The Role of Urban and Peri-urban Agriculture in building resilient cities

IHS: Urban Management Tools for Climate Change

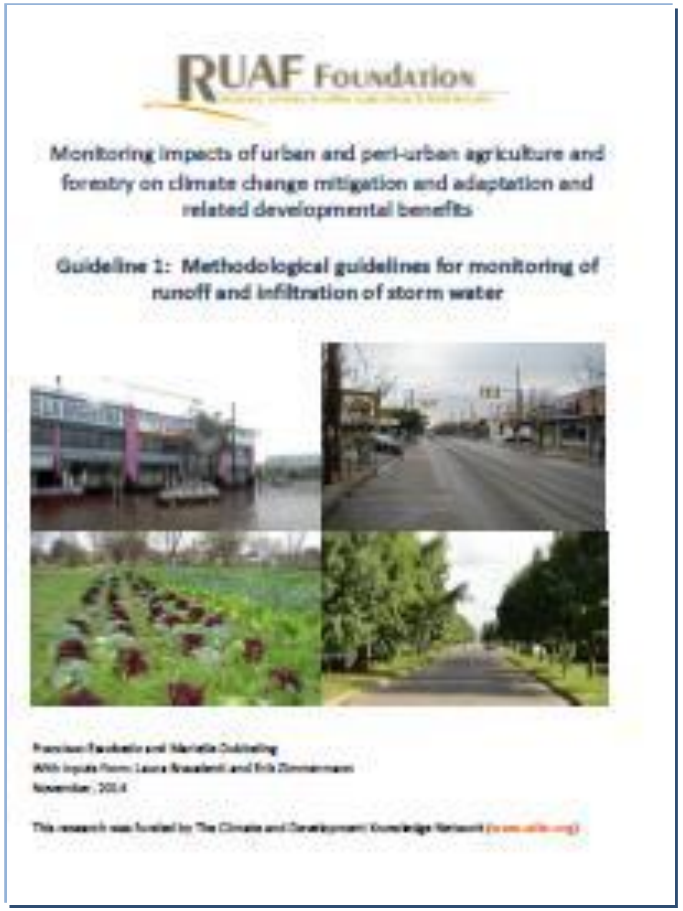
Rotterdam, 19 June 2017

René van Veenhuizen, RUAF FOUNDATION

Focus of this morning

Cities, Food and Climate Change

- Cities as major contributors
- Cities are directly and indirectly affected (esp. urban poor)
- Cities have important role to play in mitigation and adaptation (and are able to do so)
- Urban and Peri-urban Agriculture and Forestry (UPA) as an important adaptation strategy



Programme

09:00-10:30

-Introduction: Urban Agriculture
-Session 1: CC and Cities
-Session 2: role UPA
-Video

11:00-12:30

-Session 3: Working Groups
-Session 4: What cities can do
Examples

-Questions and Discussion: raise your hand !

RUAF Global Partnership on Sustainable Urban Agriculture and City Region Food Systems

- ✓ Members: Quito, Ghent and Toronto, IWMI, the Chinese Academy of Sciences, the Centre for Sustainable Food Systems, Mazingira and Está
- ✓ Projects and programmes in over 50 cities, since 1999
- ✓ Urban food systems, food security, local economic development, resource recycling and adaptation to climate change

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Preservation of low-lying flood zones for agricultural production (Antananarivo, Madagascar).
Photo: M. Dubbeling

POLICY BRIEF
Urban agriculture as a climate change strategy

Key policy messages

- Climate change impacts on cities are increasing. Cities must embrace the triple challenges of reducing the vulnerability of their population to climate change; of mitigating their GHG emissions and of providing sufficient and nutritious food for their residents.
- There is growing recognition of urban and peri-urban agriculture and forestry as an important strategy for climate-change adaptation and disaster-risk reduction, while also bringing mitigation and important developmental benefits.
- Investments in agriculture and green infrastructure have proven to be more cost-effective than other conventional approaches for climate change adaptation.
- Several cities already promote urban agriculture in floodplains, develop rooftop gardens in dense urban settlements, include urban forestry in new housing schemes and preserve peri-urban greenbelts for local food production.
- In order to build more sustainable and resilient cities, local and national governments need to better link food systems to urban planning agendas and integrate urban agriculture in their climate change strategies.
- Policy participation of all actors in the food chain, from producers to consumers, needs to be enhanced to ensure more relevant, accountable equitable and sustainable strategies.

Towards better integration of urban agriculture in climate change strategies

Urbanisation and climate change are closely linked. CO2 and other greenhouse gasses (GHG) are mainly emitted in urban areas.

Cities, and their sheer number of inhabitants, are at the same time also directly and indirectly affected by climate change. Key issues include rising temperatures, increasing rainfall, flooding and urban food insecurity. Rapid urban growth will only increase the number of highly vulnerable urban communities.

Cities have an important role to play in climate change mitigation and adaptation, while at the same time they need to ensure adequate access to basic urban services such as water, food and energy to their growing populations.

Negative climate change impacts on food production and productive arable lands will impact cities with heavy reliance on food imports. The urban poor will be most affected by disruptions in food supply and increasing food prices.

Different forms of urban and peri-urban agriculture and forestry are being adopted by cities such as Bobo-Dioulasso (Burkina Faso), Rosario (Argentina), Kesbewa (Sri Lanka), Kathmandu (Nepal), Dumangas (Philippines) and New York (USA) to respond to these challenges.

This brief will provide concrete examples and related policy support measures to serve as a source of inspiration.

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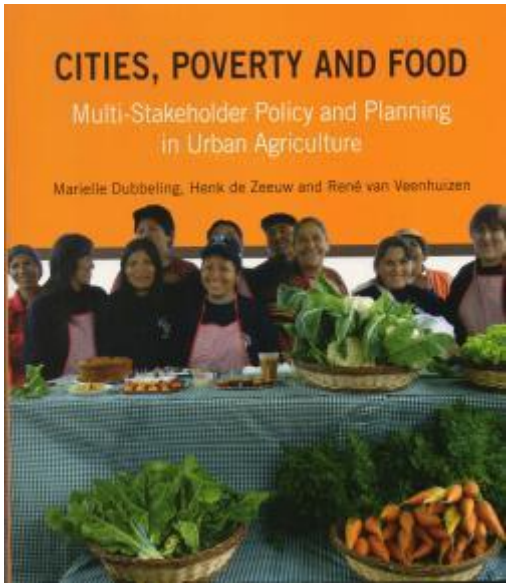
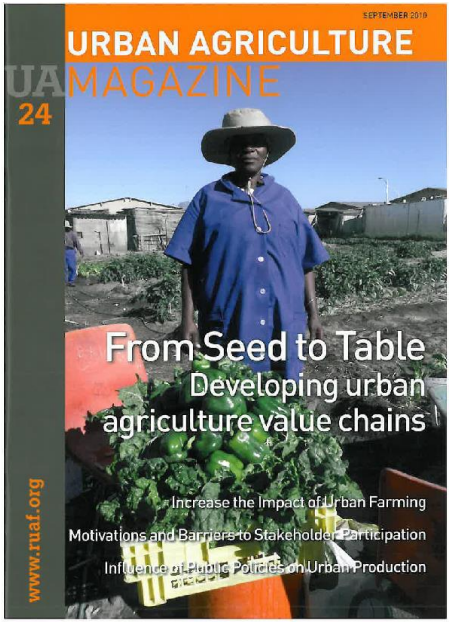




Short Introduction

How and why should food be considered within the climate policies of cities?

https://www.youtube.com/watch?v=zoBhghBVGhA

3 minutes

By: UNEP (UN HABITAT, FAO, supported by RUAF)

A resilient city

- Is a city that has the **ability to respond to and recover** from the impacts of risks that it may face (e.g. flooding; food shortages etc).

- Rather than focusing on vulnerability, a focus on **resilience** means *putting emphasis* on **what can be done by a city or a community itself**, *building on existing* natural, social, political, human, financial, and physical capital, while at the same time *strengthening its* ***capacities***.

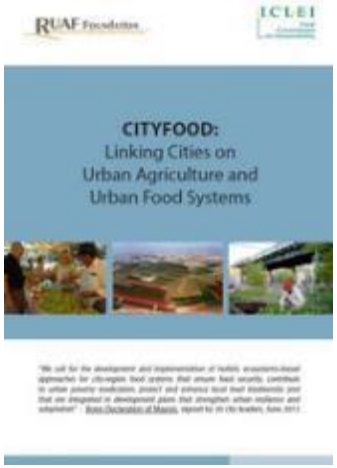
SUSTAINABLE DEVELOPMENT GOALS
17 GOALS TO TRANSFORM OUR WORLD

HOME ABOUT SECRETARY-GENERAL GOALS TAKE ACTION KEY DATES MEDIA WATCH AND LISTEN

Goal 11: Make cities inclusive, safe, resilient and sustainable

MILAN URBAN FOOD POLICY PACT

Dutch City Deal Food on the Urban Agenda



City Region Food Systems
Sustainable Food Systems and Urbanization

Landscapes for People, Food and Nature
An International Initiative for Dialogue, Learning and Action

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Urban and peri-urban agriculture

- **Agricultural production** (crops, trees, livestock, fish) **in and around urban areas** for food (vegetables, eggs, milk, meat, ..) and other products (e.g. medicinal and aromatic herbs, fodder, fuel, flowers and ornamental plants, water storage, a/o)….
- And related **inputs supply, transport, processing, marketing** and support services…
- Often combined with **other functions** (recreation, urban greening, recycling of wastes, capturing CO2, etcetera), as part of the **urban system**

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RESOURCE CENTRES ON URBAN AGRICULTURE & FOOD SECURITY

Diversity of types of Urban & Peri-urban / Near rural Agriculture

Subsistence

The global area of urban lands is estimated at about **11.0 %** of all <u>irrigated</u> croplands and **5 %** of all <u>rainfed</u> croplands

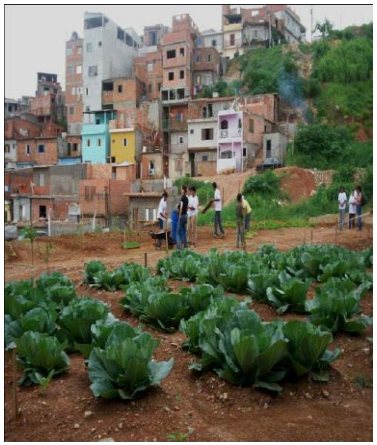
<u>Within 20 km</u> of urban boundaries this is **60 and 35 %** respectively.

