



Vegetable Chains and Consumption in the Nairobi Metropolis

Report on a stakeholder workshop November 21, 2011

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Summary

This document reports on the workshop 'Vegetable Chains and Consumption in the Nairobi Metropolis', that was held on November 21st, 2011 at the Fairview Hotel in Nairobi. The entire project is reported upon in a separate, more elaborate document. The workshop was attended by a variety of specialists from the public and private sector, and was addressed by Mr. Hans Wolff, the Agricultural Councillor of the Royal Netherlands Embassy in Nairobi.

There appears to be a fair level of consumer awareness with regards to the need for fresh vegetables, which reflects in a continuous demand. There is also the potential drive with producers for year-round production. A major improvement in availability of fresh vegetables can be achieved by producing in the dry period, for which water and irrigation facilities must be available. Production levels and product quality can be raised, if necessary, with appropriate measures such as different varieties and better crop protection. In the post-harvest phase, the enormous losses can be reduced if the value chain is better organized.

Dry season production would strongly increase year-round vegetable availability. This would require irrigation facilities and water availability.

The shortage of vegetables during the dry season can also be reduced if fresh vegetables are processed during the wet season for consumption during the dry season. Locally, households are drying local vegetables during the glut season for the dry season, however quality seems to be low. The image of processed vegetables also has to be improved; acceptance of for example frozen vegetables is low.

The value chain is not optimal, and price incentives do not sufficiently reach the farmer. With policy and market arrangements, this should be improved, which could lead to higher production.

Knowledge and awareness on the benefits of vegetable consumption and on possibilities of vegetable processing is required with all stakeholders.

The Netherlands can support in the following fields:

- Irrigation technology
- Quality seeds
- General crop management
- Chain management, post-harvest losses and quality standards
- Food processing
- Research and development
- Consumer behaviour

1 Background

The Agricultural Office of the Netherlands Embassy in Nairobi commissioned Wageningen University and Research Centre to determine opportunities and barriers to increase the consumption of vegetables in the Nairobi metropolis, and therewith increasing food security.

Within Wageningen UR, the project has been a collaboration between Wageningen UR Greenhouse Horticulture, the Centre For Development and Innovation, and LEI (the Agricultural Economics Institute).

The study has known three phases:

- 1) a desk study on vegetable chains in Kenya
- 2) a fact-finding mission to Kenya to interview key stakeholders
- 3) a workshop in Nairobi, in which finding up to that moment has been discussed and outlines of an action plan to promote and strengthen the vegetable chain for local use, have been put forward.

This document reports on the workshop 'Vegetable Chains and Consumption in the Nairobi Metropolis', that was held on November 21st, 2011 at the Fairview Hotel in Nairobi. The entire project is reported in a separate, more elaborate document.

The project was funded by the Netherlands Ministry of Economic, Agriculture and Innovation, under project number BO-10-011-126.

Wageningen, December 2011

2 Participants of the workshop

The following group of representatives from the private and public sector had gathered at the workshop:

Name	Position	Organization
Mr. Hemant Talathi	Group Operations Manager	East African Growers
Mr. Joseph Kigamwa		Kenya Plant Health Inspectorate Services (KEPHIS)
Mr. Henry Kinyug	M&E officer	TechnoServe
Ms. Hanna Njoroge	Horticulture Division	Ministry of Agriculture
Mr. Christopher K. Nkukuu		SHoMaP
Mr. Alphonse Muriu		SNV-Kenya
Ms. Janet Maigoya	Programme officer	Farm Concern International
Ms. Mary A. Oyunga	Programme officer	Kenya Agricultural Research Institute (KARI), Kisumu
Dr. Lusike A. Wasilwa	Assistant Director Horticultural & Industrial Crops	Kenya Agricultural Research Institute (KARI)
Ms. Dorcus Mbithe	Lecturer	Kenyatta University
Prof. Mary O.O. Abukutsa	Professor of Horticulture	Jomo Kenyatta University of Agriculture & Technology, Department of Horticulture
Prof Dr. Anselimo Makokha	Professor Nutrition	Jomo Kenyatta University of Agriculture & Technology
Mr. Hans Wolf	Agricultural Councillor	Royal Netherlands Embassy, Nairobi
Ir. Carin van der Lans	Researcher	Wageningen UR Greenhouse Horticulture
Ir. Fannie de Boer	Researcher	Wageningen UR, Centre for Development and Innovation
Dr. Anne Elings	Researcher	Wageningen UR Greenhouse Horticulture
Mr. Allan Muturi	Photo Journalist	Horticultural News

