



121317

August 2005

**Anglophone African Regional Training Course on Urban
Agriculture, March 2004, Supplementary Activity**

**PRODUCTION OF AN INTERACTIVE CD-ROM ON
URBAN AGRICULTURE**

**Final Report to IDRC accompanying the CD-ROM on the
production process**

**Urban Harvest, the CGIAR System-wide Initiative on Urban and
Peri-Urban Agriculture
CGIAR Convener: The International Potato Center (CIP)**



1. Background

The Cities Feeding People (CFP) programme of the International Development Research Centre (IDRC) Canada, which has now been transformed into the program on Urban Poverty and Environment (UPE), together with the Urban Harvest programme of the CGIAR, the International Potato Center and other national and international organisations prepared and offered a three-week Anglophone Africa training course on Urban Agriculture between 8 and 26 March 2004.

Participants were organised into city teams representing 7 African cities. They included staff of development and local government organisations, as well as researchers and civil society organisations. The course aimed to improve their understanding of Urban Agriculture (UA) in its various forms, and to prepare for effective participation in processes of multi-stakeholder policy development, research, action planning and implementation in the field of UA.

The course was designed to introduce key issues in urban agriculture through seven modules, with two cross-cutting Modules on History and Concepts and on Health Impacts, and 5 addressing specific food security, natural resource and planning aspects:

1. UA History, Concepts and Dynamics
2. Health Impacts of UA
3. UA Crop Production Systems
4. UA Animal Husbandry
5. Solid Waste Management and UA
6. Waste Water Re-Use in UA
7. Integration of UA into Urban Planning

Seven Module Team Leaders were responsible for coordinating the preparation of electronic and hard copy materials to be used in the delivery of their Module and were supported by a Module Team consisting of 2-3 instructors who are international experts in their field. A course Technical Advisory Committee and the Course Coordination gave further support in the development of the materials. These materials also served as the basis for the development of a Distance Learning (DL) component of the course, as further described in this report.

Development of this DL component of the project was initially supported by Katherine Morrow (IDRC consultant) and later taken on by The International Potato Center's Training Department in Lima together with Gordon Prain, Global coordinator, Urban Harvest, Marielle Dubbeling, Urban Harvest consultant and Technical Adviser to the physical course and Maarten Warnaars, Urban Harvest Information Officer. Collection and archiving of materials was supported during the course by a Kenyan data management consultant, Mr Henry Odicoh. The major role in the production of the CD-ROM was taken by Thomas Zschocke, Head of CIP Training Department and a specialist in DL, who was responsible for designing the CD architecture and authoring the multimedia materials incorporated as

content. (See Annex 1 for a full list of Credits for both the physical course and the production of the CD-ROM).

2. Identification of an appropriate DL component

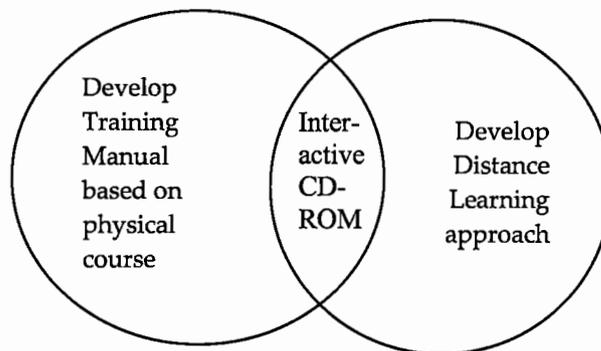
During the Second Planning Workshop for the Training Course (November 2003), held in Nairobi, discussions, moderated by Katherine Morrow and Marielle Dubbeling, were held with the Module Team Leaders and technical advisers on what kind of DL component could realistically be developed as part of the output of the real world course. Four options were identified:

- Unclassified filing of course materials in electronic format
- An “electronic library” with some kind of simple search engine
- An interactive CD-ROM
- A fully fledged DL (pilot) course, with CD-ROM, web-based monitoring and interactions and accreditation

At the Nairobi meeting the Technical Committee and Module leaders were faced with addressing the pressing demands of the real world course preparations and gave this highest priority. The consensus was that the output of the DL component of the course would consist of the production of an interactive CD-ROM that:

- Captures all materials produced in and used during the training course in electronic form (collection, digitising, archiving)
- Classifies and labels the materials (electronic library)
- Provides a basic learning structure to the materials (through a navigation menu, and through basic editing of materials with such a perspective).