Variety of urban farming systems

a) In the urban spaces used








1. Micro-farming in and around the house

b) in main line of production

C) in level of technologies used

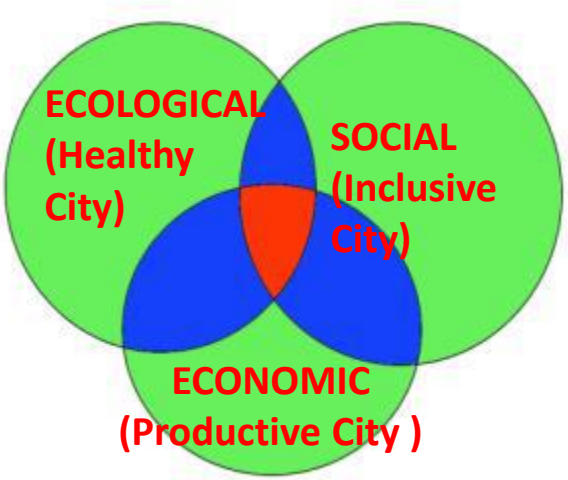




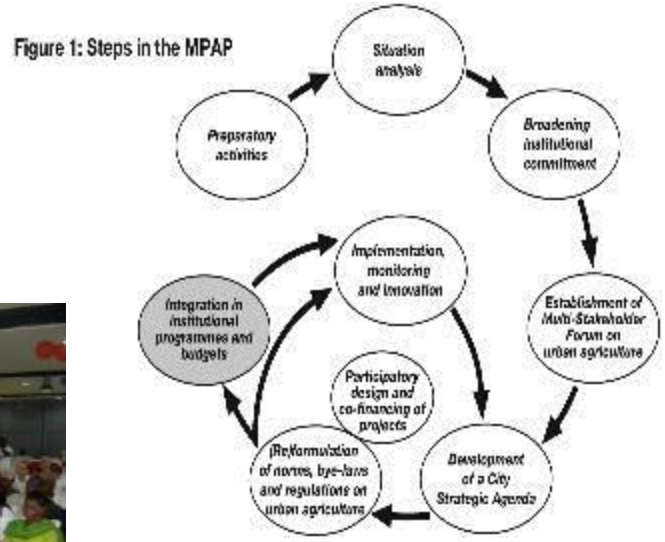


d) in degree of formality, organisation and marketing

Multiple Benefits



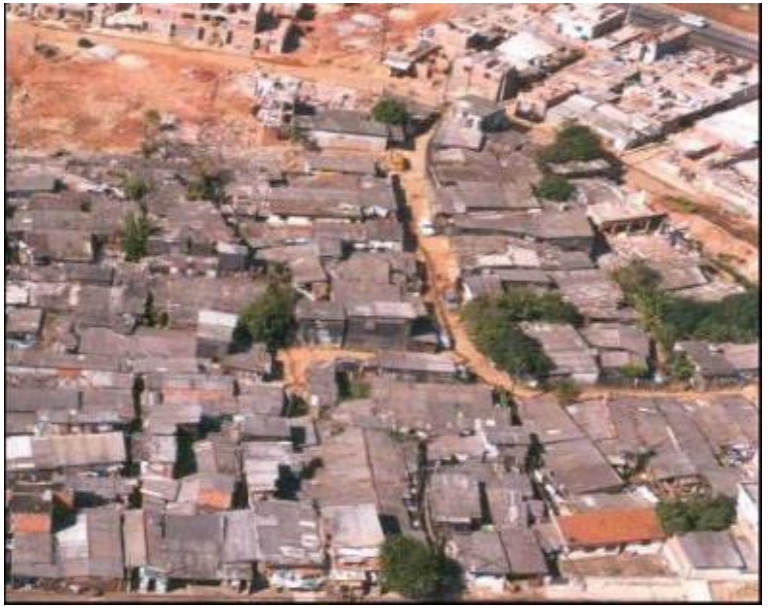
Multiple Levels And Actors



North South linkages

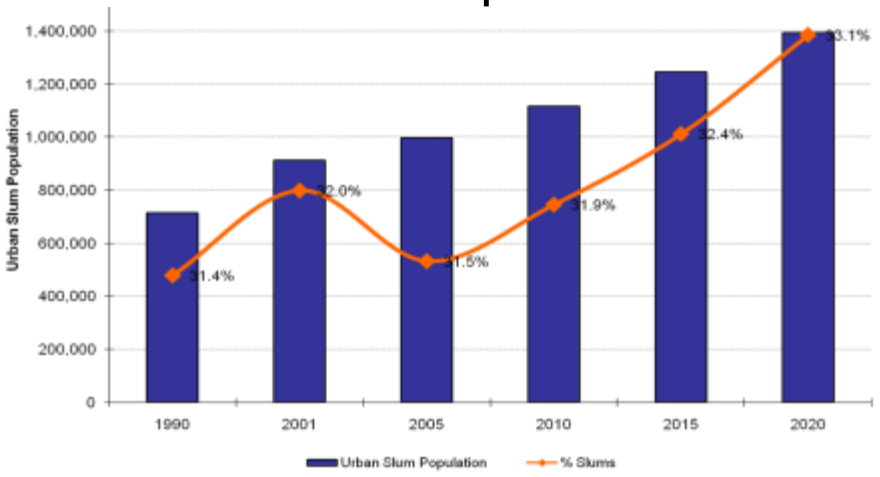
Do you recognise this ?

Session 1 WHY CITIES?



Increased attention for urban food insecurity

- Since 2008 majority of world population lives in cities
- Urban population to double before 2050
- by 2030, 60% of the world's population will live in cities
- 95% of the urban growth will take place in cities of the South
- Neglect of national investments in rural agriculture; Growing dependence on imported food and macro food retailers; Migration to cities and abroad.
- Shift of poverty to urban areas; High vulnerability of the urban poor to increases in food prices and economic crisis; Decreasing access of urban poor to fresh and nutritious food




SODA
bubbles


PHOSPATE
SELLOUT IS
SECRET

Urban Peri-urban Rural

Food, water, fuel, raw materials

Urban resilience vs.
- Population growth
- Climate change
- Economic crisis
- Political crisis

Hotspot of resource depletion, pollution and urban growth

Rural resilience vs.
- Resource depletion
- Urban waste streams
- Climate change

Food waste, wastewater, solid waste

CGIAR RESEARCH PROGRAM ON Water, Land and Ecosystems

- Analyzing CRFS, resilient food flows and food sheds
- Feasibility studies for resource recovery businesses

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RRR

Complex dynamics of urban-rural development need policy re-orientation

-From emphasis on increasing production as a rural issue, to include the diversity of urban and rural based production and consumption.

-Include the variety of actors, along formal and informal value chains.

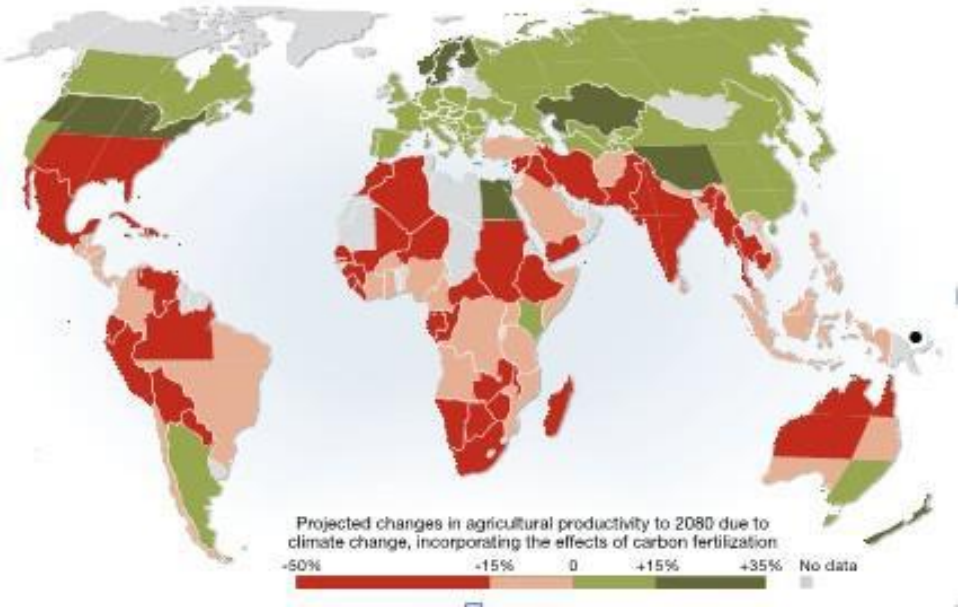
-From sectoral to territorial policies, seeking synergies and enhance urban – rural linkages.

-Address a mix of drivers (economic but also social and environmental: include employment generation in the changing food system).

Climate Change

Increases in means: temperatures, precipitations, sea level

Increases in extremes (more frequent and intense): rains, heat or cold waves, drought, abrupt climate changes



Effects on food supply:

- Lowering production in rural areas
- More frequent / serious disruptions in transport
- Climate refugees

Cities: part of the problem, feeling the impact, part of the solutions

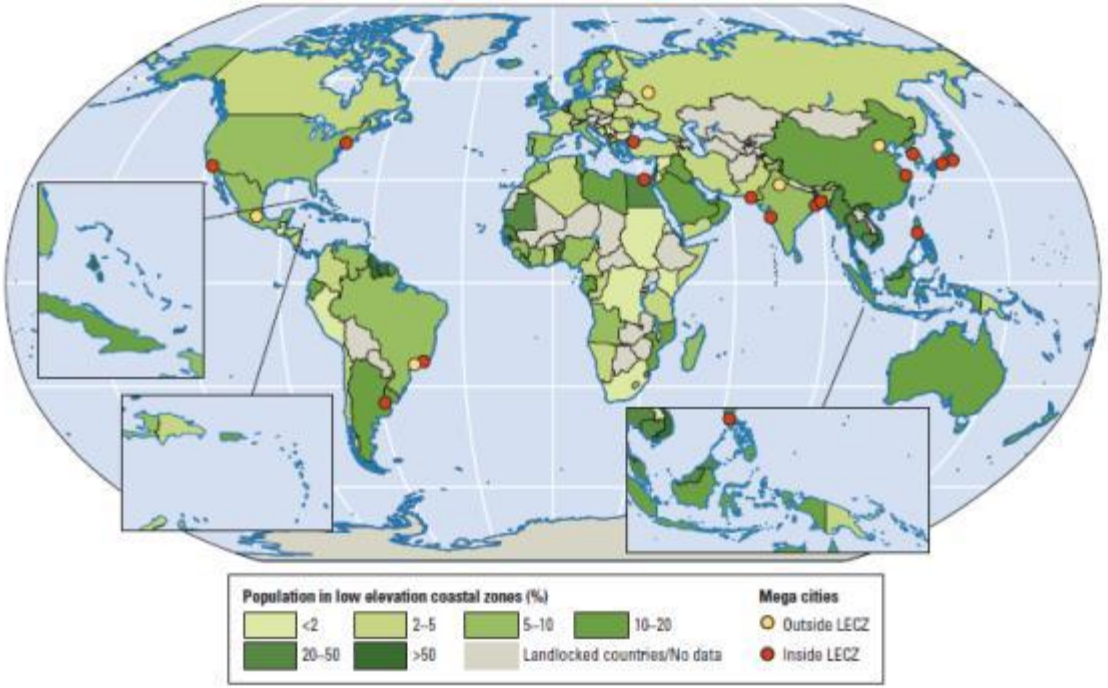
- The **contribution** of cities to GHG emissions, and hence climate change
- The direct and indirect **impacts** of climate change on cities, and the sheer number of people affected by it

"*Increasingly, food insecurity is one extreme weather event away and* ***urban centres are highly vulnerable****.*

In the context of urbanization and agriculture, the role of ***cities*** *is becoming more prominent in creating more* ***resilient urban food systems*** *(Statement made at UN General Assembly on Food and Nutrition, 2013)*.