3 Workshop programme

Workshop 'Vegetable Chains and consumption in Nairobi Metropolis'

November 21th 2011



Agenda (morning)

- 9:00 : Opening by Mr. Hans Wolf, Agricultural Counsellor of the Embassy of the Kingdom of the Netherlands
- 9:20 : Introduction by Anne Elings
- 9:30 : Short introduction by each participant
- 9:45 : Presentation of findings desk study and interviews
- 10:15 : *Coffee/Tea break*
- 10:30 : Brainstorm missing constraints / prioritizing prioritizing constraints
- 11:30 : Brainstorm missing opportunities / prioritizing
- 12.30 : *Lunch*



Agenda (after lunch)

- 14:00 : Feedback on findings of the morning
- 15:00 : *Coffee/Tea break*
- 15:30 : Drafting plans of action
- 16:30 : Presentation of action plans
- 16:50 : Concluding remarks
- 17:00 : *Refreshments*



Opening of the workshop

by Mr. Hans Wolf

Agricultural Counsellor of the Embassy of the Kingdom of the Netherlands



Introduction of the workshop

by Anne Elings

project leader 'Vegetable chains and consumption in Nairobi Metropolis'



Objectives of the study

- Determine potentials for vegetable consumption and cultivation in Nairobi metropolitan region;
- Analyse reasons for low vegetable consumption and production;
- Define strategies to stimulate consumption and production of vegetables.



Why vegetables...

- Vegetables play important role in food and nutrition security
 - Income
 - Dietary diversity
 - Good source for micronutrients
- Increased domestic market
- Unsatisfied demand for ALV


Source: African indigenous vegetables in Kenya by Mary Abukutsa



Domestic vegetable chain (global)



Coffee/Tea break




Brainstorm constraints

- What are missing constraints?
- Prioritizing of constraints

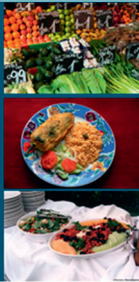


Brainstorm opportunities

- What are missing opportunities?
- Prioritizing of opportunities



Lunch





Feedback on findings of the morning

Plenary session on the findings on constraints and opportunities of the domestic vegetable value chain



Coffee/Tea break




Setting up of action plans

- Drafting plans of action
 - Objectives
 - Activities
 - Stakeholders
 - Public - Private
 - Possible funders
- Presentation of action plan




Concluding remarks

and the way forward




Thank you!!

Asanthe Sana!!

Dank u wel!!

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4 Summarized findings of the desk study and interviews

From the desk study and the interviews held by Wageningen UR, a series of major constraints and opportunities were found. These results were presented in the workshop meeting as an introduction to the planned brainstorm sessions.

4.1 Constraints

The most important constraint to increase the consumption of vegetables seems to be seasonality, related to rain-fed horticulture in Kenya. This leads to surpluses during the rainy season and shortages in the dry season. Surplus of production causes low prices for farmers, as hardly any price information is known to them. Middle men and brokers are the links that determine prices paid at farmers.

Surpluses for processing looks promising, but this market has to be better developed. Consumers do prefer to eat fresh vegetables, awareness on the advantages of processed vegetables must be improved for example.

Shortages lead to low vegetable consumption and high prices in the dry season. Consumers are aware of the importance of vegetable consumption (especially vitamin A and iron intake) hence they will continue to consume vegetables however in smaller quantities. . In addition, consumers did express the need on simple preparation techniques for African Leafy Vegetables since they did not know how to prepare them.