As such this interactive CD-ROM output was seen as a mechanism to disseminate training materials from the course and a link between the physical course and future DL pilot course, envisaged by IDRC:



A workplan was elaborated to guide further development of this CD-ROM-ROM, requiring a series of activities to be implemented prior to, during and after the course which are all further described below.

Following the Nairobi workshop, a CD-ROM Planning Meeting was convened in CIP Lima, involving CIP and Urban Harvest Staff and the physical course Technical Advisor. The group reviewed the discussions in Nairobi, the timetable and workplan and made necessary modifications, based on the recognition that the CD-ROM needed to extensively “re-package” the Training Manual produced out of course materials – textual case study material, proposals prepared by participants, photos, graphics, video clips of case sites and

of classroom sessions from the real world course – into a clearer set of Learning Goals, Objectives, Topics and Lessons for use in an interactive learning environment.

A proposal for the structure and content of the CD-ROM were developed, envisaging an interactive CD-ROM with five “chapters”:

- I. General introduction (i.e., history, concepts, dynamics)
- II. Toolbox of relevant methods and techniques (i.e., gender analysis, multi stakeholder process, health risk assessment etc)
- III. Actors scenario (i.e., municipality/policy-maker, researcher, farmer)
- IV. Issues scenarios (e.g. food security, health, waste management, urban planning)
- V. Modules
- VI. City scenarios, including basis city data, maps and proposals from 7 cities.

In addition, the CD would have a glossary, a search function and a Help function.

Based on this structure, the learner would be enabled to explore the content of the CD-ROM in order to learn about concepts, techniques and strategies to solve problems related to urban natural resources and agriculture, based on personal needs or interests. The individual modules are organized into lessons that consist of a number of topics. The lessons and topics are sequentially arranged containing easily accessible learning materials.

The CD-ROM adapted a scenario-based approach (goal-based scenarios) to provide the user with an environment that contains authentic narrative of cases in a real-world setting. This inductive approach helps the user to actively develop his or her knowledge while applying existing knowledge, skills and expertise.

The CD-ROM was developed with Macromedia® Authorware®, a specialized (icon- based) authoring program for computer-based training. The resulting content is delivered on the CD-ROM through a standalone program that can be run from any Windows computer. It does not require any additional software except Acrobat Reader to read PDF documents and QuickTime /Windows Media Player to view video clips (See Annex 2 for a visualization of the CD-ROM architecture).

3. DL-related activities prior to the physical course

3.1. Formatting & content guidelines

The materials produced for the course and which served as inputs for the CD-ROM included written materials (handouts, reading materials, assignment sheets), and visual materials (diagrams, charts, photos, maps, videos). Formats were prepared by the course coordination to guide Module Team Leaders in the preparation of digitised materials.

Module Team Leaders were requested to bear in mind in developing their materials the potential for re-use in a distance learning setting, without making this their main consideration. The main consideration remained the immediate need to prepare for and deliver their module. Module Team Leaders were provided with some tips about the ways that modules and materials can be shaped to support future DL uses:

- o Identify clear learning objectives for the overall module as well as for the different

- parts of the module (module sessions or blocks).
- Use Handouts that summarise the modules' main messages and make them as complete as possible in such a way that the learning objectives are clearly communicated.
 - Incorporate as much as possible visual and other multimedia elements in the course design to help achieve learning objectives.
 - Complement visuals, diagrams, etc. with a text description explaining the point the materials are designed to illustrate
 - Think about whether the materials will be self-explanatory outside the classroom setting, or even if participants would consult them again at a later date.
 - Annotate the materials appropriately. Include the date, location, author and full source in headers, footers, PowerPoint slideshows, etc. This will also facilitate a later check on copyright for use of the materials.
 - Limit the amount and time of lectures and build in the module a series of interactive exercises. Write down the exercises and their different steps, as these will form the core of interactive DL.

The variable way in which these tips were followed is discussed below in Section 6.