Most affected cities

- **CITIES IN HIGHLY IMPACTED REGIONS**: tropical, sub-tropical eco-systems, arid and water-stressed countries, island states
- **COASTAL CITIES**: all coastal cities, particularly those in deltaic environments, those with high levels of land-reclamation
- **CITIES IN LESS DEVELOPED COUNTRIES**: where institutional resilience, financial resources and technical capacity are scarce



Impacts of climate change on cities

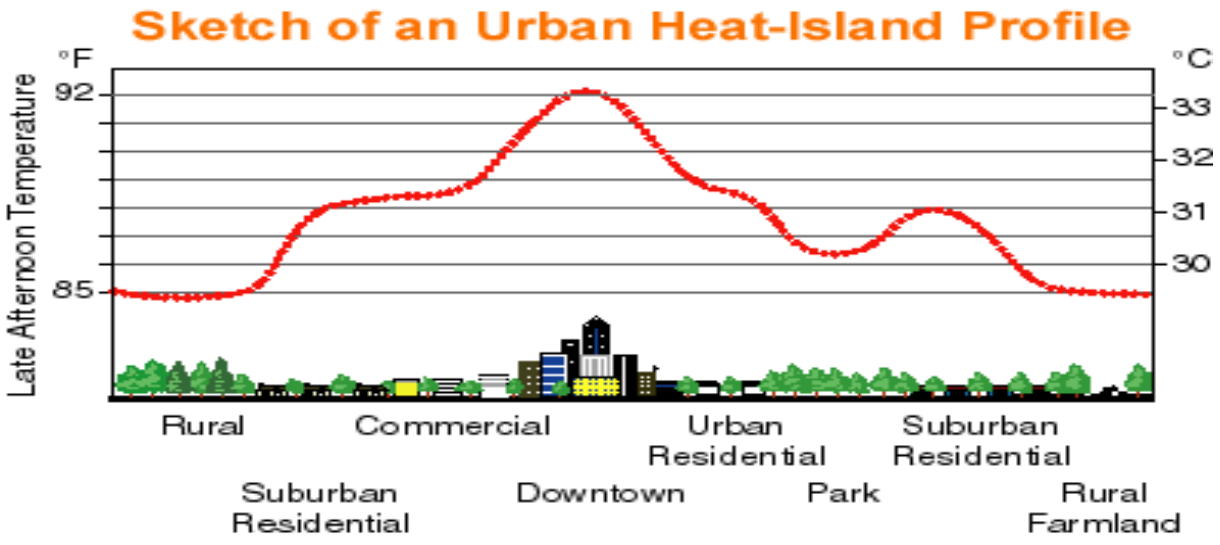
DIRECT EFFECTS

1. In areas with higher rainfall: increased risk of **floods** and **landslides**, leading to **human losses**, **damages of infrastructure, houses, economic losses, more poverty** and **epidemics**

Impacts of climate change on cities

DIRECT EFFECTS

2. In areas where CC increases temperatures: enhanced **urban heat island effect** and **heat waves** leading to **more energy used for cooling and refrigeration, more smog and air pollution** and more **health problems/higher mortality**



Impacts of climate change on cities

INDIRECT EFFECTS

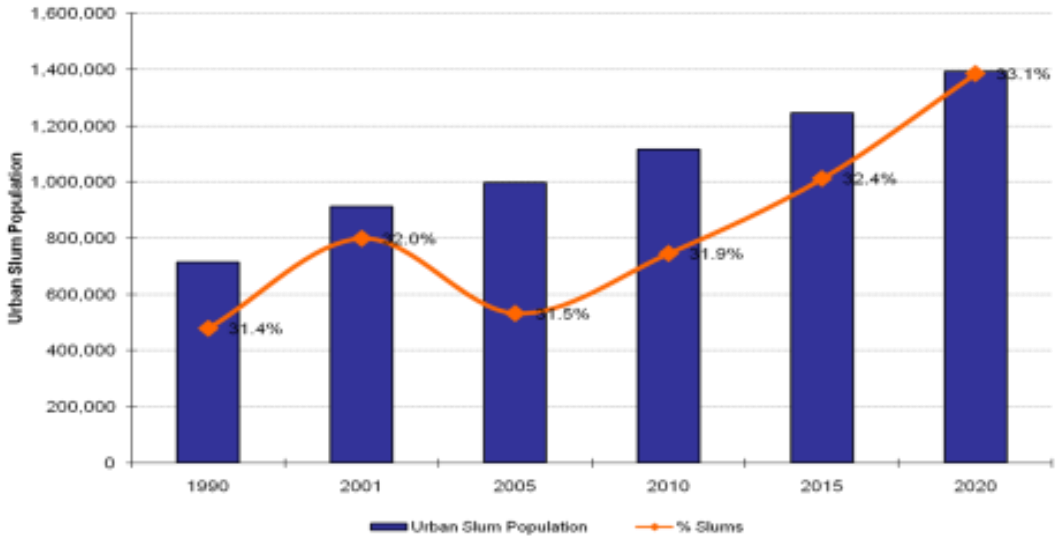
- CC may **lower agricultural production in the hinterland** due to changes in average temperature or precipitation and more extreme events (storms, floods, droughts, hail)
- **Transport to urban areas may be disrupted** more frequently by storms or floods
- Leading to **higher food prices**
- **Inflow of displaced households** from affected rural areas
- Cities' **fresh water resources** may be negatively affected (quality and quantity)

Cities are almost exclusively dependent on food imports

- Cities like London only have a 3-day supply of food
- High vulnerability to food price hikes/changes
- High vulnerability to disruptions in food supply
- Cities are major contributors to GHG emissions, with about 33% of global emissions related to food

URBAN POOR ARE AT GREATEST RISK

- Vulnerability due to their **location**: in areas that are **prone to floods or landslides** and with poor housing, sanitation, drainage
- **Low/irregular income; informal jobs;** high vulnerability to **changes in food and fuel prices**
- Vulnerability due to **poor nutrition and health** of the urban poor
- **Low capacity** of the urban poor to cope with the effects of climate change



Session 2

WHY URBAN AGRICULTURE AND FORESTRY?

Need for more resilient urban (food) systems

- More resistant to impacts of climate change
- Less dependent on food imports
- Less vulnerable to food price increases
- That enhance access of the urban poor to fresh, nutritious and safe food at affordable prices

Urban agriculture is part of -and interacts with- the urban ecological, social and economic system

- **Agricultural production** (crops, trees, livestock, fish) **in and around urban areas** for food (vegetables, eggs, milk, meat, ..) and other products (e.g. medicinal and aromatic herbs, fodder, fuel, flowers and ornamental plants, water storage, a/o)….
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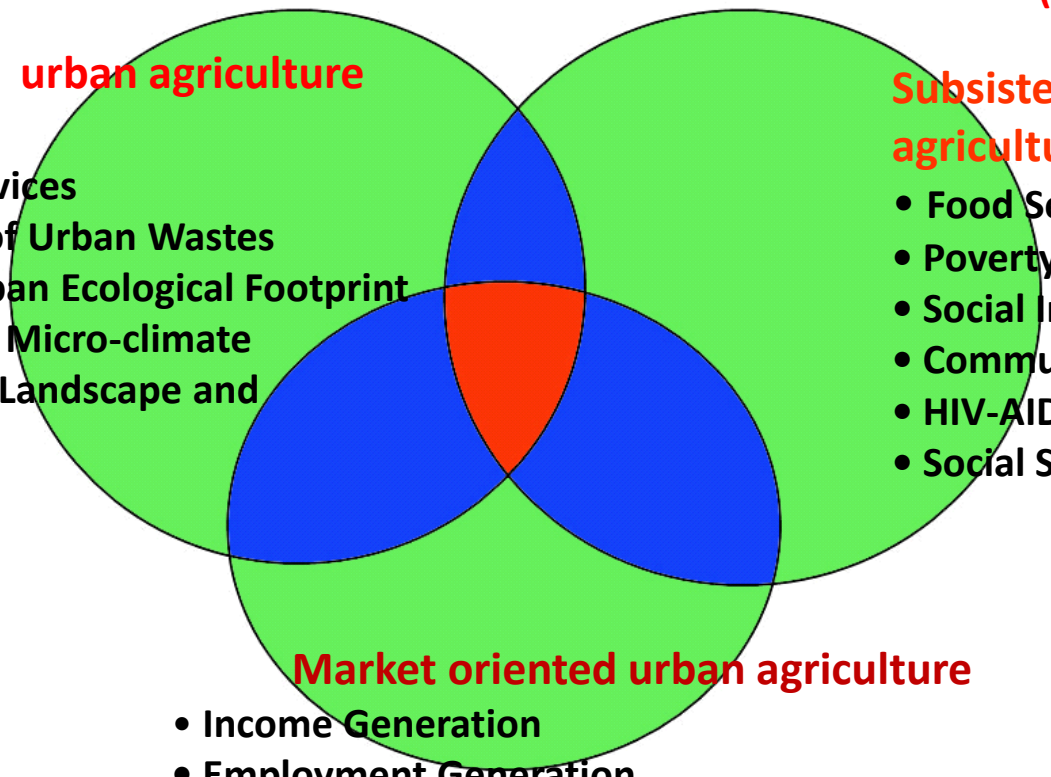
Multiple Benefits

ECOLOGICAL
(Healthy City)

SOCIAL
(Inclusive City)



Multi-functional urban agriculture

- Urban Greening
- Recreational services
- Productive Use of Urban Wastes
- Reduction of Urban Ecological Footprint
- Improved Urban Micro-climate
- Management of Landscape and Biodiversity
- Climate Change

