1. Background

Urban and peri urban agriculture (UPA) refers to the growing of plants and the raising of animals in and around cities. Contrary to what many believe, urban and peri urban agriculture is a permanent feature of many cities, taking place in a large variety of forms, in different locations and at different scales, from a small backyard garden supplying food to family, to a community garden offering its members a source of food, leisure and company, to a large commercial agribusiness located in areas surrounding the city.

A more detailed definition is as follows: Urban agriculture is ... “an industry located within (intra-urban) or on the fringe (peri-urban) of a town, a city or a metropolis, which grows and raises, processes and distributes a diversity of food and non-food products, (re-) using largely human and material resources, products and services found in and around that urban area, and in turn supplying human and material resources, products and services largely to that urban area” (Mougeot, 2000).

Food production in and around Freetown has been a permanent feature of the city development, growing in parallel with its population. Since 2006 a number of institutions and organizations have worked together in the Multi Stakeholder Forum on UPA, renamed Freetown Urban and Peri Urban Agriculture Platform in 2010. Previous mapping of UPA activities showed that only within the perimeter of Freetown City Council, over 1000 families rely on UPA for survival. UPA plays an important role in Freetown in the following aspects: produce food and generate income for very vulnerable urban and peri urban families; development of food product for the Freetown market; employment generation, especially for the youth; contributing to environmental management through soil and water management and waste management through composting. These potential benefits are largely recognized.

Previous work from FUPAP brought to the definition of a number of priorities identified in the City Strategic Agenda on UPA. International donors also recognized the potential benefits of UPA, with both the European Union and the UN system funding programs to stimulate innovation in UPA.

Land security is a key pre-condition in order to ensure that the potential of UPA is reached and that UPA farmers move beyond mere subsistence farming and towards a more commercial way of managing their activities, in line with MAFFS Smallholders Commercialization Program and more widely with the GoSL Agenda for Change. A recent study conducted by FUPAP on credit and finance highlights how some form of land security would suffice some credit institutions to invest into the work of UPA farmers groups. While it is not possible that all food consumed in Freetown be produced in and around Freetown, UPA already play an important part in the delivery of cold vegetables and vegetables for cooking, herbs, spices, livestock, poultry and piggery products, and value added products like cassava based chips, flower and
gari and fruit juice, in addition to ornamentals and fishery products. The close proximity to a large market means that UPA activities are ideal to develop new value added products while leaving rural areas for the production of extensive crops. If supported, the potential for job creation especially for urban and peri urban youth is huge.

Conversely, rapid urbanization in Freetown means an increasing pressure on land for dwelling use and a rapid depletion of natural resources in and around Freetown, namely the Peninsula Forest, with devastating effect on soil erosion across the slopes and decreasing water supply. The encroachment of low lands and valleys for dwelling purposes has been documented by a FUPAP survey in August 2009 and it is accelerating environmental degradation in various parts of the capital and its surrounding. The current move by the Ministry of Lands Country Planning and Environment to move from a contract based to a title based land tenure system, starting from Western Area represents the ideal context in which taking crucial steps to integrate UPA land use in order to preserve environmental resources and ensure the sustainability of Freetown and its surroundings.

The current move of Freetown City Council to establish a Freetown Master Plan and of WARDC to establish an economic development plan complete the setting in which the effort to map and allocate land for urban and peri urban agriculture is taking place.

The exercise requires a collaborative effort among multiple stakeholders.

The four key implementing institutions will be the Ministry of Lands Country Planning and Environment, Ministry of Agriculture Forestry and Food Security, Freetown City Council and Western Rural District Council. Other FUPAP members will provide collaboration and advice.

In the context of the EC and DGIS funded project Freetown Fambul Farm – managed by COOPI, RUAF – the Network of International Resource Centres on Urban Agriculture and Food Security - will provide technical guidance, advice and learning from other cities where similar initiatives have been implemented. Where needed additional support will be provided and synergies found with the other EC funded projects on Food Security managed by Concern Worldwide and on Peninsula Forest Conversation managed by WHH.