3.2. Labelling & copyright status

Materials were to be delivered by the Module Team Leaders as a complete set (not piecemeal) to the course secretariat on CD-ROM. A list of materials and files included on the CD-ROM had to be provided, including:

- Description of the file or item (title, author, date, location etc.)
- Information on the copyright owner
- Permission obtained to use copyrighted materials
- Proper credit given of the source of particular text, where appropriate

Unfortunately, not all permissions and crediting of others' work were completed during the course and follow-up was required with authors.

It was agreed that the general copyright and disclaimer statement to be included with the DL package would indicate that the materials might be freely copied, adapted, translated and redistributed for non-profit or educational use, provided that the source is credited.

3.3. Review of materials

All materials were to be delivered by the Module Team Leaders to the course coordination two months before the course. Materials were then to be reviewed by the course coordination on their content, format, structure, quality and completeness. Unfortunately the majority of the Module Team Leaders were unable to comply with this latter agreement. They were busy till the last moment (and even during the course) with the preparation and finalization of their materials. Because of this, materials were inevitably collected piecemeal during the course for digitalization and archiving the data management consultant, resulting in an incomplete archive at the close of the physical course and the need for extensive follow up.

4. DL-related activities during the course

4.1. Collection, digitising and archiving

The data management consultant was contracted to collect, digitise and archive all course materials provided and used by the Module Team Leaders during the course, in collaboration with and under the supervision of the Course Technical Advisor. He was also to classify them per module in the following categories:

- (a) Module or lesson plans (describing learning outcomes, module set up and methodology);
- (b) Handouts;
- (c) PowerPoint presentations;
- (d) Other visual materials;
- (e) Case studies and
- (f) Additional reading materials.

All course materials that were received were burned onto CD-ROMs and handed out to the participants and Module Team Leaders at the end of the course. This constituted an electronic library for their use. Part of the terms of reference of the consultant was to check materials for quality, indicate their copyright status and check file and source descriptions. However, his lack of experience and commitment and the limited possibility for supervision due to the commitments of the Technical Advisor to the physical course, meant that materials were only selected and archived and not checked for quality, copyright or sourcing. Consequently this work had to be done after the course.

4.2. Note taking & documentation

The course secretariat was responsible during the course for taking notes of discussions and to document results of exercises, field visits and working groups. Specifically the Technical Advisor was responsible for documenting the structure and methodology applied during the various modules, observing participant reactions and taking note of materials used to:

- Describe in detail exercises and assignments used that could be incorporated on an interactive CD-ROM (or modify descriptions provided by the Module Team Leaders)
- Be able to provide feedback to moderators for post-course review of their materials
- Be able to comment on or advise on the incorporation of materials on the CD-ROM
- Collect inputs for development of materials to be developed specifically for the CD-ROM (such as for example the actor scenarios).

4.3. Photographing and videotaping

The data management consultant was also responsible for documenting certain parts of the course in photos and video, especially those parts that could serve as "learning tools" for future users of the CD-ROM such as role plays, field visits, demonstration etc. Large parts of the course were documented on video, however taping was not based on any script nor was taped material properly classified, coded and described, making further use of the material very time-consuming and difficult.

5. DL related activities after the course

5.1. Review of materials

Based on feedback provided by Marielle Dubbeling and the course evaluator Sunita Kapila Module Team Leaders were requested to revise their materials. Further revision and editing of these final texts were undertaken by the CIP Lima team (M. Dubbeling, G. Prain, M. Warnars and T. Zschocke). Where necessary concepts were clarified, texts were illustrated with examples or case studies and the materials were summarized and structured into main lessons and "topic blocks". Final texts were edited by a professional language editor.

The CIP Lima team took the decision to elaborate the CD-ROM based only on the final materials made available for archiving in the face-to-face training course, despite the limitation of these materials (for example in terms of their content or the absence of documented exercises, etc). Resources were not sufficient to permit the development of original material. As a result the CD-ROM is of a less interactive nature than ideally would have been the case.

5.2. Development of glossary and toolbox

Using inputs provided by the Module Team Leaders as well as other information sources, A glossary of key technical terms was prepared, which should be of considerable use in its own right as well as contributing to the greater utility of the CD-ROM. Based on the inputs provided by the Module Team Leaders a "toolbox" was developed to bring together a range of techniques, processes and methods which had been discussed in the training course. These included health impact assessment, gender analysis and stakeholder analysis, qualitative research methods and monitoring and evaluation.