Subsistence oriented urban agriculture

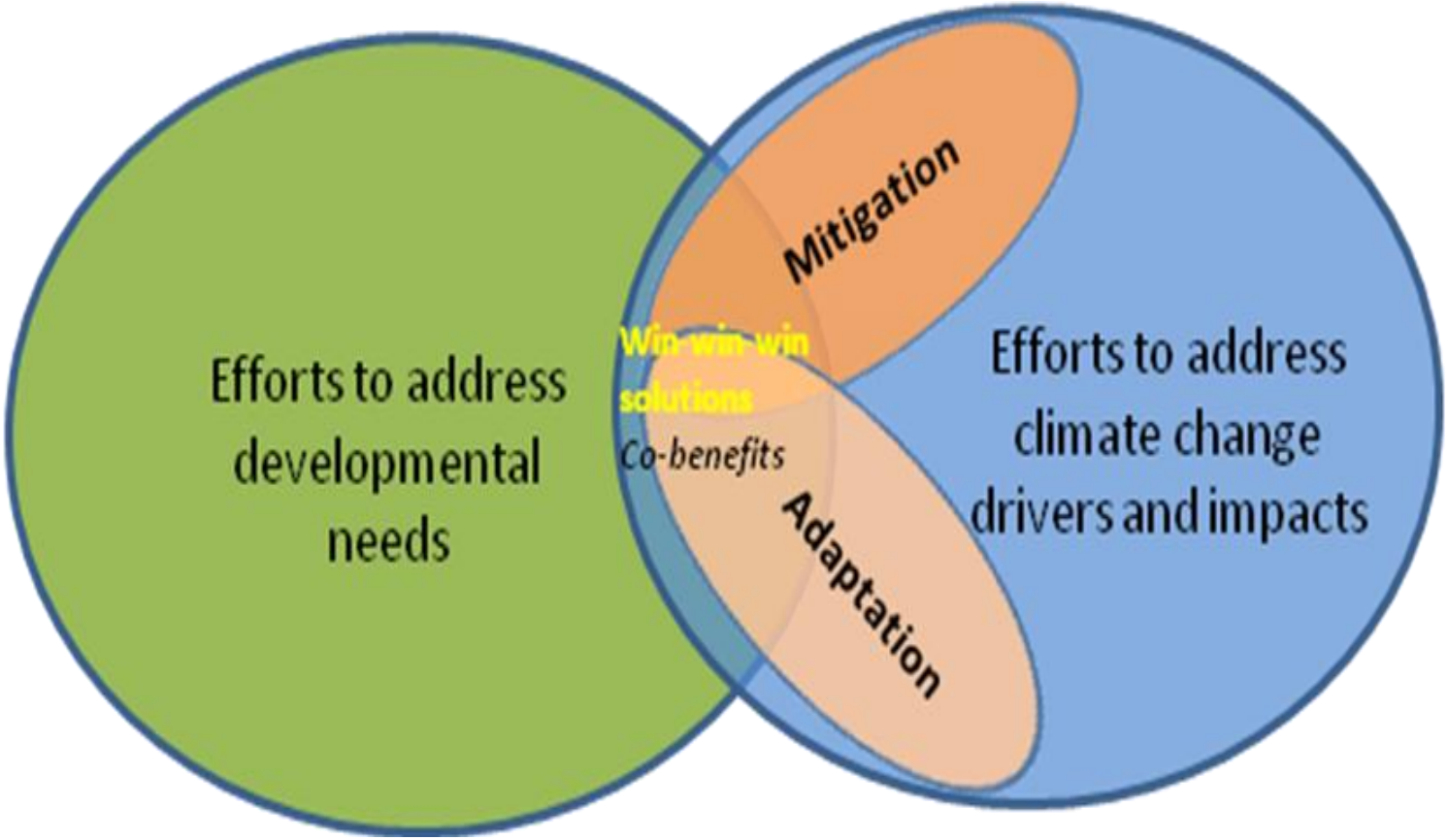
- Food Security & Nutrition
- Poverty Alleviation
- Social Inclusion
- Community Building
- HIV-AIDS Mitigation
- Social Safety Net

Market oriented urban agriculture

- Income Generation
- Employment Generation
- Enterprise Development
- Market chain development

ECONOMIC
(Productive City)

Include UPA/F:
attending development needs
+ CC adaptation & mitigation
: a win-win solution



Impacts UPAF on climate change **adaptation** and mitigation

-Reduce vulnerability at **city level** (resilient urban food system)

-Reduce vulnerability at **HH level** (diversify food and income sources)

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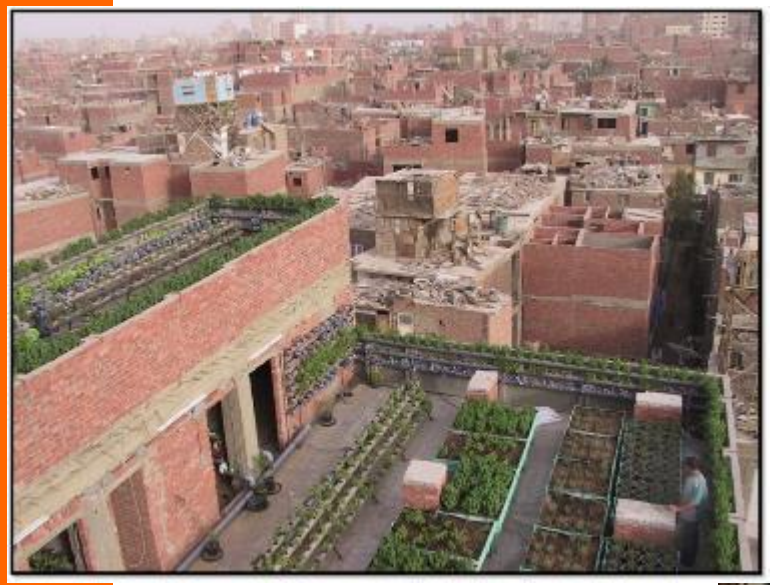
RESOURCE CENTRES ON URBAN AGRICULTURE & FOOD SECURITY

Impacts UPAF on climate change **adaptation** and mitigation

-Reduce impacts of increasing temperatures/ UHI

-Reduce vulnerability to flooding



Impacts UPAF on climate change adaptation and **mitigation**

-Reduce food transport, storage and packaging

-Recycle organic wastes and wastewater

Impacts UPAF on climate change adaptation and mitigation **Depend on**

-Type of UPAF and location

-Production systems and technologies used

-Trade offs (e.g. consumer transport)

RUAF/CDKN: Kesbewa (Sri Lanka)

Local climate change challenges:

-(Expected) increase in rainfall/ flash rains

-Urbanisation of low lying agricultural lands: increase in flood risks

-Increasing dependence on food imports

-Increasing urban temperatures

UPAF responses:

-Productive use of abandoned paddy-fields and flood areas with salt resistant paddy and mixed vegetables

-Agroforestry type of space-intensive home gardening

RUAF/CDKN : Rosario (Argentina)

Local climate change challenges:

-Increased flood incidences

-Increasing temperatures and energy use

-Increasing dependence on food imports

UPAF responses:

-Preservation of peri-urban greenbelt for local food production

-Promoting (productive urban) greening

-Integrating UPAF in watershed management

RUAF/CDKN : Kathmandu (Nepal)

Local climate change challenges:

- Vulnerability to disruptions in food supply
- Smog
- Urban waste management

UPAF responses:

- Promotion of rooftop gardens and household waste recycling/rainwater harvesting

RUAF/CDKN : Bobo Dioulasso (Burkina Faso)

Local climate change challenges:

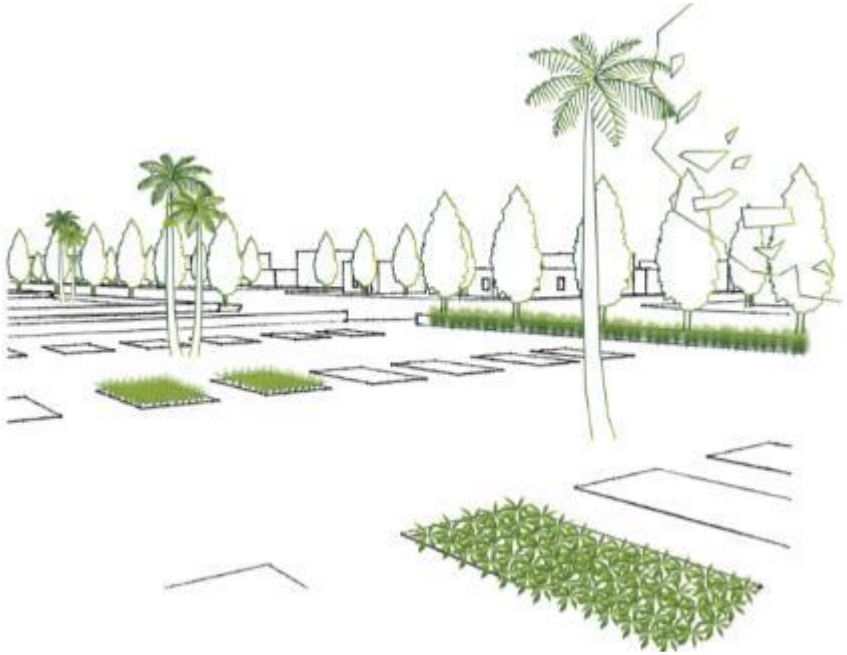
-Increasing temperatures

-Vulnerability to disruptions in food supply

UPAF responses:

-Multifunctional use of greenways

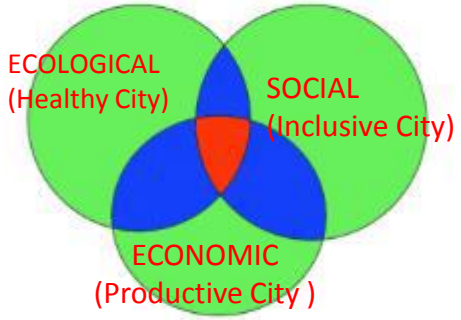
-Preserving peri-urban forestry

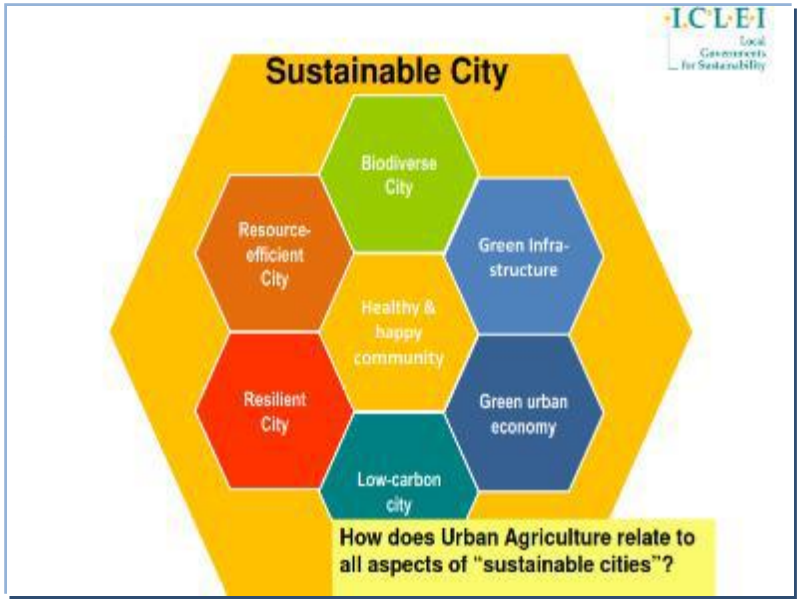


URBAN AGRICULTURE ADDRESSESS ACTUAL URBAN CHALLENGES

1. Growing urban poverty and social exclusion
2. Growing food insecurity and malnutrition in cities
3. Growing need to enhance resilience of the cities and reduce climate change/disaster risks and ecological foot print
4. Growing waste management problem
5. Growing need for green spaces and recreational services for the urban population

Multiple Benefits





Enhancing urban food security & nutrition

• About 15-20% of the world's food is produced in urban areas; For perishable products this may rise to 60 % or more.

