

FSN FORUM DISCUSSION TOPIC No. 48
FOOD, AGRICULTURE AND CITIES
FROM 2 NOVEMBER TO 7 DECEMBER 2009

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I. GENERAL INFORMATION

Duration: from 02.11.2009 to 07.12.2009

Number of participants:

Number of Contributions:

II. INTRODUCTION OF THE TOPIC

Dear Forum members and readers,

My name is Julien Custot, I work as a facilitator for the [FAO Food for the Cities initiative](#) (FCIT). The initiative has been launched in 2001 with the aim to ensure access of the urban population to safe food and healthy and secure environments by increasing dialogue and partnerships with institutions at international and national levels. FCIT works in particular with local authorities and offers technical assistance and support in policy formulation and urban planning to institutions and groups.

More and more of the world's population is becoming concentrated in and around large cities. Ensuring that the billions of people living in cities have their rightful access to adequate amounts of safe and nutritious food represents a global development challenge of the highest order. Promoting sustainable agricultural production in urban and peri-urban areas and developing food systems capable of meeting urban consumer demand will become increasingly important to global food security. Currently however, the important relationship between food security, agriculture and urbanization is often not sufficiently recognized.

A recent briefing note on [“Food, agriculture and cities: challenges and priorities”](#) highlights the major issues related to food, agriculture and cities and provides a set of recommendations for action at the global, national and local level.

Moreover, a set of additional documents can be found on the FAO-FCIT website (<http://www.fao.org/fcit/en/>).

In order to broaden the approaches and to gather new insights for cities both of developing, intermediate or developed countries, we would like to hear the opinions and experiences of Forum members.

Comments on the briefing note are welcome; in particular I would like to invite Forum members to focus on 3 main issues that may require a more specific attention:

- 1. How would you illustrate or highlight the links between food security in cities, urban-centred food systems and urban-rural linkages? Do you have any examples, good practices or lessons learned to be reported?**
- 2. Regarding the priorities at a national and local level, what issues/themes would you propose and would like to focus on?**
- 3. At a global level, how could you and your organization participate/contribute to a multi-stakeholder dialogue platform? What priorities would you have?**

The timing of this FSN Forum discussion will overlap with the World Summit on Food Security, taking place on November 16 to 18, 2009 in Rome and preceded by different events. Your contributions will therefore be useful to bring elements to the process and feed into the preparation of the 5th [World Urban Forum](#) which will be held in Rio de Janeiro in March 2010.

Julien Custot

Facilitator of the FAO Food for the Cities interdisciplinary initiative

III. LIST OF CONTRIBUTIONS

Contribution by Maria van Heemstra from the World Council of Churches, Switzerland

Dear FSN members,

I would like to highlight two points related to urban-rural linkages and food security: the issue of rural migration and the issue of food waste.

The first point I would like to make about food security in cities is the fact that in many cases the reason why cities are overflowing is because of **rural migration to cities** owing to factors such as farmers no longer being able to make a living, lack of government investment in rural areas (schools, health facilities etc.), lack of support for small farmers to improve their agriculture (credit, training, land ownership) and others. For example the aggressive advance of soybean monocultures in Argentina, Brazil and Paraguay has destroyed and continues to destroy the livelihoods of many small farmers who have no choice but to go to seek employment in the cities. This increases the food needs of the cities while at the same time decreases the amount of food being produced in the countryside. This is an example of an extremely “bad practice” and should be considered a “lesson learned” and stopped; the opposite, however, is happening. The emptying of the countryside to fill the cities should not be taken as an unavoidable “fait accompli” but should be analyzed and the causes of this phenomenon seriously addressed by governments. Soybeans in Latin America are being planted in large monocultures with gigantic machines using direct-seeding, and which only large farmers can afford, and making it easy for such farmers to destroy vast swaths of land and plant them to soybeans. The fact that the FAO considers this type of agriculture as being “conservation agriculture” and in this regard states as a positive sign in its website that “*Particularly in Brazil the area under conservation farming is now growing exponentially having already reached the 10 million hectare mark*” is very disconcerting.

This so-called “conservation farming” is not conserving the forest, biodiverse small scale agriculture or rural employment. Based on FAO statistics, it has been shown that in Brazil the number of people involved in rural employment has decreased faster than the rural population as a whole, while the country population has grown

(http://www.networkideas.org/news/jul2003/news11_Agricultural_Employment.htm).