The present guidelines were prepared by RUAF in order to inform the process of land mapping and allocation for urban and peri urban agriculture in Freetown. The mapping of UPA activities undertaken and published by FUPAP in 2007-08 will form the valuable starting point of this process. The current process aims at updating the initial mapping; extend it to the entire Western Area; and complete it with official allocation of identified sites to UPA use of by MLCPE, FCC and WARDC and signature of land usage agreements with farmers, women and youth groups. The process will start with the lowlands and valleys, which are Government land and will be mapped and declared assigned to UPA by the end of September 2010 and allocated to groups in October – December 2010. A second phase of the process will be implemented in 2011 and covered all other land used or suitable for UPA in Freetown and Western Area.

2. Key Concepts for land mapping

   - Availability
The first step is understanding where urban and peri urban agriculture currently takes place, where it could take place, and how urban agriculture land use could be preserved, protected and promoted in different areas.

Various cities, like Portland (USA), Vancouver (Canada), Cienfuegos (Cuba), Dar es Salaam (Tanzania), Rosario (Argentina) and Cagayan de Oro (Philippines), have already made an inventory of the available vacant open land in the city (using methods like community mapping and/or Geographic Information Systems). They did so in order to:

a. Identify the locations where various types of urban agricultural activities are undertaken in and around the city.

b. Understand the extent and spatial distribution of urban agriculture as a way to preserve these areas for future agricultural use.

c. Identify vacant open spaces in the city and analyze their accessibility, suitability and feasibility for urban agriculture according to a number of criteria. For these areas, policies, plans and regulations can be put forward to enhance the access of the urban population to available and suitable spaces for food production, processing and marketing.

d. Analyze past, current and future changes in land related to city expansion. This helps identify which areas of the city urban agriculture might be undertaken in a sustainable way (supported by zoning, municipal and neighbourhood development plans).

Land use mapping in the news: San Francisco calls for land use mapping for urban agriculture

"The Mayor of San Francisco has made an executive order to all city departments to assess all unused land that could be turned into community gardens or farms. He's already banned spending city money to buy bottled water and mandated composting citywide. Now, San Francisco Mayor Gavin Newsom is taking on something as basic as water and trash: food.

All city departments have six months to conduct an audit of unused land - including empty lots, rooftops, windowsills and median strips - that could be turned into community gardens or farms that could benefit residents, either by working at them or purchasing the fresh produce.

It's still unclear how much land could be converted into community farms. The Public Utilities Commission has thousands of acres outside San Francisco that could be used, and the Real Estate Division and the Recreation and Park Department own some unused parcels in the city.

Newsom made the announcement Wednesday at a junkyard-turned-farm in West Oakland that could serve as a model for how land could be converted in San Francisco. The 2,000-square-foot former junkyard now produces 2,000 pounds of food every year, including lettuce, squash, tomatoes, parsley, sage, collard greens, grapes, cherries and plums.

"This speaks to people's soul," said Barbara Finnin, director of City Slicker Farms. "It's a place people can relax, be outside, and nourish themselves and their families."

- **Accessibility, suitability, use and feasibility of the land**

Access to land may be more of a constraint than its availability. Questions to consider when assessing accessibility of land include:
- Who owns the land?
- What is its current status (freehold, leasehold, etc.)?
- What are the norms and standards on this land (public domain, reserved for development, etc.)?
- Are there any project or planning regulations for the future such as a new road, a garbage dump or the extension of a development?
- What are the physical constraints such as topographical conditions (e.g. slopes or limited sun exposure) or hazard prone areas (e.g. risk of flooding)?

Another aspect is to judge the suitability of the identified piece of land:
- What are its qualities for agriculture and planting? For what kind of urban farming?
- What is the level of contamination of the soil and neighbouring water sources: Are they polluted? What is their level of toxicity?
- What is the water availability? In terms of quality and quantity?
- Is it suitable for cultivation? For what kind of products?

A third aspect relates to the current and past uses of the land that reflects the social dimension of land use mapping. This has to be done even if the land is currently idle, or partially cultivated, as the history of the land may reveal important aspects:
- How is the land currently being used?
- What was it being used for in the past?
- If it is currently being cultivated, and by whom?
- Where do the current urban farmers of the land live? Who are they?
- What are the farming practices?