5.3. Development of scenarios and city profiles

To introduce the different CD-ROM chapters and to orient learning on the basis of real life contexts, actor and issue scenarios were developed based on examples that emerged from the physical course case studies. In addition, profiles of the participants' home cities are provided, including GIS-generated maps, pictures and access to the proposals developed by each city team.

5.4. Programming

Authoring of materials involved the use of Macromedia Authorware This included layout, interface design and adjusting the content to fit the computer screen. The basic requirements to run the program are Windows 95 or Windows NT or later, Pentium 1 233Mhz or later, minimum 64MB RAM, CD-ROM drive (16x or faster), high color (16 bit) monitor capable of 800x600 pixel resolution.

5.5. Dissemination and evaluation

The CD-ROM will be disseminated to all organisations, moderators, advisers and participants involved in the Anglophone African Training course. Furthermore copies can be made available by CIP and IDRC to other interested parties.

In addition, the content of the CD-ROM will be made accessible through the CGIAR Knowledge SILO, an on-line learning object repository hosted by ARIADNE - Foundation

for the European Knowledge Pool (<https://ariadne.cs.kuleuven.ac.be/siloCGIAR/>). This will make the material available not only to users within the CGIAR system, but also globally to users who search for learning material through ARIADNE and the Global Learning Objects Brokered Exchange (GLOBE) (<http://globe.edna.edu.au/globe/go>). Finally, CIP will make the learning material available as a Web-based course using an open source learning management system (LMS) called Moodle (<http://etraining.cip.cgiar.org>).

As part of the maintenance of the CD-ROM, the technical editors will continue to collect feedback from users, which will be incorporated to correct and/or improve the CD-ROM.

6. Lessons learned and recommendations

6.1 Reviewing instructional course materials for learning objectives and consistency

The physical Anglophone course materials did not in all cases have clear learning objectives fully consistent with the instructional content and this made the work of adapting these course materials for DL purposes challenging. Undoubtedly an important reason for this was the late delivery by some Module Leaders of their module materials. This meant that the intended joint review and revision of these materials during the second preparatory workshop and in the period leading up to the course was difficult or impossible. Timely preparation of course materials and their review for pedagogic approach, clarity of learning objectives and their consistency with content is crucial.

Preparation of a course, either face-to-face or self-instructional online courses, require careful preparation of their goals, objectives, teaching strategies, choice of media, and so on. In order to reuse the same material in different learning environments, it is recommended to develop modular learning materials or learning objects. These modules are media independent and could be used in any learning environment. International learning technology standards, such as Learning Object Metadata (see: <http://ltsc.ieee.org/wg12/index.html>; <http://www.imsglobal.org/metadata/index.cfm>) help to establish such a learning object strategy to develop modules that can be reused in different contexts. The reusability of learning objects increases the efficiency in developing these elements and using them for different purposes. At the same time they can be easily adapted to the special requirements of a face-to-face course or a Web-based course. This offers the possibility of single source publishing, an efficient means to use the same content in multiple publications and in multiple formats.

6.2. Well-structured course design and preparation of materials for face-to-face course can facilitate editing and re-packaging of materials for DL purposes

Developing a course, face-to-face or online, requires careful planning following proven instructional system development procedures. Clear guidelines and formats for the development of the different media elements help to facilitate this process. In terms of course design it is most important to specify learning objectives for each module, each of the module sessions or blocks and each of the exercises or assignments used. These learning objectives orient the trainer and trainee and guide the content of both face-to-face and DL learning.

In terms of course materials it is important to use common formats, with a consistent classification (labelling) and appropriate annotations and source references and copyright status. The copyright status of materials used in the physical Anglophone course was given limited attention, leading to problems and additional work when this material was used in a DL context. Also all materials should be digitised if possible. Materials to be developed by Module Team Leaders should include among other elements: (1) a detailed session or lesson plan; (2) assignment sheets, (3) Handouts, (4) a Reader and (5) audio-visual training materials:

1. Session plans: a detailed planning of the module and the different sessions/block, defining learning objectives, session contents, methods, materials needed and responsibilities.

These session plans detail the basic structure and detailed learning components of the module and facilitate multiple uses of instructional materials in the context of a "learning object" approach.