Vegetable growing in urban areas can cause public health hazard; vegetables grown are contaminated due to the use of water from the sewage system and by exhaust fumes. Urban agriculture is illegal, there are no standards for hygiene and no inspection,, this contaminated produce are being sold at markets. This is a major threat for the public health of Nairobi citizens who consume these vegetables.

There are no grades and standards for the domestic chain. Consumers are unaware of shelf life of the products they buy, unaware of possible effects of the consumed vegetables for their personal health, and whether there are still pesticide residues on the vegetables.

The interaction/cooperation between the different links of the domestic vegetable chain is low. This affects the produce prices at different levels of the chain and the quality of vegetables at consumer level.

4.2 Opportunities

A major opportunity is the consumer awareness on the benefits of the consumption of vegetables, creating a continuous demand for vegetables; consumers are aware that vegetables are an important source for micronutrients intake and needed for good health.

Knowledge for production and inspection is very good developed for the export market. What can we use from it for the domestic market?

There is a demand for quality vegetables by a.o., hotels and high end consumers.

Vegetable production is profitable and in general the proceeds are going to women which has a better effect on the nutritional well-being of the household.

Infra-structure for inputs is available, some supply business has local developed. For example seed industry, greenhouses, R&D.

Infrastructure is at different levels can be further developed. To start with, roads and marketing systems. But also well-functioning and affordable cold stores can be made available. If this is combined with a well-working market system in which consumers are willing to pay for a quality product, and in which farmers are therefore willing to pay for cold storage, then post-harvest losses (now estimated at around 40%) can be reduced.

5 Brainstorm sessions of the workshop

The brainstorm sessions were held in small groups of 4-5 participants. Each group was asked to add any missing constraints respectively missing opportunities to the lists of constraints and opportunities that had been summarized from the desk study and the interviews. Also they were asked to give the top 3 of major constraints and opportunities.

In the desk study and the interviews with different stakeholders, we found as the main constraint the seasonality of the vegetable production. During the rainy season a surplus was produced with not much possibilities to process the vegetables leading to low prices. During the dry season the reverse was noted: low availability and high prices. The consumer is adapting to this situation by decreasing the quantity of vegetables in the diet during the dry season.

In the desk study a detailed analysis was made on the different constraints mentioned in literature per stakeholder in the chain which has been enriched with observations during the interviews.

Participants of the workshop identified additional constraints which are mentioned under additional constraints in the table.

Table 1. Overview of constraints identified during the desk study and the interviews, and additional constraints identified during the workshop.

Actors	Constraints and <i>additional constraints</i>
R&D	<ul style="list-style-type: none"> • Limited applied research <p>Additional</p> <ul style="list-style-type: none"> • <i>Market research</i> • <i>Processing research</i> • <i>Research prioritization</i> • <i>Dissemination / extension /advocacy</i> • <i>Classification of vegetables to give a chance to all others</i> • <i>Low governmental funding</i> • <i>Seeds, planting materials, equipment, applications</i>
Inputs	<ul style="list-style-type: none"> • Poor access to <ul style="list-style-type: none"> • inputs • financial services • water (management) • high quality plant material/seeds • Decreasing land resources • Poor infrastructure (roads, telecommunication, electricity) • Insufficient quality of extension services (urban agriculture) <p>Additional</p> <ul style="list-style-type: none"> • <i>technical information</i> • <i>Information flow towards extension services</i> • <i>Procurement - high costs</i>