This is also true for other countries and there has been a general tendency for the number of jobs in the agricultural sector to fall without a concomitant rise in other employment opportunities; simultaneously rural labour force has grown faster than number of agricultural jobs across the world during the 1990s. In the absence support to support them, many small and marginal farmers are being forced to sell or lease their land to wealthier farmers. Despite the fact that research has shown that small farms are able to use inputs more intensively and be highly productive, recent advances in agricultural technology have tended to reduce the need for labour, which has made the situation even worse for rural workers seeking jobs in agriculture. If cities cannot absorb the rural workers forced to migrate and provide decent work for them, these trends will lead to a worsening of the food security situation as there will be more poor people unable to produce food. This is in addition to the environmental problems caused by modern mechanized agriculture.

The agricultural landscape in the countryside throughout the world is being gradually converted from a bio diverse agriculture into a very uniform and toxic one to such an extreme that cities sometimes can sometimes provide more biodiversity than the countryside. For example in the United States and Canada one can fly distances of some 1,800 km over fields planted to only two or three crop species (Smil Vaclav. 2000. Appraising the Basics. In Feeding the World, A Challenge for the 21st Century. MIT Press, Cambridge Ma. pp.23-63).

I have read reports that in certain cities (Geneva for example) there are now more species of birds than in the countryside as they can no longer find habitats in the countryside; and in Paris

for example bees are able to produce 4-5 times more honey than those in the countryside as they have access to a greater variety of flowers and without pesticides (http://209.85.135.132/search?q=cache:4BLncdgL5iQJ:www.rfi.fr/sciencefr/articles/116/article_83739.asp+biodiversit%C3%A9+miel+abeilles+villes&cd=2&hl=en&ct=clnk&gl=ch).

This is an alarming sign about what is happening to our rural areas. This also indicates that cities have some potential to provide biodiversity for urban agriculture. By means of organic urban agriculture Cuba reportedly has been able to provide four million tonnes of vegetables a year making the country 90% self-sufficient in fruit and vegetables (<http://news.bbc.co.uk/2/hi/americas/8213617.stm>).

Another issue concerning food security in cities that is often overlooked, particularly in developed countries, is the **waste of food** by overeating as well as serving excessive quantities in restaurants and fast food restaurants. This is a waste of the resources it took to grow that food (land, water, inputs, fuel etc.). In a world where we are all buying food in the same international market place, food wasted and excessive eating indirectly lead to less availability of food for the poor. Overeating is also bad for health. According to a WHO news release of 27 October 2009, 75% of cases of heart disease (the leading cause of death worldwide) are linked to eight risk factors. Four of these are linked to eating habits (high blood glucose, high body mass, high cholesterol, low fruit and vegetable intake, alcohol consumption) the others being physical inactivity, tobacco use, and high blood pressure. Through education and public awareness governments should encourage healthy eating habits and require the food industry to provide healthy foods and refrain from promoting overconsumption of unhealthy foods. Through globalization the unhealthy Western diet too rich in meats and fat, is being spread to developing countries. Women should particularly be targeted for nutrition education as they are to main ones to prepare meals and teach children eating habits.

Food production should be managed in a holistic manner, and integrated with health issues, employment issues as well as environmental issues in policy making and not be looked at in terms solely of yield per hectare on a crop by crop basis.

Thank you,

Maria van Heemstra
PhD in Agronomy (Rutgers University)
Project assistant
Faith, Science and Technology; Health and Healing
World Council of Churches
Geneva, Switzerland

Contribution by Edward Mutandwa from RDA, Rwanda

Dear FSN-Members,

I agree with the observations made by Maria (*see below*) concerning the food security implications caused by rural-urban migration in developing countries in Latin America. I would like to corroborate these by giving an example from Rwanda, which could be considered to be a model in East Africa. In Rwanda, at least 90% of the population are rural farmers. The government has adopted an agricultural policy termed the "Green Revolution policy" which is one of the key elements of its Vision 2020 whose objective is to halve poverty by 2020. Since, the bulk of food is grown in rural areas, it implies that urban food security relies to a large extent on production in rural areas. Through tourism, many agricultural products from rural areas are bought for use by restaurants domiciled in tourist areas (home to mountain gorillas) around the country. Much of the products are bought at low prices by restaurants yet they are sold at exorbitant prices to final consumers meaning that farmers get a low percentage of the income from the food value chain. A recent study commissioned by SNV (Dutch Development Organisation) found out that Irish potato farmers get around 20% of the total income. This has an