The fourth and last aspect is to assess the feasibility (or adequacy) of the land for urban agriculture, beyond its accessibility and suitability. One has to look more particularly at the following:
- Is this land safe (from thefts and possible crimes), and is there anything to be done to increase the safety? Or should it be abandoned because it is too risky?
- Is it well located in relation to households and to the community that is interested, or is too far? Are there good public transportation systems?
- Is it well located in relation to other important community amenities such as green spaces, community centres, schools, places of worship or other public gathering places?
- Is it well located in relation to markets and sources of input supply?

*Source: Cabannes Y. 2008. Guidelines for community mapping of land for Urban Agriculture. DPU University College London, UK*
3. Preparation and gathering of existing information

Before embarking on any fieldwork, first, the team will start collecting information that will address as much as possible the availability and accessibility of the land. This includes review and analysis of the city’s current and future land use plans, legal frameworks dealing with land tenure, use and regulation, neighbourhood plans and cadastral information. Using good quality aerial Google earth prints in various sizes will help identify and locate already productive land, as well as vacant land areas (and water bodies), and get a first impression on their limits and other basic characteristics (vegetation, current use etc).

If information can be digitalized and stored, this will facilitate its future use. For example, in order to enhance access of urban farmers to privately owned (vacant) land, the Municipality of Rosario (Argentina) created a Municipal Agricultural Land Bank (a cadastral-based land registry). The Land Bank brings those in need of agricultural land in contact with the owners of vacant land. It also hires vacant land from private landowners and leases it out to community groups interested in using this land productively.

To this effect it may be useful to develop a typology of (potential) urban agriculture land use areas, categorising them into private household plots, institutional land areas, public land (municipal, provincial / state or federal land) protected land areas or green spaces, etc., as each of these areas require specific rules and regulations to enhance their use. This will be examined further in the section on urban policies, plans and tools for urban agriculture.

Lastly, and before the information collected can be verified in the field, key informants from the community should be identified. These key informants are usually people who have been living for some time in the area, who are or were urban farmers, or who are able to bring some insights on each of the four dimensions of the mapping (accessibility; suitability; current and past uses and adequacy/feasibility).

Use of large-scale site or topography maps in the field visits, will facilitate spatial identification of areas and validation of information, as well as enhance for community involvement and preliminarily analysis of further information (on slopes, height, orientation, etc).

3.1 Preparing for mapping of valleys and lowlands

Digitalized maps of Freetown and Western Area are available with the MLCPE. Lowlands and Valleys have already been mapped by FUPAP. Most of these areas are falling in the typology of Government Land, so it should be relatively easy for the team to identify the relevant areas and mark them on existing maps.
4. Field verification and action planning

During the field visits to selected areas, available information can be verified and additional information regarding the accessibility, suitability, use and feasibility of the site will be gathered.

Types of information to be collected:

**A description of the site:**
- Size in square meters (approximate).
- Topography: Flat or sloping, smooth or irregular surface?
- Sun exposure: How is the site exposed? Are trees or buildings around the site overshadowing it?
- What is the quality of the soil? Is there any risk of soil pollution?

**Relative location of the site:**
- How is the site located in relation to housing, markets, access roads, public transportation, other important community sites and amenities?
- The accessibility to the site, and within the site (It is locked? Well protected? Open?)
- Are there any problems with safety (related to access and use of the site?)

**Availability of water:**
- Locate on the map the water taps, wells, down pipes or any other current water sources. Indicate on the map, if these are working properly and the state of maintenance.
- Locate on the map, any pond, flooded area, small water beds, drains.
- Inquire about the depth of the ground water and find out what happens when it rains.

**Past, current and future uses:**
- Identify the existing trees, locate them on the map.
- If the site is currently being farmed, identify the species that are cultivated. Are there any food producing plants? What are they?
- If the site is not being cultivated, how is currently being used? What was the site used for in the past?
- Who owns the site? What are plans for future land use?
- Who uses or can use the site? When and for what purposes? What are the existing land use regulations or restrictions?
- Do users or the neighboring community like the site? What would they like to use it for? What would they improve?

**Maintenance of the site**
- How is the place maintained? (e.g. mowing, tree pruning etc.)
- By whom: Local residents? Farmers? The municipality?
Other observations or ideas you may have

Collection of this information can be done through personal observations, measurements (for example measuring soil depth, or doing a chemical analysis of soil or water), taking photographs or videos, and individual or group interviews.