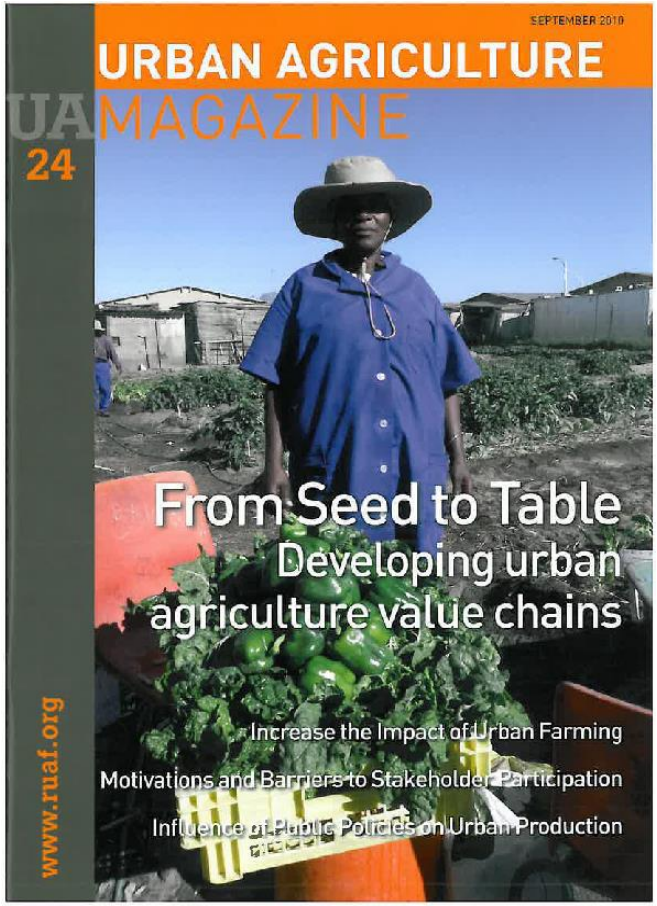
• poor urban households produce 20-60 % of their food themselves (e.g. East Jakarta 18 %, Kampala 50 %, Harare 60 %)
<variation: location, season>

• Producing households are less vulnerable to economic crisis and increases in food prices than non-producing households (FAO, RUAF)

•The costs of supplying food from distant sources are rising rapidly; often only limited cold storage transport facilities available

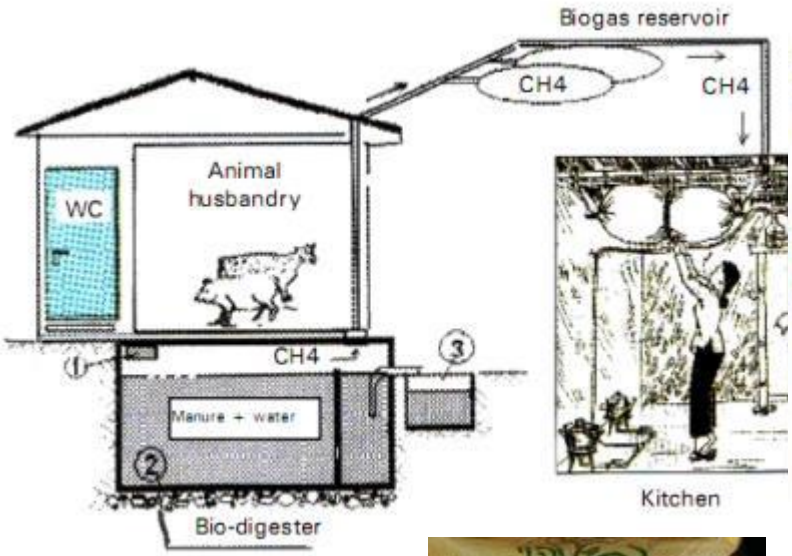
Reducing urban poverty and social exclusion

- UPA is an important **primary or secondary *source of income*** for *large numbers* of poor urban people (RUAF, FAO)
- In market oriented UPA often **good *net returns*** *to capital* invested are realised (*ODI, FAO Studies*)
- UPA is often used to facilitate ***social integration*** of newcomers and disadvantaged groups and *community development*
- UPA **stimulates *SME's*** in compost production, food processing, marketing and agro-tourism (**green jobs**)



Integration in Youth employment generating strategies

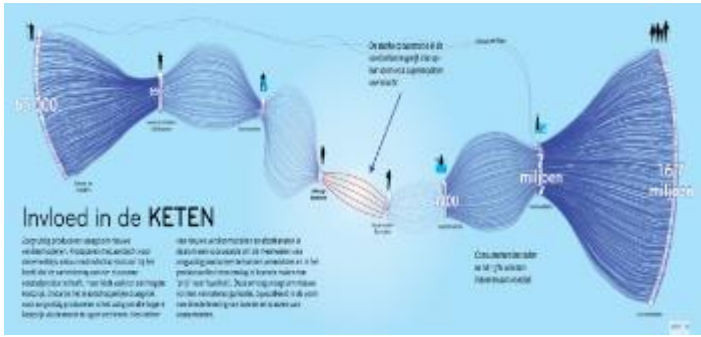
- Exploring the potential of *green jobs*: UPA as a driver for (youth) job creation in clean *energy* production through *waste* re-use. (ILO)



...and productive decentralised waste management

Or micro-enterprise development

Short food supply chains



- Increasing number of "social enterprises", many set up by youth
- Value addition through branding (local, safe, healthy, social, organic, quality) is an important success factor of SFSC
- These can be built on trust (government accredited; participatory guarantee schemes; direct contact with producers)
- Need for market diversification (farmers markets; institutional schemes; supermarkets; consumer boxes) and stable linkages to consumer groups

Water – Agriculture Nexus in Freetown, Sierra Leone

Zoning and **allocating** low lying areas and valleys for agriculture to **reduce impacts of flooding**, storm water runoff is reduced, and excess water is stored and infiltrating in these **green open spaces**

Political agreement *brokered by Freetown Urban and Peri Urban Agriculture Platform*

- Min. of Lands maps and demarcates the areas;
- Local authorities sign agreements with farmers groups;
- Min. of Agriculture provide extension services and inputs;
- Finance and Credit Institutions accept as collaterals
- FUPAP: Conflict Mgt + Monitoring Impact

Mainstream business that include innovative strategies

Image 11: Urban gardens in Chicago O Hare Airport

Source: http://www.autogrill.com/en/stories/ohare-urban-garden-hanging-between-gates

Image 12: Sale of W&D products in a supermarket in the Netherlands

Large-scale retail and catering promote food waste reduction, local/regional sourcing and on-site food production

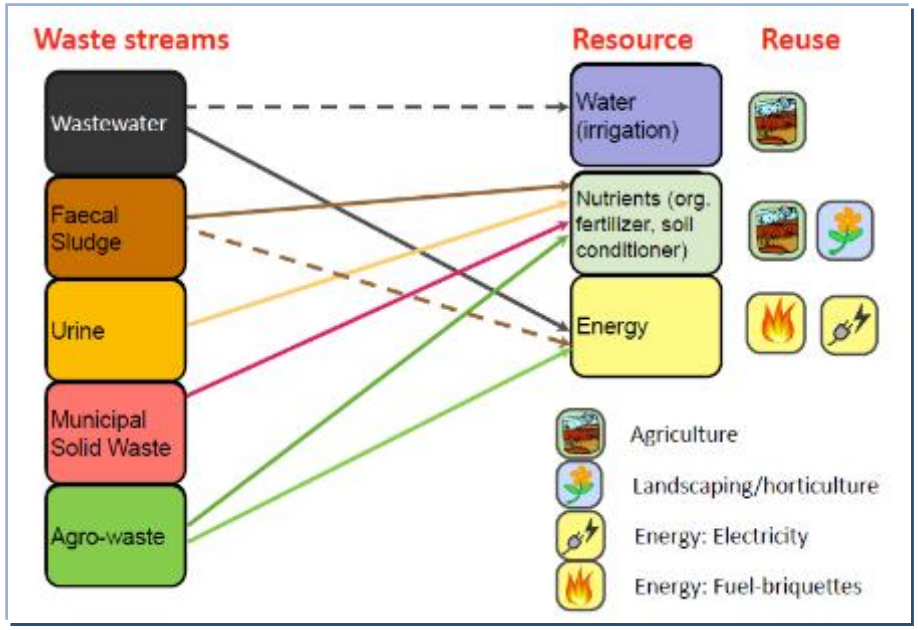
Auto Grill, Accor

Technology Companies

Vertical Farming/Philips, etc.

Waste and Electricity Companies

Reducing food waste and using residues



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IWMI International Water Management Institute

Risks associated with UPAF

Risk reduction measures include:

-Improving irrigation water quality

-Farmer education on safe irrigation practices, proper crop choice, disease management etc.

-Education of food retailers in proper handling of the produce

-Education of consumers on washing and cooking of produce

-Separation of waste streams

-Prevent production of green vegetables within a distance of 50 meters from main high ways

-Promote alternative crop choice e.g. tree or fodder growing

-In intensive production areas: monitoring of residues in crops and groundwater

Inclusion of urban agriculture in Amman "Clean Development" Plan

- **Urban agriculture & forestry** is made one of the five **components of the City Plan**
- Promotes intra- and peri-urban forestation (**applying wastewater**)
- Enhances access of urban poor to agricultural land: Identification of vacant open spaces; setting up of a Land bank
- Promotes productive green roofs

Resilient urban (food) systems include mixes of local, rural or global production

- Less dependent on food imports
- Less vulnerable to food price changes
- That enhance access of the urban poor to fresh, nutritious and safe food at affordable prices
- More resistant to impacts of climate change

Trends: local and ecological production

Trends: professionalization and intensification







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Questions?

- Nepal video : http://www.ruaf.org/publications/roof-top-gardening-kathmandu-nepal

- Nepal Uganda video: http://www.cityfarmer.info/2015/02/22/city-seeds-documentary-urban-farming-in-nepal-and-uganda/

Session 3

Working in Groups (Break) = 45-60 min.