Actors	Constraints and <i>additional constraints</i>
Production	<ul style="list-style-type: none"> • Poor quality of produce • Disease and pest infestation • Declining soil fertility • Lack of horizontal cooperation <p>Additional</p> <ul style="list-style-type: none"> • <i>Only packages for supermarkets contain nutrition information</i> • <i>Standards</i> • <i>Lack of market based production</i> • <i>Fragmented farming - no economic use</i> • <i>Smallholders voice in value chain e.g., pricing</i> • <i>Open up into other production areas</i> • <i>Low production</i> • <i>Poor record keeping</i> • <i>Lack of technical skills</i> • <i>Unreliable climate conditions</i>
Collection/ Processing	<ul style="list-style-type: none"> • Inefficient post-harvest handling leading to high post-harvest losses • Lack of grades and standards • Theft of crops • (Cold) storage facilities • Lack of processing capacities <p>Additional</p> <ul style="list-style-type: none"> • <i>Lack of organized collection</i> • <i>Packaging for transportation</i>
Distribution	<ul style="list-style-type: none"> • Infra-structure (telecommunication network, roads, buildings, (cold) storage, transport) • Packing, handling, grading • Seasonality of the production (surplus during the rainy season, shortage during the dry season) • Payment of fines • High wastage • Controlling position of the middle men <p>Additional</p> <ul style="list-style-type: none"> • <i>Lacking market information</i>
Wholesale	<ul style="list-style-type: none"> • Infra-structure (cold) storage • Poor market infra-structure (storage, waste disposal, hygiene) • High wastage • Traders dominate the value chain • Product quality is not awarded <p>Additional</p> <ul style="list-style-type: none"> • <i>Payment to growers</i>
Retail	<ul style="list-style-type: none"> • Poor market infra-structure • Low quality criteria • High waste • Lack of hygienic conditions for markets <p>Additional</p> <ul style="list-style-type: none"> • <i>Non-compliance to food safety laws - all sectors</i> • <i>Poor storage conditions</i>

Actors	Constraints and <i>additional constraints</i>
Consumer	<ul style="list-style-type: none"> Seasonality Lack of skills to prepare African Leafy Vegetables Price of vegetables related to income Limited variation in vegetable intake Food safety / hygienic handling Low status of vegetables (poor man's food) Shelf life Time available for buying and preparing vegetables <p>Additional</p> <ul style="list-style-type: none"> <i>Shelf life (from harvest to consumption)</i> <i>Lifestyle</i> <i>Preference, likes and dislikes</i> <i>Family economy</i> <i>Diversifying eating habits</i> <i>Poor/lack of information on nutrition and health benefits from a public health perspective</i>

Table 2. Overview of cross-sectional constraints identified during the desk study, interviews and workshop.

Actors	Cross-sectional constraints	
R&D	<ul style="list-style-type: none"> Illegality of urban agriculture Insufficient insight in marketing channels consumer behaviour, accepting low quality fragmentation throughout the vegetable chain - loose supply chain arrangements- lack of vertical cooperation between the different links within the chain market prices limited technical and marketing support services 	
Inputs		
Production		
Collection/ Processing		<ul style="list-style-type: none"> Lack of joint transport and selling
Distribution		<ul style="list-style-type: none"> Poor hygienic situation leading to waste
Wholesale		
Retail		
Consumer		

5.1 Priority constraints

A fairly wide range of constraints was prioritized. Below the top 3 per discussion group is shown.

Group A - Top 3 constraints:

- Poor information and knowledge sharing on nutrition and health benefits;
- Inefficient post-harvest handling/lack of processing capacities;
- Lack of quality seeds/plant material.

Group B - Top 3 constraints:

- Poor access to inputs (seeds, fertilizers etc.)
- Poor/inadequate post-harvest techniques (storage/infrastructure)
- Under-developed market and market infrastructure

Group C - Top 3 constraints:

- Research, development and extension
- Policy formulation and enforcement
- Production system (collectiveness) quality and quantity.

Group D - Top 3 constraints:

1. Post-harvest losses (handling, poor grading, storage)
2. Poor market infrastructure
3. Disease and pest infestation (extensive use of pesticides)

In general terms, it was analysed that there is lack of produce due to inadequacies in the pre- and post-harvest chains, that enabling policies and market infrastructure need improvement, and that customer information is insufficient.

5.2 Opportunities

A similar process as for the identification of constraints was followed for the opportunities. The desk study and interviews revealed as main opportunity the interest that the consumer has in eating vegetables, and the general interest in growing vegetables. Vegetable cultivation during the dry season could solve temporal shortages.