effect not only on farmers' livelihoods but also on agricultural productivity because farmers are not able to purchase seasonal agricultural inputs. An interesting initiative has been crafted whereby some NGOs are now promoting the concept of value chains targeting honey, Irish potatoes, cassava and other key crops of the country. The main objective is to increase the proportion of incomes that farmers get through the management of the entire value chain from production to marketing, thus creating positive incentives for them and a win-win situation between all stakeholders in the value chain namely-farmers, transporters, processors and restaurants. To ensure success of the project, lobbying and advocacy activities are at an advanced stage to ensure policy support. Strengthening the value chain through auspicious policies and involvement of all stakeholders is important for improving food security in the cities around the globe.

Edward Mutandwa
RDA, Rwanda

Contribution by David O. Ojo from the National Horticultural research institute, Nigeria

Dear All

Linking urban and rural/peri urban agriculture to me is the bane of African problems as a result of wastages involved. In Nigeria for instance, agriculture products are cheap towards the rural areas. The reverse is true towards the cities with resultant nutritional health problems/poverty especially regarding horticultural produce which I specialise on. Horticulture could be practiced in the cities and towards the cities which will not only provide employment, solve health issues but ameliorate poverty which is most endemic in this part of the world. As hinted in the All Africa Horticulture Congress held in Nairobi (<http://www.globalhort.org/news-events/all-africa-horticulture-congress/>), horticulture stands best chance in the urban and peri-urban areas especially in Africa for many reasons. The challenge faced in Nigeria as in most parts of Africa include among others poor /low timely availability of inputs especially viable seed and irrigation facilities. I observed and through my research found that horticultural products are cheaper and abundant during the raining seasons but scarce during the dry/off season. For year round productivity adaptable effective irrigation techniques need be developed for policy formulation and implementation through governance. Though have tried along these line all that is needed are commitments by government and development partners to make bring these technologies to the stakeholders and develop other proposals.

Hope this prompts further interest in this topic.

Courtesy.
Dr. David O. Ojo
Chief Research Scientist
National Horticultural research institute (NIHORT), Ibadan,
Nigeria

Contribution by Girma Taddese, from the International Livestock Research Institute (ILRI), Ethiopia

Dear Members,

The findings of the below papers could be important in view of production and health concerns. The central aspect is how we could really design the urban agriculture to benefit the poor and improve health concerns.

Extent and significant use of low quality water in agriculture: the case of Addis Ababa Catchments the upland of the Awash Basin

The daily waste generation in Addis Ababa catchments is estimated about 0.252kg/capita/day and 65 % (1,482m³)/day of municipal waste is collected. There is an increasing concentration of heavy metal pollution, coliform and pathogen pollution in the surface and ground water. The nitrate concentration in surface water is higher than the accepted normal concentration of 10 mg/l. Irrigation with polluted water increased accumulation of heavy metals in the soil. Consequently, irrigating with polluted Akaki River has increased As (Arsenic) and Zi (Zinc) considerably.

Read the full paper here:

http://km.fao.org/fileadmin/user_upload/fsn/docs/ExtentSignificantUse.pdf

Community Based Traditional Irrigation Schemes Performance: A Case Study of Upper Awash River Basin of Addis Ababa Sub-Catchments

The study was carried out in Addis Ababa sub-catchments along the Akaki River. The Akaki River is a tributary of Awash River in Upper Awash basin has two main catchments (Little Akaki and Big Akaki River) which drain into Aba Samuel Artificial reservoir. The traditional irrigation schemes grow vegetables along the Akaki River and supply about 30 % of the vegetable demand for Addis Ababa city. The water management in the Schemes was very poor and some of the traditional irrigations schemes are located in the river course and face frequent over flooding during the heavy rainy season. Apart from that there is great concern using fresh vegetables from this schemes as they are irrigated with municipal wastewater. Some factories dump waste product is and water directly to the river with out treating. The concentration of heavy metals and coliforms are increasing below Aba Samuel dam an out let of Akaki River. The overall information showed that the farmers get adequate benefit from traditional irrigation and hold dairy cows. Finally the Addis Ababa sub catchments community irrigation activity should be thoroughly studied to for the benefit of the Addis Ababa community.