2. Assignment sheets: Instructions for assignments or exercises, which generally are no longer than 1 page, normally contain:

- an *introduction* to the exercise (what is it about, expected learning outcome: see also the detailed session plan)
- a description of the *materials* necessary to do the exercise (example cards, pens, flip chart)
- *procedure* or rules (description of the different steps of the exercise, for example how to perform a certain role play, in how many groups to divide and of what composition)
- an explanation on how to *report* the findings (for example each group identifies somebody to present group results in 5 minutes in plenary)

These assignment sheets, in combination with the documented results of the exercises during the course, will facilitate the incorporation of similar learning exercises in DL courses. One can envisage that the DL user/learner will be asked to address specific problems or challenges illustrated by the exercise. Then, s/he is presented with a set of options (branching). Depending on the choice of options, the user/learner is presented with appropriate feedback from the materials used in the course.

3. Case studies: These are written descriptions or visual illustrations of real-world cases used to illustrate certain information or used as an instrument for learning. Cases are the starting point for debate, while information and theory are illustrated with practical examples. Cases can stem from literature, from the Module Team Leader, Technical Committee member or other Module Team Member experience, and very importantly also from the participants themselves. Cases can be extensively described or just mentioned briefly (In Accra, the Municipality did x, while in Harare they did y). Cases should involve the so-called 'good' and 'bad' practices. The differences between cases provide participants with something to analyze and discuss.

As in face-to-face courses, successful learning in DL is achieved by situating it in a relevant or authentic context inevitably involving the use of case studies.

4. Thematic texts: These are texts written by the instructors for course participants that consist of a short statement of the main messages dealt with in each of the blocks and sessions. Text should be clearly related to the defined learning objectives and be self-explanatory.

These texts also provide easily usable content for CD-ROM or DL web-based environment.

5. Reader: A collection of additional texts (not necessarily written by the instructor but selected by him or her from existing literature that contributes to understanding of the topic) that participants take home for further study.

These additional reading materials can be easily included as pdf files on a CD-ROM or web page, provided that copyright requirements are fully complied with.

6. Audio-visual training materials:

- Short video clips
- Diagrams
- Charts
- Illustrations

The more audio-visual materials are used, the richer the learning-teaching environment, whether face-to-face or distance learning based.

6.3 The face-to-face course provides a good opportunity to collect and develop additional DL materials

The face-to-face course provides various opportunities to develop additional materials that can be used in a DL context. Demonstrations (for example how to make compost), role-plays and parts of field visits can be videotaped. Resulting video material can be edited and incorporated in DL to illustrate learning or be used as a tool for analysis (for example ask users to identify certain learning points based on viewing the role play).

Additionally actor or city scenarios can be developed, based on real-world persons and cities participating in the course to provide DL users a real-world context for learning.

7. Planning next steps

The demand for training on UA is increasing. DL is a way to broaden the outreach of training and respond to interests of specific target groups like students for example. The distribution of this CD-ROM is one way to respond to the growing demand, beyond that provided by the physical course in Nairobi. The inclusion of the course on line via the CGIAR Knowledge SILO, hosted by the Foundation for the European Knowledge Pool will make the material available not only to users within the CGIAR system, but also globally to users who search for learning material through the Knowledge Pool and the Global

Learning Objects Brokered Exchange (GLOBE). The web-based course will facilitate maintenance of the content and upgrading. It is also understood that IDRC plans to build on these experiences to develop a DL pilot in collaboration with a University to provide an accredited course. In this proposal, a DL web based course would be developed that uses materials developed in the different regional UA training courses that have been thus far supported by IDRC and its partners. It is clear that the experience of producing this CD-ROM will contribute significantly to that effort.