A good R&D infra-structure is available (from production to consumer), however due to the financial constraints researchers are limited in their activities. Kenya's vision 2030 offers opportunities to increase the area for irrigation for vegetable production. Also during this exercise participants of the workshop added their observations on opportunities mentioned under additional opportunities.

Table 3. Overview of opportunities identified during the desk study and the interviews, and additional opportunities identified during the workshop.

Actors	Opportunities
	Additional <ul style="list-style-type: none">• Enhanced FNS• e-business
R&D	<ul style="list-style-type: none">• Rather well-equipped research and educational facilities (KARI, Universities) for cultivation as well as for nutrition promotion activities. Additional <ul style="list-style-type: none">• <i>Local production and supply of quality seeds</i>• <i>Change from production to market orientation by leading research organisation (KARI)</i>• <i>Have skilled manpower for research</i>• <i>Competitive grants (room for strategic partnerships) resource mobilization, knowledge sharing</i>• <i>Continuous professional education</i>• <i>Developed research facilities and skilled workforce</i>
Inputs	<ul style="list-style-type: none">• Open market system• Enhanced skills in integrated crop management• Skilled labourers and high unemployment• Good air connections for import• Local suppliers of greenhouses, shadow nets, irrigation and cooling techniques, nutrients and herbicides, packing materials, etc. Additional <ul style="list-style-type: none">• <i>Direct procurement system through coop/gps</i>• <i>Strong private sector actors</i>• <i>Local initiatives of seed multiplication</i>

Actors	Opportunities
Production	<ul style="list-style-type: none"> • Vegetable production is profitable • Indigenous vegetables that are better resistant against diseases • Vegetables are a women crop (better for food security) <p>Additional</p> <ul style="list-style-type: none"> • <i>Increasing the area under production especially through irrigation</i> • <i>Several programmes supporting production; year round horticulture production - favourable climate / irrigation vision 2030</i> • <i>Suitability maps for expansion to new areas across country</i> • <i>Developing improved varieties</i> • <i>Diversification of cropsenhanced income</i>
Collection/ Processing	<ul style="list-style-type: none"> • Increasing demand for consumer convenience foods <p>Additional</p> <ul style="list-style-type: none"> • <i>Cottage industries (juices, dried vegetables)</i> • <i>Re-emergence of the business co-operative</i> • <i>Rural electrification</i> • <i>Skilled manpower (youth)</i> • <i>Motorbike transport</i>
Distribution	<ul style="list-style-type: none"> • Technical and marketing facilities available at HCDA, also for domestic markets • Good air connections for export • Available experience and knowledge at export oriented farms to improve quality <p>Additional</p> <ul style="list-style-type: none"> • <i>Implementing new courses for schools eg introducing nutritious food through promotions</i> • <i>Motorbike</i> • <i>Improved road network</i>
Wholesale	<p>Additional</p> <ul style="list-style-type: none"> • <i>Presence of market infrastructure</i> • <i>Policy infrastructure being developed = market info as starting point</i> • <i>Export opportunities</i>
Retail	<ul style="list-style-type: none"> • Demand for convenience food <p>Additional</p> <ul style="list-style-type: none"> • <i>Presence of public markets</i> • <i>Supermarkets are well placed all over the country</i>
Consumer	<ul style="list-style-type: none"> • Awareness on high nutritional value of vegetables • Vegetables are commonly consumed • Amaranth consumed are highly in nutrients • OFSP widely accepted • Women prefer better vegetables • Acceptability of traditional vegetables • Demand for vegetables higher than supply <p>Additional</p> <ul style="list-style-type: none"> • <i>Children?</i> • <i>Growing market</i> • <i>domestic commercial utilization - hotel industryimproved health benefits</i>

Table 4. Overview of opportunities identified during the desk study and the interviews, and additional constraints identified during the workshop.

Actors	Cross-sectional opportunities		
R&D			
Inputs			
Production	Market for vegetables is available; Kenya is net-importer; there is demand for vegetables from overseas markets		
Collection/Processing			
Distribution			
Wholesale		Exploring new markets like public institutions (schools, prisons, hospitals)	Demand for quality foods by hotels
Retail			Demand for quality food
Consumer			

5.3 Priority opportunities

A fairly wide range of constraints was prioritized. Below the top 3 per discussion group is shown.