Read the full paper here:

http://km.fao.org/fileadmin/user_upload/fsn/docs/CommunityBasedI_TadeseBekele.pdf

Girma Taddese,
International Livestock Research Institute (ILRI)
Ethiopia

Contribution by Joëlle Diani, from the Urban Planning Agency for the Development of Greater Lyon, France

Peri-urban agriculture and direct sales: the role of urban planners

Historically peri-urban agriculture is related to the local market for fresh produce: until the last century, green belts have provided almost a monopoly on the supply of cities and environmental management through the recovery of waste. In the twentieth century in Western countries, the relationship between city and agriculture has widened in economic terms: the development of transport has allowed moving the food over long distances and has fostered a form of organization in which the logic has put under discussion the advantage of the proximity to the basin of consumption. It is only recently, under the pressure from the Common Agricultural Policy (CAP) and of the French Law on land tenure of 1999 establishing the terms of the multifunctionality of agriculture, and addressing issues of local control of urban development, that the role of peri-urban agriculture has been reconsidered.

Facing the challenges of the fight against urban sprawl and in a broader context of economic, environmental, energy and food security crisis, the professionals of land planning and planners had to stop seeing farmland as a mere scenery to the city or as a reserve space for future urban development –agricultural production is indeed often being seen by default as the most efficient way to maintain the space meanwhile. Peri-urban agriculture must now be integrated into urban area projects underpinned by sustainable development challenges. It is necessary to couple classical regulations on protection and zoning policies with development and management projects that are coherent with the specificities of the territory, and therefore adapted to the peri-urban situation. The solidarity and urban renewal legislation (13 December 2000) creating the pattern of territorial coherence (Scot) and the law concerning the development of rural areas (DTR) (February 23, 2005) which introduces a new tool for the suburban areas, the perimeters for protection and enhancement of agricultural and natural areas (PAEN), reflect this shift in planning and the transition from zoning to project.

This situation opens theoretically a favourable space for direct sales channels and short supply circuits to the city. Talks often point out that "the city is also an asset for agriculture and farmers: potential consumers exist near cities that can serve them if they are able to exploit local markets" (ADAYG).

It is true that the experience of direct sales are booming in peri-urban areas: the development of associations for the maintenance of farming (AMAP), collective sales points, direct sales in farms and farms networks, conventions for the supply of supermarkets, labels, sales channels for catering ...All these initiatives "to put the face of the local producer and of the territory on the food" increase the value of proximity with additional social benefits (making producer and consumer move closer) and technical benefits (freshness of food, energy saving in transportation). The benefits of these practices are widely accepted and are now included in the national program "Grenelle de l'Environnement".

However, there is a clear discrepancy between, on one side, the intentions expressed in sometimes incantatory speeches on proximity and the virtues of short supply chains, on the other side, the achievements that remain sometimes still timid. The Lyon region experience through the implementation of a Scheme of territorial coherence (Scot) on 72 municipalities coupled with an approach for the setting up of protection perimeter and for the enhancement of agricultural and natural areas (PAEN) shows all difficulties and obstacles in the process. They depend on local agriculture and agriculture actors as well as spatial planning procedures limitations.

Agricultural activity in the Lyon metropolitan area occupies and manages 1 / 3 of Scot land and 70% of non built areas. Despite a strong presence of specialized activities in horticulture and arboriculture, the territory does not have any productive peri-urban specificity: 72% of the Utilised Agricultural Area (UAA) is dedicated to extensive agriculture that is not suitable for local markets. The structures are varied: the small greengrocer who sells on the local market close to the large grain or vegetable company working on long supply chains. Moreover, the agricultural presence is often very diffuse and farmers are very isolated or in difficulty. For many of them, switching their production to local supply chains is hampered by the need of manpower and additional investment, access to land or to new premises for processing and marketing, but also by the need of new know-how and training. The concerted efforts undertaken within the Scheme of territorial coherence (Scot) and the introduction of PAEN in the territories of agriculture more conducive to the local market (mixed farming, fruit growing, market gardening) illustrate the great difficulty of these farmers to formalize a collective territorial project. Individual strategies prevail. Direct sales, seen as a complementary diversification activity, are not excluded from these practices, but they remain poorly organized and quantified. Moreover, the image and perception of direct selling and short supply chains is very differently understood and supported by agriculture professionals: these are divided between those who are willing to engage in a project of multifunctional agriculture anchored to the land and those who favour the production and development of productive chains on a different scale.

