markets will help create a stronger financial base and a more attractive investment profile for the industry.
- 12.5** DFID and other donors should continue, and enhance, their dialogue with the private sector – including UK-based agrifood processors and retailers – as potential partners in development, for example through the new Procurement and Development Forum.
- 12.6** Together with DEFRA, DFID could apply a ‘development test’ analysis to allocation options for aviation, considering economic development, equity, development imperatives in developing countries, mitigation measures that enable ‘ecological space’ to be calculated fairly, and the opportunities to trade in unused space to be fully exploited. This could be achieved by working through organisations such as the Intergovernmental Panel on Climate Change (IPCC) and the United Nations Framework Convention on Climate Change (UNFCCC) – expanding the ‘food miles’ concept to that of ‘fair miles’. Options for expanding the food miles concept in ways that are equitable, enable trade, work with business, etc. should be investigated within the government and corresponding research should be commissioned to support this.
- 12.7** The availability of training has proved key to SSG compliance – such as in IPM, QMS, environmental management, pesticide use, basic management skills, group dynamics, and food safety. This impacts directly on the core production outcomes from the farms (and in some cases the entire farming community) beyond the certified production for export.

## **13. Recommendations for researchers and service providers**

- 13.1** Research is required to provide simple guidelines or tools to assist exporters in mapping the participation of smallholders in their supply networks.
- 13.2** Researchers should also develop simple guidelines or tools for exporters to understand the development impact of their horticulture operations, and means to improve that impact within the commercial realities of the business.
- 13.3** Alternative options are required for marginalised smallholders, such as greater involvement in non-certified or domestic markets. It is important to help secure the existing trade in non-certified produce for domestic, regional and wholesale export markets. Consideration needs to be given to help farmers and exporters establish a simple system of traceability and crop record-keeping, helping the food service to supply companies that audit their suppliers. Such a system would be much simpler than private-sector certification such as GLOBALGAP, but it would give increased confidence to the food service sector and help with improving its 'due diligence'. Consideration could also be given to the establishment of measures for setting up a simple certification procedure for some segments of the SSA local market.

## **14. Contact information**

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