Annex 1

Credits for CD-ROM production and for the Anglophone Africa Physical Training Course

Technical editors:

Marielle Dubbeling, Consultant, ETC Foundation, Leusden, Netherlands
Gordon Prain, Global Coordinator, Urban Harvest, Lima, Peru
Maarten Warnaars, Information Officer, Urban Harvest, Lima, Peru
Thomas Zschocke, Head, Training Department, International Potato Center, Lima, Peru

Conceptual design and multimedia authoring:

Thomas Zschocke, Head, Training Department, International Potato Center, Lima, Peru

Language editor:

Freda Wolf, Lima, Peru

GIS support:

Henry Juarez, International Potato Center, Lima, Peru
Darwin Gomez, International Potato Center, Lima, Peru

Module authors:

George Ayaga (Module: Crop production)
Kenya Agricultural Research Institute,
P.O. Box 57811
Nairobi, Kenya

Athanase Bopda (Module: Concepts)
National institute of Cartography
B.P. 14704
Yaounde, Cameroon

Andrew Bradford (Module: Solid waste management)
Centre for Developing Areas Research,
Department of Geography,
Royal Holloway,
University of London, Egham, Surrey,
TW 20 0EX London, United Kingdom

Donald Cole (Module: Health impacts)
Senior Scientist, Institute for Work & Health, Associate Professor
Department of Public Health Sciences
Faculty of Medicine, University of Toronto
McMurrich Bldg Room 4015
12 Queen's Park Cres W.
Toronto, Canada ON M5S 1A8

Pay Drechsel (Module: Wastewater reuse)
Regional Director for West Africa
International Water Management Institute
C/o CSIR CAMPUS, AIRPORT RES. AREA
Martín Ordei Block
PMB CT 112, Cantonments
Accra, Ghana

Marielle Dubbeling (Module: Urban planning)
Formerly: Adviser on Urban Agriculture
Urban Management Programme, Regional Office for Latin America and the Caribbean
(UMP-LAC / UN-HABITAT)
Quito, Ecuador
Currently: Adviser on Urban Agriculture
Resource Centre on Urban
Agriculture and Food Security (RUAFA)
ETC Foundation
P.O.Box 64, 3830 AB
Leusden, The Netherlands

Malick Gaye (Module: Wastewater reuse)
Ecopole Ouest-Africaine
ENDA-SIGGI
B.P. 3370
Dakar, Senegal

Zarina Ishani (Module: Livestock production)
Mazingira Institute
PO. Box 14550
00800 Nairobi, Kenya

Nancy Karanja (Module: Solid waste management)
Senior lecturer: Department of Soil Science
University of Nairobi
P.O. BOX 29053
Nairobi, Kenya
Consultant: Urban Harvest
International Potato Center (CIP)
P.O. Box 25171
Nairobi 00603, Kenya

Ben Keraita (Module: Wastewater reuse)
Water Engineer
International Water Management Institute C/o CSIR CAMPUS, AIRPORT RES. AREA
Martín Ordei Block
PMB CT 112, Cantonments
Accra, Ghana

Gilbert Kibata (Module: Crop production)
Kenya Agricultural Research Institute
P.O. Box 57811
Nairobi, Kenya

Diana Lee-Smith (Module: Livestock production)
Sub-Saharan Africa Coordinator
Urban Harvest
International Potato Center (CIP)
P.O. Box 25171,
Nairobi 00603, Kenya

Winnefride Makumbi (Module: Livestock production)
City Minister for Social Improvement, Community Development and Antiquities,
Kampala City Council
P.O. BOX 3146
Kampala, Uganda

Shingirayi Mushamba (Module: Urban planning)
Senior Programme Officer Municipal Development Partnership -Eastern and Southern Africa
7th Floor, Hurudza House 14-16 Nelson Mandela Avenue Harare,
Zimbabwe

John Musisi Muwanga (Module: Livestock production)
Senior Agriculture Officer,
Department of Crop Production, Ministry of Agriculture, Animal Industry and Fisheries
P.O. Box 3146
Kampala, Uganda

George Nasinyama (Module: Livestock production)
Head, Department of Veterinary Public Health & Preventive Medicine,
Faculty of Veterinary Medicine, Makerere University
P.O. Box 7062
Kampala, Uganda

Seydou Niang (Module: Wastewater reuse)
Hydrobiologiste Environnementaliste
Maître Assistant de Recherche
Laboratoire de traitement des eaux usées
IFAN CH. A. Diop, BP 206 UCAD
Dakar, Sénégal

Mary Njenga (Module Solid waste management)
Research Assistant
Urban Harvest, International Potato Centre
P.O. BOX 25171
Nairobi, Kenya