At last, in the world of planning and urban planning, appropriation of concepts related to agronomy and agriculture are still limited. Progress in terms of frames and green frames is easier in a culture of planning and architecture than progress in considering agricultural activities and functioning of operating systems. The need to invent new professions in the suburban area, "*the agriurbanistes*" begins to emerge. It would be futile to expect that planning documents become tools to promote direct sales, the most they could do is to facilitate the construction of sales points, but in no case they would be able to designate farmland dedicated to direct sales.

Finally, new planning tools represent some progress on the concept of peri-urban agriculture and on the challenges of supplying nearby urban market. The consultations associated with these procedures establish new locations and times for confrontation and cross-fertilization between actors for the emergence of territorial projects, including projects of direct selling activity.

The fact remains that these approaches require changes in the posture of each other, for the ones to organize a consultation for an effective territorial project and not a simple zoning, for the others to open to an approach integrating sales, surpassing the single point of production.

Joëlle Diani

Directeur d'études

Chargée de mission agriculture/nature

Agence d'urbanisme pour le développement de l'agglomération lyonnaise,
France

Original message in French

Agriculture périurbaine et vente directe: que peut l'urbaniste

Historiquement l'agriculture périurbaine est liée au marché local des produits frais : jusqu'au siècle dernier, les ceintures vertes ont assuré le quasi monopole de l'approvisionnement des villes et la gestion de l'environnement par la récupération des déchets urbains. Au XX^{ème} siècle, dans les pays occidentaux, la relations ville/agriculture s'est en termes économique : le développement des transports a permis de délocaliser l'alimentation sur de longues distances et a favorisé un mode d'organisation en filières dont les logiques ont remis en cause l'avantage de la proximité du bassin de consommation. Ce n'est que récemment, sous la pression de la Politique Agricole Commune (PAC), et de la loi d'orientation foncière de 1999 qui consacre le terme de multifonctionnalité de l'agriculture, et face aux enjeux de maîtrise locale du développement urbain que le rôle de l'agriculture périurbaine est reconsidéré.

Face aux enjeux de lutte contre l'étalement urbain et dans un contexte plus général de crise économique, écologique, énergétique et de sécurité alimentaire, le monde de la planification et des urbanistes a dû cesser voir les espaces agricoles périurbains comme un simple décor à la ville ou encore comme une réserve d'espaces pour l'urbanisation future - la production agricole étant alors appréhendée par défaut comme le moyen le plus économe de conserver l'espace en attente. L'agriculture périurbaine se doit désormais d'être intégrée au projet territorial urbain sous-tendu par les enjeux du développement durable. Il s'agit d'accompagner les politiques classiques de protection et de zonage par des projets de valorisation et de gestion en lien avec les enjeux du territoire, et donc adaptés à la situation de périurbanité. La loi solidarité et renouvellement urbain (13 décembre 2000) en créant les schéma de cohérence territoriale (Scot) et la loi relative au développement des territoires ruraux (DTR) (23 février 2005) qui instaure un nouvel outil pour le périurbain, les périmètres de protection et de mise en valeur des espaces agricoles et naturels (PAEN), traduisent cette inflexion de la planification et le passage du zonage au projet.

Ce contexte ouvre sur le plan théorique un espace favorable à la vente directe et aux circuits courts d'approvisionnement de la ville. Les discours ne manquent pas de faire remarquer que "*la ville est aussi un atout pour l'agriculture et les agriculteurs : un potentiel de consommateurs existe près des villes qui peut les servir s'ils savent exploiter les marchés de proximité*" (ADAYG).