13 participants: 3 city teams of 4/5 persons

Discuss in general your ideas, based on your country (10 min), and than focus on one city or on Nepal / Uganda cases to answer these questions (20 min):

- What are the main CC related problems?
- Which key problem(s) might urban agriculture address?
- What results do you realistically expect from promoting urban agriculture?
- What type(s) of urban agriculture you want to promote to that effect; where; why?

Short presentations (each 5 min)
And discussion (10-15 min)


Presentations and Discussion

Session 4: WHAT CITIES CAN DO?

Why include UPAF in city climate change/development strategies?

1. Cities are major contributors to climate change

- **Cities** produce ca. 70 % of GHG emissions worldwide
- 90 % of the expected increase in GHG emission will be from cities in **developing countries**

2. UPAF makes important contributions to cities' **adaptation** to climate change and enhances city resilience
3. UPAF makes some contributions to CC **mitigation**
4. The **co-benefits** of UPAF are substantial (poverty alleviation, enhanced food security, improved urban environment)

POLICY UPTAKE

Kesbewa

(a) Including UPAF zones in **city development plan**

(b) Paddy act allows for new forms of productive use of **flood zones**

(c) UPAF integrated in **biodiversity plan**

(d) New **incentives** for rainwater harvesting

Kathmandu

(a) Rooftop garden programme **included in municipal budget**

(b) By end 2016, **20% of all** HH rooftops should be under production (agreement between Ministry of Federal Affair's and Local Development and KMC Chief Executive Officer)

Policy for Roof Top Gardening in Kathmandu Metropolitan City

12-Feb-2014

Prepared by:

Nepal Forum for Environmental Journalism (NEFEJ)

With support of:

The International network of Resource centres on Urban Agriculture and Food security (RUAF Foundation) and UN Habitat

Submitted to:

Kathmandu Metropolitan Council (KMC)

RUAF Foundation

UN HABITAT
FOR A BETTER URBAN FUTURE

POLICY UPTAKE

Bobo Dioulasso

(a) Productive use of greenways acknowledged

(b) Municipal greenway commitee formed by law

(c) Municipal budget made available


Huerteros locales venderán directo a hoteles y restaurantes

Rosario

(a) Choice tree species determined on basis of temperature impacts

(a) New **area preserved** for peri-urban production

(b) Sales **agreement signed with restaurants**

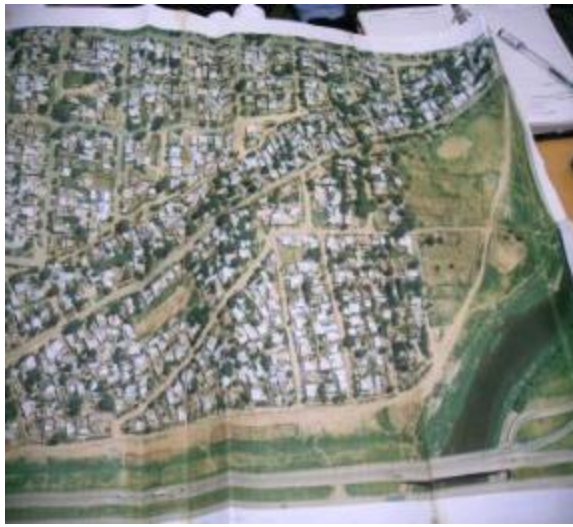
(c) UPAF proposed as part of **watershed management**

Food system Innovation
Re-localising
Address multiple needs and functions

- Climate change and Disaster Risk Reduction ...And ...
- Food security
- Income
- Employment (Green Jobs)
- Health and well-being
- Social coherence, identity
- Governance and relation government-civil society

Cities actively support this transition

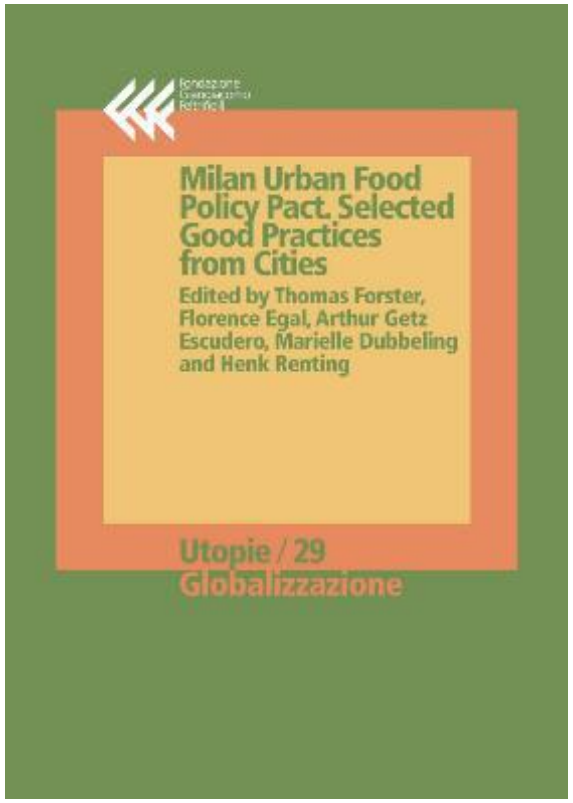
- → **Creation of an enabling policy environment** (Recognition and formal acceptance, adapt legislation, create institutional home, integration into city planning, ***multi actor platforms and food policy councils***)
- → **Reducing health and environmental risks** (Coordination, ***Zoning***, Awareness creation, Active pollution Control)
- → **Enhancing availability and access to land** and use security (Mapping, Zoning, Tax incentives, Temporary Agreements, Land banks)
- → **Support to Farmers** and to **Local value chain initiatives** *(Facilitate access to land, finance, marketing (youth involvement, extension support, value chain development, farmers markets).*
- → Preferential **public procurement** of regional and organic products
- → Reduce food waste and losses and **stimulate resource recovery and recycling**



Belo Horizonte: enhancing food security and nutrition of the urban poor

- Major urban agriculture programme (as part of **national Zero Hunger policy**)
- Promotion of organic urban horticulture (technical assistance, credit , certification, farmers' markets)
- Support to food enterprises
- **Local food procurement by government** offices and social programmes
- **Transparency in planning and budgeting**, included in institutional agenda's
- Sharing of results and discussing lessons learned

BH CULTIVANDO AGRICULTURA URBANA
Projeto da Semente à Mesa



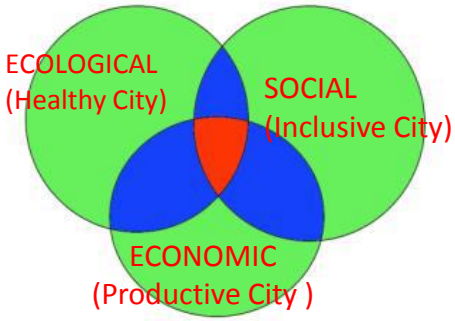
1. Governance: ensuring an enabling environment for effective action (actions 1-6)
2. Promote Sustainable diets and nutrition (7-13)
3. Encourage Social and economic equity (14-19)
4. Promote and strengthen Food production in and around the city (20-26)
5. Improve Food supply and distribution (27-33)
6. Reduce Food waste and losses (34-37)

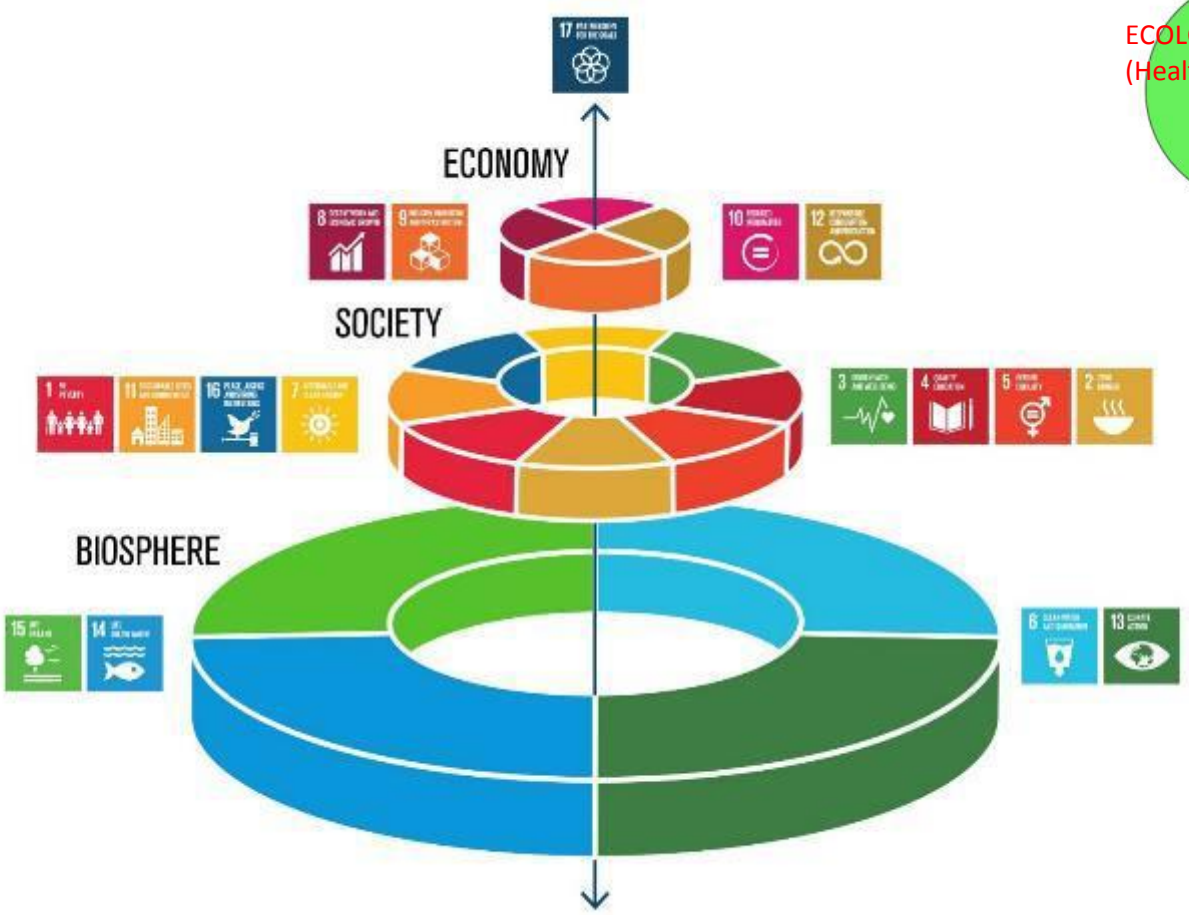
www.foodpolicymilano.org
www.ruaf.org
cityregionfoodsystems.org

Food Connects People

Food connects SDGs

Multiple Benefits





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Cities designing urban food strategies...