Monica Opole (Module: Crop production)
Coordinator
Centre for Indigenous Knowledge Systems and by-Products (CIKSAP)
P.O. BOX 66344
Nairobi, Kenya

Gordon Prain (Module: Crop production)
Global Coordinator,
Urban Harvest, International Potato Center
P.O.Box 1558
Lima 12, Peru

Dan Twebaze (Module: Health impacts)
Project Coordinator
Kampala Urban Sanitation Project
Kampala City Council
P.O. Box 7010
Kampala, Uganda

Getachew Yilma (Module: Crop production)
Yilma Bio-consult
P.O. BOX 62214
Addis Ababa, Ethiopia

Henk de Zeeuw (Module: Concepts)
Coordinator
Resource Centre on Urban
Agriculture and Food Security (RUAF)
ETC Foundation
P.O. Box 64, 3830 AB
Leusden, The Netherlands

Technical advisory committee – physical course:

Donald Cole
Senior Scientist, Institute for Work & Health, Associate Professor
Department of Public Health Sciences
Faculty of Medicine, University of Toronto
McMurrich Bldg Room 4015
12 Queen's Park Cres W.
Toronto, Canada ON M5S 1A8

Pay Drechsel
Regional Director for West Africa
International Water Management Institute
C/o CSIR CAMPUS, AIRPORT RES. AREA
Martín Ordei Block
PMB CT 112, Cantonments
Accra, Ghana

Marielle Dubbeling (Course Advisor)
Formerly: Adviser on Urban Agriculture
Urban Management Programme, Regional Office for Latin America and the Caribbean
(UMP-LAC / UN-HABITAT)
Quito, Ecuador
Currently: Adviser on Urban Agriculture
Resource Centre on Urban
Agriculture and Food Security (RUAF)
ETC Foundation
P.O.Box 64, 3830 AB Leusden
The Netherlands

Naser Faruqi
Team Leader Urban Poverty and Environment International Development Research Centre
P.O. Box 8500
Ottawa, Ontario K1G 3H9, Canada

Diana Lee-Smith (Course Coordinator)
Sub-Saharan Africa Coordinator
Urban Harvest
International Potato Center (CIP)
P O Box 25171,
Nairobi 00603, Kenya

Luc Mougeot
Formerly: Senior Programme officer
Cities Feeding People Programme
International Development Research Centre
Currently: Senior Programme Specialist
Special Initiatives Division
International Development Research Centre
P.O.Box 8500
Ottawa, Ontario K1G 3H9
Canada

Shingirayi Mushamba
Senior Programme Officer Municipal Development Partnership -Eastern and Southern Africa
7th Floor, Hurudza House 14-16 Nelson Mandela Avenue Harare, Zimbabwe

George Nasinyama
Head, Department of Veterinary Public Health & Preventive Medicine,
Faculty of Veterinary Medicine,
Makerere University
P.O. Box 7062
Kampala, Uganda

John Onyatta
Research Development Department
Ministry of Education Science and Technology,
P. O. Box 30568-00100
Nairobi, Kenya

Gordon Prain
Global Coordinator, Urban Harvest
International Potato Center
P.O.Box 1558
Lima 12, Peru

Henk de Zeeuw
Coordinator
Resource Centre on Urban
Agriculture and Food Security (RUAF)
ETC Foundation
P.O. Box 64, 3830 AB
Leusden, The Netherlands

Support team:

Reuben Anangwe
Photocopying and general support
International Potato Center
Sub-Saharan Africa
P.O. Box 25171
Nairobi, Kenya

Michael Baumeister
Course Secretariat
Resource Centre on Urban Agriculture and Forestry (RUAF), ETC Foundation
P.O. Box 64
3830 AB Leusden, The Netherlands

Elijah Igunza
Purchasing Officer
International Potato Center
Sub-Saharan Africa
P.O. Box 25171
Nairobi, Kenya