Group A - Top 3 opportunities:

1. Enhanced Food and Nutrition Security
2. Improved health benefits
3. Enhanced income generation and e-business
- 4.

Group B - Top 3 opportunities:

1. Ability for year-round vegetable production exist + irrigation enhancement as part of vision 2030;
2. Development of policy infrastructure
3. Development of horticulture policy

Group C - Top 3 opportunities:

1. Change to market based research
2. Production: suitability maps for expansion to new areas in Kenya;
3. Enlarged consumer market.

Group D - Top 3 opportunities:

1. Setting-up educational priorities (local);
2. Direct procurement by cooperative/association (cost saving, sea freight)
3. Selection of correct varieties for maximum yield

The most important opportunities match to some extent with the most important constraints, but not entirely. On the production side, year-round vegetable production is possible if irrigation is enhanced, and if this is matched with the proper varieties. Work has to be done in terms of policies and market incentives, and knowledge generation and transfer.

6 Action plans

The following main themes for focusing for action plans were identified at the workshop:

1. Stability in the market economy
2. Knowledge and awareness
3. Policy
4. Cross cutting

Per group one themes was elaborated into an action plan. The theme on 'Knowledge and awareness' has been developed into an action plan on 'Development of a robust vegetable industry in Kenya'.

6.1 Action plan 'Stability in the Market Economy'

Objectives	Activities	Stakeholders	Possible donors
Optimize the quantity and quality of vegetables	<ol style="list-style-type: none"> 1. enhance access to quality inputs 2. promote water harvesting, management technology and irrigation 	government bodies, KARI, Kephis, local government agro input suppliers media houses i.e. horticultural news private sector farmers consumers	Kenyan Government USAID-KHCP IFAD NGOs JICA EKN EU GATSBY-UK
Improve the efficiency in marketing systems of vegetables	<ol style="list-style-type: none"> 1. capacity building of market intermediaries 2. improve the platform for collecting and dissemination of market information 3. promote value addition and processing of vegetables 4. establish good business relationship between the buyers and sellers 		
Increase per capita consumption of vegetables	<ol style="list-style-type: none"> 1. increase awareness on nutrition benefits and recommended dietary intake 2. improve distribution networks and ensure availability throughout the year 		

6.2 Action plan 'Development of a robust vegetable industry in Kenya'

Objective:

In 2017, 75% of the Kenyan population is aware of the benefits of vegetables.

Objectives	Activities	Stakeholders	Possible donors
Create awareness about the benefits of vegetables	<ol style="list-style-type: none"> 1. 1 desk review 2. publicity campaign 3. develop materials 4. M&E 	Media GoK/partners NGOs Researchers/ universities	GoK Partners Private sector
Develop and promote production, processing and utilization technologies	<ol style="list-style-type: none"> 1. develop, adopt and adapt technologies 2. Promote technologies 3. M&E 	Private sector Consumer Researchers/ universities	
Develop dissemination and knowledge sharing tools and strategies	<ol style="list-style-type: none"> 1. Develop tools and strategies 2. Disseminate and share knowledge 3. M&E 	Same	
To develop training curricula for various actors in the chain	<ol style="list-style-type: none"> 1. Curriculum development 2. Identify anchor institutions 	Same	

Action plan policy

The broad objective is to accelerate and sustain growth and development of the vegetable industry in order to enhance its contribution towards food security, poverty reduction, and employment and wealth creation.

The specific objectives for the realization of the broad objective are to:

1. Facilitate increased production of high-quality horticultural produce.
2. Enhance provision of the subsector's support services.
3. Promote value addition and increase domestic and external trade.
4. Establish and develop infrastructure to support the vegetable industry.
5. Establish and strengthen institutional, legal and regulatory framework in the vegetable industry.
6. Promote mechanisms for environmental sustainability and other cross-cutting issues.