- Take an active role in facilitating and strengthening the food system of the city region: Shift in **urban planning;**
- Commission the **mapping** and analysis of **the city region food system**
- Establish of a **Multi-stakeholder Forum** on Urban Food & Agriculture
- Visioning and scenario building: Defining sustainable urban food strategies
- **Zoning and Food Systems Planning**
- Creating the **legal, operational and financial framework** for coordinated actions re. food and agriculture

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URBAN AGRICULTURE POLICY

Change in thinking on Urban planning

- City government takes an *active facilitating role* in strengthening the food system in the city region
- Physical and green infrastructure are designed in parallel; agriculture integral part of urban planning
- Compact high density built up areas intertwined with multi-functional productive landscapes (wedges, corridors, greenbelts, etc.) Bohn & Viljoen: Continuous Productive Landscapes

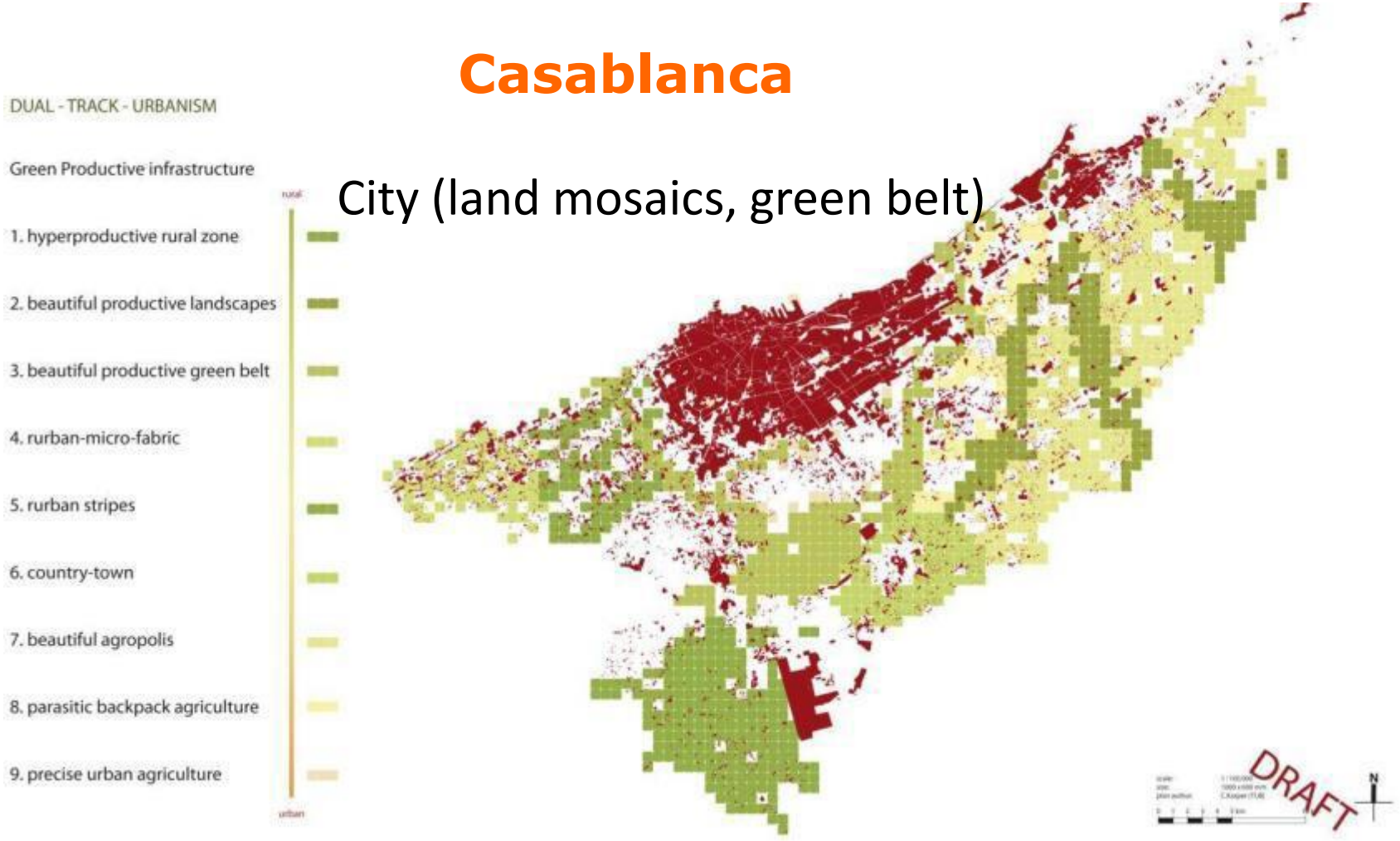
Working at Different Scales

Micro-spaces, plot design, lane upgrading, community spaces, productive parks, flood zones

Working at Different Scales

Casablanca

City (land mosaics, green belt)



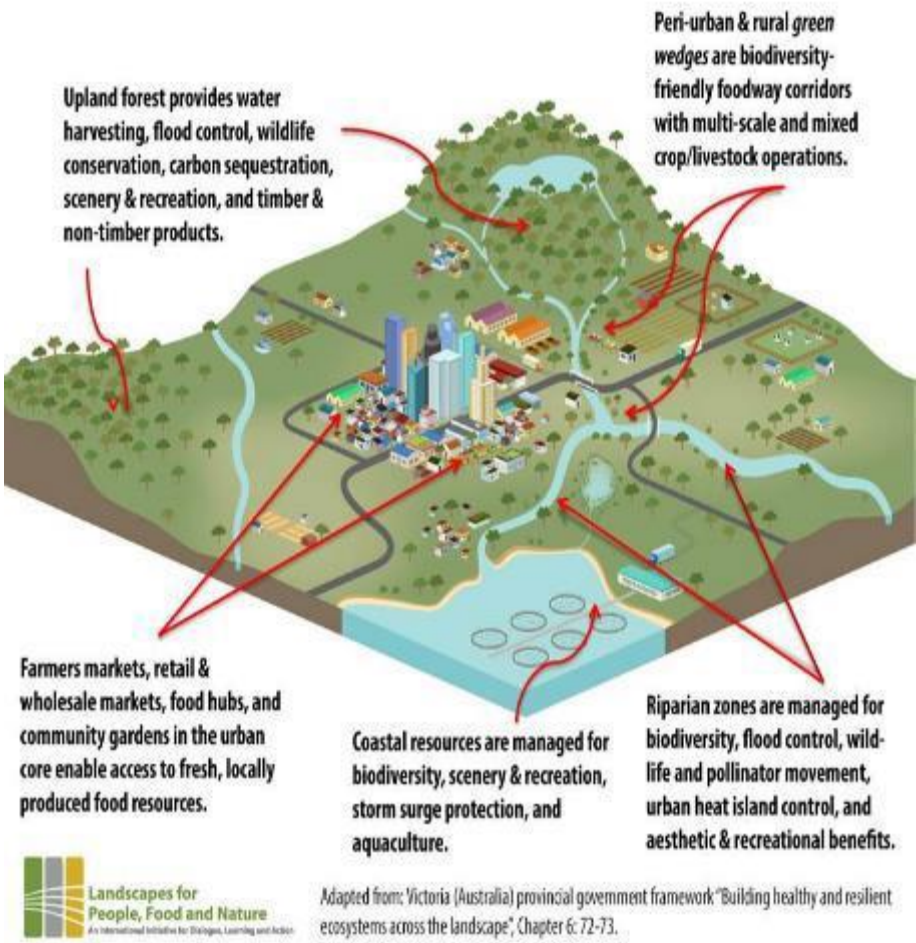
Provision and sales of other multi-functional services (leisure, education, flood management)

Problems encountered in urban food system planning

- Traditional divide between urban and rural planning; **institutional "domains"**; administrative boundaries
- Neo liberal view that **"the market"** will take care of urban food supply
- A restricted view of urban planners on "**land value**" and **availability** of land for UPA
- Lack of control on **city expansion**
- **limited resources** (financial / human)
- Restrictions in **legal mandate** of city
- **Fear for health problems**, eg zoonosis

City-Region Food Systems

- ✓ Complex network of actors, processes & relationships involved in food production, processing, marketing, consumption, disposal & recycling within a geographical region
- ✓ Exchange and flows of food, people, goods, nutrients/waste and ecosystem services (urban metabolism)
- ✓ Urban-rural linkages; nexus agriculture, biodiversity, water and energy

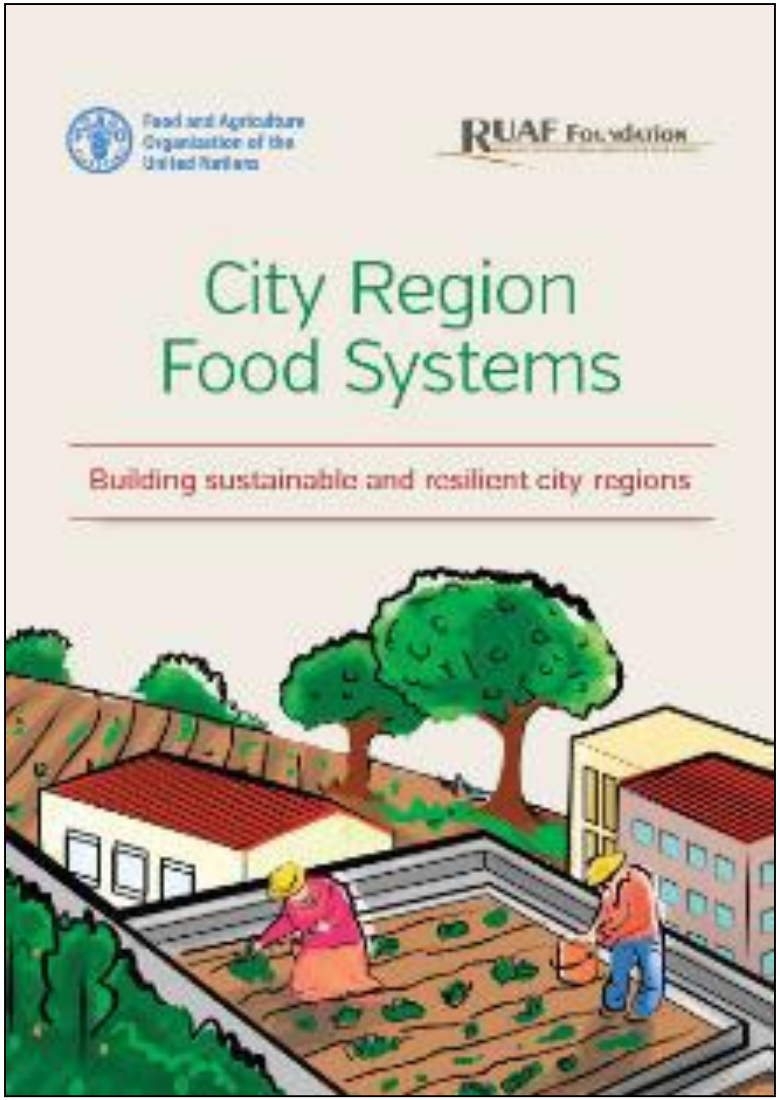


cityregionfoodsystems.org

City Region Food Systems data

FAO and RUAF collaborate in developing a toolbox for assessing City-region food systems and stimulating multi-stakeholder planning