5. **Official Allocation of Selected Sites to Urban and Peri Urban Agriculture Use by MLCPE, FCC and WARDC**

Once all sites have been identified, a (digitalized) map should be produced highlighting all the locations (with exact coordinates) to be allocated to urban and peri urban agriculture.

On the basis of this map and starting with selected lowlands and valleys, MLCPE and FCC or WARDC are expected to promulgate an official and legally binding policy, act, decree or notice which allocated officially these sites to UPA activities. Such legal acts should be made public, especially to the communities in the concerned areas.

6. **Signature of Agreements with Farmers, Women and Youth Groups**

Selected sites should then be allocated to farmers’, women and youth groups registered with MAFFS, FCC and WARDC through the signature of a Land Usage Agreement.

Sites should be allocated free of charge for a fixed period of time, provided that the groups respect the covenants contained in the agreements (See Template for Land Usage Agreements)

MAFFS, FCC and WARDC staff should play a key role in identifying existing viable groups, supporting them with the instruments at their disposal to make the best possible productive use of the allocated land and monitoring that the rules agreed are respected.

7. **Monitoring and dispute resolution**

The key institutions involved in the process should each nominate a representative on the process work committee. The representatives should report directly to their political Heads who signed the initial agreement.

The Committee with have the following tasks:
- to monitor the timely implementation of this agreement and act upon any delay;
- to evaluate the impact of the implementation of this agreement on food production, food security, income generation, employment and environmental management for vulnerable communities
- to agree on a mechanism for the resolution of any conflict and dispute arising from the present agreement.
8. **Timeline of the process**
The timeline will follow a two-step approach, starting with lowlands and valleys in 2010 and continuing with all other land used or suitable for UPA in 2010.

The foreseen process will be as follows:

<table>
<thead>
<tr>
<th>Action</th>
<th>Deadline</th>
<th>Responsibility</th>
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</thead>
<tbody>
<tr>
<td><strong>Phase 1 – Lowland and valleys</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Signature of Agreement by Political Heads</td>
<td>End of August 2010</td>
<td>MLCPE, MAFFS, FCC, WARDC, FUPAP</td>
</tr>
<tr>
<td>Establishment of implementation team and detailed implementation plan, including resources needed and available</td>
<td>End of August 2010</td>
<td>MLCPE, MAFFS, FCC, WARDC, FUPAP</td>
</tr>
<tr>
<td>Preparing for Mapping of Valleys and Lowlands (site identification on existing maps)</td>
<td>By 10 September 2010</td>
<td>MLCPE + implementing Team</td>
</tr>
<tr>
<td>Field Verification</td>
<td>By 25 September 2010</td>
<td>MLCPE + implementing Team</td>
</tr>
<tr>
<td>Finalisation of digitalized map of lowlands and valleys to be allocated to UPA</td>
<td>By 30 September 2010</td>
<td>MLCPE + implementing Team</td>
</tr>
<tr>
<td>Official Allocation of sites to UPA through legal acts of MLCPE, FCC and WARDC</td>
<td>By 15 October 2010</td>
<td>MLCPE, FCC, WARDC</td>
</tr>
<tr>
<td>Signature of Agreements with farmers, women and youth groups</td>
<td>October – November 2010</td>
<td>FCC, WARDC, MAFFS</td>
</tr>
<tr>
<td><strong>Phase 2</strong></td>
<td></td>
<td></td>
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<tr>
<td>Desk identification of further sites used or suitable for UPA</td>
<td>Dec 2010 – Mid Feb 2011</td>
<td>MLCPE + implementing team</td>
</tr>
<tr>
<td>Site visits to new sites identified</td>
<td>Mid Feb – Mid March 2011</td>
<td>MLCPE team</td>
</tr>
<tr>
<td>Finalisation of digitalized map of all sites to be allocated to UPA</td>
<td>End of March 2011</td>
<td>MLCPE + implementing team</td>
</tr>
<tr>
<td>Official Allocation of sites to UPA through legal acts of MLCPE, FCC and WARDC</td>
<td>April 2011</td>
<td>MLCPE, FCC, WARDC</td>
</tr>
<tr>
<td>Signature of Agreements with farmers, women and youth groups</td>
<td>May 2011</td>
<td>FCC, WARDC, MAFFS</td>
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</tbody>
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