Activities	Stakeholders	Possible donors
Inputs 1. Licensing stockists 2. Certification of nurseries 3. Fast track registration of agro chemicals 4. Enforce phytosanitary measures	MOA KARI KEPHIS Pest Control Products Board (PCPB) STAK Agrochemical Association of Kenya Agriculture Employers Association Commodity Association	The Netherlands USAID World Bank IFAD ADB GoK
Production 1. Harmonisation of Agriculture Extension 2. Promote the adoption of modern technologies through improved provision of advisory services by both the public and private sector extension service providers. 3. Enhance promotion of safe and effective use of agro-chemicals, including pesticides, to promote and support compliance with standards for markets and product safety. 4. Promote use of integrated pest and disease management. 5. Facilitate the development of commodity suitability maps/profiles for various eco-zones and long-term development plans to facilitate coordinated vegetable production. 6. Encourage the development and use of appropriate production packages for organic farming	KARI MoA KENFAP Private sector (Farm Concern Int., Technoserve) CGIAR Universities	
Processing/Collection 1. Capacity building 2. Traceability 3. Reduce taxation on processing equipment 4. Put in place tax holidays for vegetable industries in rural areas 5. Reduce taxation on packaging Materials	KAM MoA MoTrade KRA KIRDI RTDS Universities HCDA	
Distribution 1. Reduce multiple taxation 2. Channel cess to infrastructure development 3. Promote integrity in vegetable value chain 4. Increase irrigated area under production	Transporters Municipal council	
Marketing 1. Develop an efficient market information system and build the necessary physical and human capacity to manage the system. 2. Traceability and certification= 3. Enhance and ensure effective traceability mechanisms are in place and operational certification systems	MoR MoA KACE HCDA SHDP SHOMAP	The Netherlands WB USAID
Consumers		

6.3 Action plan ‘ Policy’

The broad objective is to accelerate and sustain growth and development of the vegetable industry in order to enhance its contribution towards food security, poverty reduction, and employment and wealth creation.

The specific objectives for the realization of the broad objective are to:

- i. Facilitate increased production of high-quality horticultural produce.
- ii. Enhance provision of the subsector’s support services.
- iii. Promote value addition and increase domestic and external trade.
- iv. Establish and develop infrastructure to support the vegetable industry.
- v. Establish and strengthen institutional, legal and regulatory framework in the vegetable industry.
- vi. Promote mechanisms for environmental sustainability and other cross-cutting issues.

Activities	Stakeholders	Possible donors
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Consumers		

7 Conclusions

The purpose of the workshop was to obtain a full picture of constraints and opportunities with regard to the vegetable production and consumption in the Nairobi metropolis. A group of representatives from the private and public sector had gathered for one day to achieve this.

Three broad fields, that are interlinked, can be distinguished, viz.

1. Stability in the market economy
2. Knowledge and awareness
3. Policy

In summary, there appears to be a fair level of consumer awareness with regards to the need for fresh vegetables, which reflects in a continuous demand. There is also the potential drive with producers for year-round production. A major improvement in availability of fresh vegetables can be achieved by producing in the dry period, for which water and irrigation facilities must be available. Production levels and product quality can be raised, if necessary, with appropriate measures such as different varieties and better crop protection. In the post-harvest phase, the enormous losses can be reduced if the value chain is better organized.

Dry season production would strongly increase year-round vegetable availability. This would require irrigation facilities and water availability.

The shortage of vegetables during the dry season can also be reduced if fresh vegetables are processed during the wet season for consumption during the dry season. Locally, households are drying local vegetables during the glut season for the dry season, however quality seems to be low. The image of processed vegetables also has to be improved; acceptance of for example frozen vegetables is low.

The value chain is not optimal, and price incentives do not sufficiently reach the farmer. With policy and market arrangements, this should be improved, which could lead to higher production.

Knowledge and awareness on the benefits of vegetable consumption and on possibilities of vegetable processing is required with all stakeholders.

The Netherlands can support in the following fields:

- Irrigation technology
- Quality seeds
- General crop management
- Chain management, post-harvest losses and quality standards
- Food processing
- Research and development
- Consumer behaviour

8 Photo impressions