Utrecht (Netherlands), Toronto (Canada), Quito (Ecuador), Medellin (Colombia), Colombo (Sri Lanka), Lusaka & Kitwe (Zambia)



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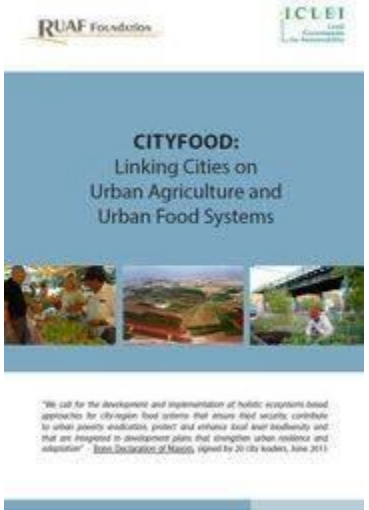
CITYFOOD: Network of Cities on Urban Agriculture and Food Systems

- Joint ICLEI / RUAF initiative recently launched at the Resilient Urban Food Systems Forum, Bonn April 2013
- Includes amongst others:
  - City hub: Cities present on line their food policies and programmes and the results thereof
  - Community of Practice: Practitioners share experiences on food system analysis and design of food strategies; joint problem solving and design
  - On line Compendium: fact sheets, business models, guidelines and tools, on line library
  - Training and technical assistance

Resilient Cities series



Colombo (Sri Lanka): Integrating UPAF in slum upgrading

Lima (Peru): re-use of wastewater for urban greenin

Reuse of wastewater to irrigate parks and urban forests
Enhancing access of urban producers to land: Inventory of vacant open spaces suitable for urban agriculture; Provision of occupancy licenses; Electricity company leases land under power lines to groups of urban poor to prevent illegal building
Participatory design of multi-functional "**productive parks**"

Toronto (Canada): climate change plan includes UPAF actions

- **Financial support to community based UPAF projects** e.g. community orchards and gardens, home gardens,
- Promotion of **composting of organic wastes and rainwater harvesting**
- Reducing the City "Foot (d) print "by:
  - requiring that **shipping distance are mentioned on food labels**
  - promotion of **regional food products**
  - supporting **farmers' markets**
  - **preferential procurement** of food
- **Doubling the existing tree canopy in the city by 2020**

Livegreen Toronto

Beijing (China): Protecting of agricultural and green open spaces

•Strict **protection** of agricultural land within city region
• Increased investment in sub- & peri-urban agriculture
• Promotion of various types of **multi-functional agriculture** (enterprise and community based)
• Strips of urban forests along all major roads to reduce urban heat, dust, CO2 and winds

- **Intra urban: green spaces/parks, agro-exhibitions, allotment gardens**
- **Sub-urban: sightseeing, agro-parks, eco-education, landscape management**
- **Plains: intensive high tech agriculture and livestock keeping**
- **Mountainous areas: village based agro-tourism, ecological protection, cultural heritage**

Success factors (1)

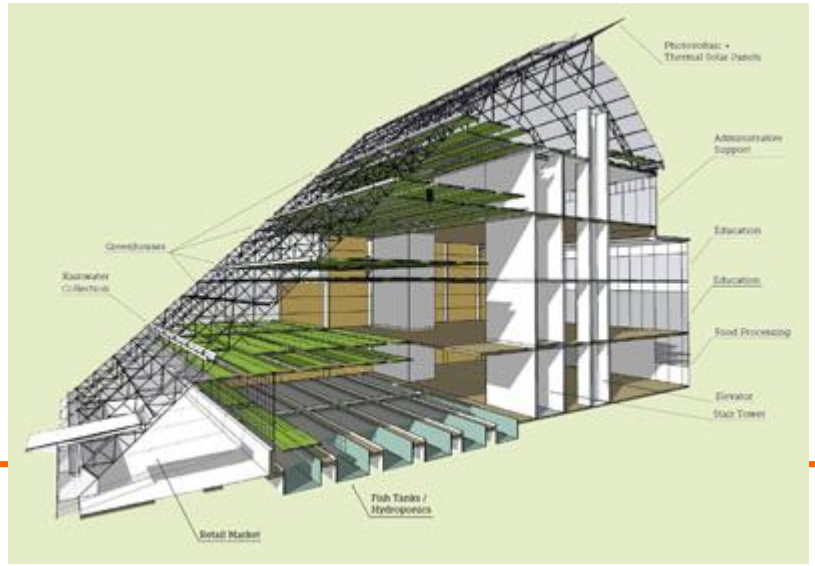
- Strong **political leadership**;
- **Longer term** continuation of the process (beyond 4 years)
- **Multi stakeholder involvement** (local gov., private sector, civil society, universities) in planning and implementation
- Involvement of **various departments & disciplines**; strong and concerned coordinating department
- Generate media attention and public dialogue on food issues and the multiple roles of agriculture in urban system
- **Take sufficient time for fact finding**, dialogue, building trust and partnerships; Joint visioning and objective setting

Success factors (2)

- Building on existing local initiatives; Support for community based and innovative private sector food projects; Facilitate replication and upscaling of successful initiatives.
- Combined with creation of a **facilitating legal framework** and **larger scale programmes** at City level
- Optimal use of available resources of all partners in the process;
- Proper documentation and sharing of results and costs (visibility; transparency)
- Monitoring of clearly defined indicators for the desired changes in the urban food system
- Balance between support and sustainabili**ty**

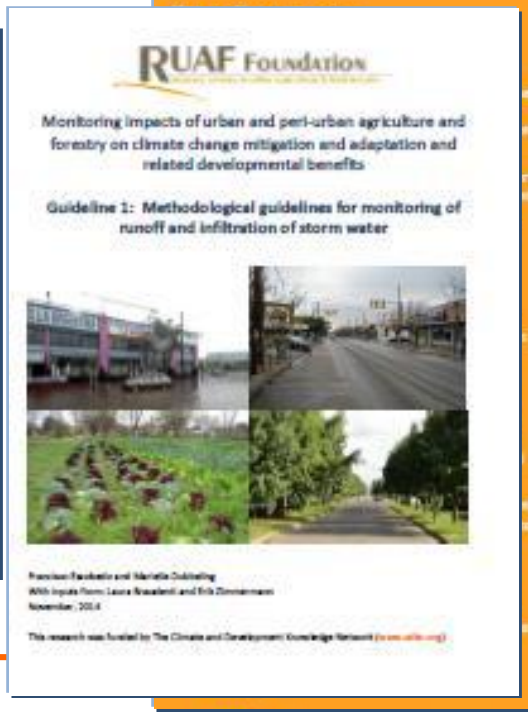
Development challenges

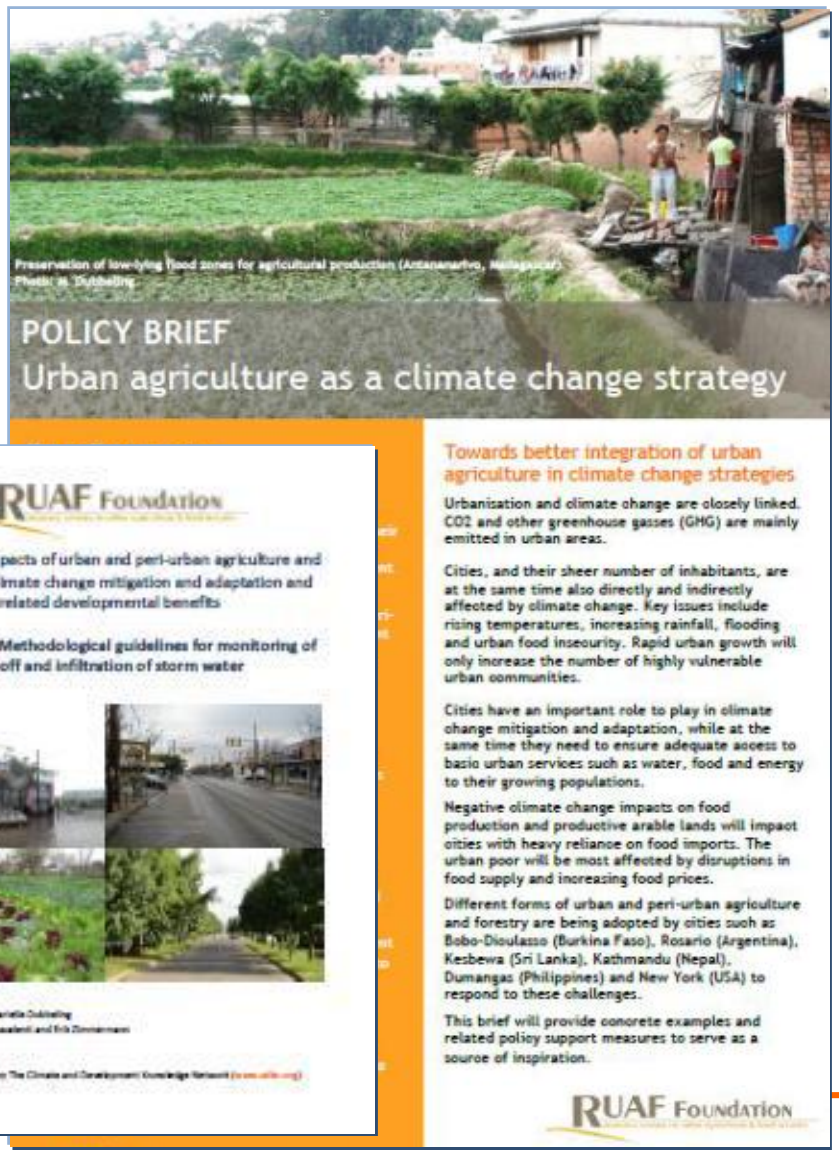
- Many interesting localised and often small-scale experiences to learn from. General challenge is **how to upscale** and apply these at level of city-region .
- Attracting **private sector investment.** Make better use of application of innovative financing (PB, guarantee schemes; insurance systems; crowd-funding)
- **How to translate social benefits/ cost savings in opportunities for enterprises**, e.g. by means of revenues from public funding or access to resources (land, credit, etc.).
- Include in planning at **different Levels**
- Need for **(new) information** and **indicators** that support the **active involvement** of a variety **of actors**



Reports/materials: www.ruaf.org

- 3 scientific articles
- 4 manuals
- 1 RUAF policy brief
- 1 CDKN insight story
- 1 CDN background paper
- 1 issue of the UA Magazine
- 1 working paper













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