Sunita Kapila
Course Evaluator
Nairobi, Kenya

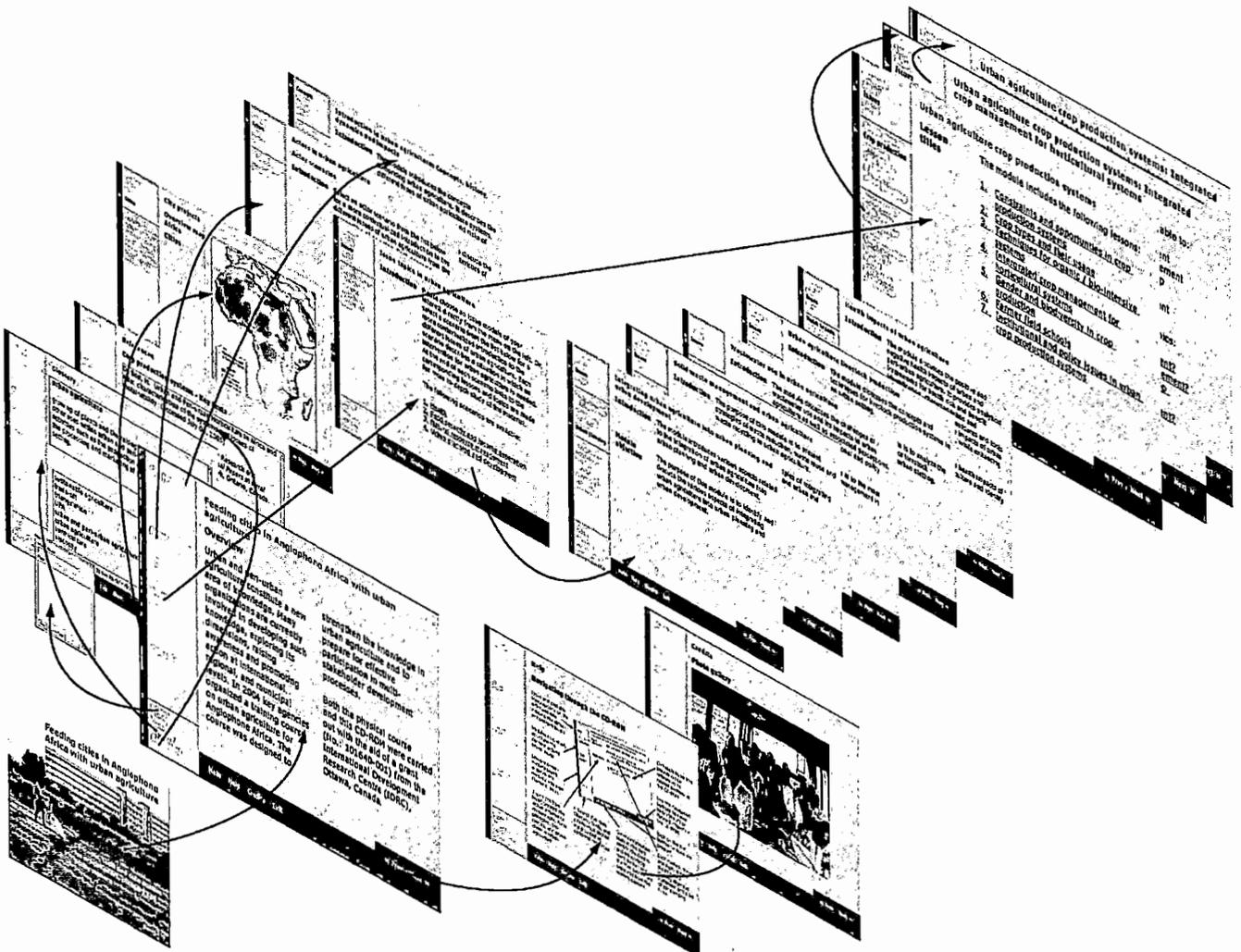
Peter Kingori
Training Assistant
Urban Harvest
International Potato Center
Sub-Saharan Africa
P.O. Box 25171
Nairobi, Kenya

Emily Ndoho
Administrative Assistant
International Potato Center
Sub-Saharan Africa
P.O. Box 25171
Nairobi, Kenya

Mary Njenga
Research Assistant
Urban Harvest
International Potato Center
Sub-Saharan Africa
P.O. Box 25171
Nairobi, Kenya

Simon Obaga
Accountant
International Potato Center
Sub-Saharan Africa
P.O. Box 25171
Nairobi, Kenya

Henry Odiko
Training Course - Distance Learning Consultant
Nairobi, Kenya



Annex 2 Diagram of CD-ROM structure