Il est vrai que les expériences de vente directe sont en pleine expansion dans les territoires périurbains : développement des associations pour le maintien d'une agriculture paysanne (AMAP), points de vente collectifs, ventes directes à la ferme et réseaux de fermes, conventions d'approvisionnement avec les grandes surfaces, labels, circuits de commercialisation à destination de la restauration collective ... Toutes ces initiatives "*pour remettre le visage du producteur et du terroir sur l'aliment*" valorisent la proximité avec des avantages autant sociaux (rapprochement producteur/consommateur) que techniques (fraîcheur, économie d'énergie du transport) Les avantages de ces pratiques font consensus et sont désormais inscrites au programme national du Grenelle de l'Environnement.

Cependant, on note un net décalage entre, d'un côté, les intentions avec des discours parfois incantatoires sur la proximité et les vertus des circuits courts et, par ailleurs, des réalisations qui restent encore timides. L'expérience lyonnaise à travers la mise en œuvre d'un Schéma de cohérence territoriale (Scot) sur 72 communes couplée avec une démarche de mise en place de périmètres de protection et de mise en valeur des espaces agricoles et naturels (PAEN) montre toutes les difficultés et les freins de la démarche. Celles-ci relèvent autant de l'agriculture du territoire et du monde agricole que des limites des procédures de planification de l'espace.

L'activité agricole de l'agglomération lyonnaise occupe et gère 1/3 du territoire du Scot et 70 % des espaces non construits. Malgré une forte présence d'activités spécialisées en maraîchage et en arboriculture, le territoire ne présente pas de spécificité productive périurbaine : 72% de la SAU est dédiée à la grande culture peu propice au marché de proximité. Les structures sont variées : le petit maraîcher qui vend sur le marché local côtoie le céréalier ou les grandes entreprises maraîchères organisées en circuits longs. Par ailleurs la présence agricole est souvent très diffuse et les agriculteurs très isolés ou en difficulté. Pour bon nombre d'entre eux, la mise en circuit court de leur production est rendue difficile par l'exigence de main-d'œuvre et d'investissements supplémentaires, d'accès au foncier ou nouveaux locaux de transformation et commercialisation, mais aussi par l'acquisition de nouveaux savoir-faire et de la formation. Les démarches de concertation entreprennent dans le cadre du Schéma de cohérence territoriale (Scot) et de la mise en place des PAEN sur les territoires d'agriculture plus propices au marché de proximité (polyculture, arboriculture, maraîchage) témoignent de la grande difficulté de ces agriculteurs à formaliser un projet collectif de territoire. Les stratégies individuelles l'emportent. La vente directe, perçue comme une activité complémentaire de diversification, n'est pas exclue de ces pratiques mais elle reste peu organisée et quantifiée. Par ailleurs, l'image et la perception de la vente directe et des circuits courts est très différemment appréhendée et portée par les professionnels de l'agriculture : ils sont partagés entre ceux qui sont prêts à s'engager dans un projet d'agriculture multifonctionnelle ancrée au territoire et ceux qui privilégient la production et développement des filières sur une autre échelle.

Enfin, dans le monde de la planification et de l'urbanisme, l'appropriation des concepts d'agronomie et d'agriculture sont encore bien limités. Il est vrai que les avancées en termes de trames et d'armatures vertes sont plus aisées dans une culture d'urbanisme et d'architecture que les avancées en matière de prise en compte des activités agricoles et du fonctionnement des systèmes d'exploitation. La nécessité d'inventer des nouveaux profils de professionnels de l'aménagement périurbain, "*les agriurbanistes*", commence à émerger. Il serait par ailleurs vain d'attendre des documents d'urbanisme qu'ils deviennent des outils de promotion de la vente directe, au plus ils peuvent faciliter la construction de points de vente mais en aucun cas ils ne sauraient désigner des espaces agricoles dédiés à la vente directe.

Pour conclure, les nouveaux outils de planification représentent des avancées certaines sur la notion d'agriculture périurbaine et sur les enjeux d'approvisionnement de proximité du marché urbain. La concertation associée à ces procédures instaure de nouveaux lieux et temps de confrontation et de brassage entre les acteurs nécessaires à l'émergence de projets territoriaux, dont les projets d'activité de vente directe. Il n'en demeure pas moins que ces démarches appellent des évolutions de postures des uns et des autres, pour les uns organiser la concertation pour un vrai projet de territoire et non pas un simple zonage, pour les autres s'ouvrir à une approche intégrant la commercialisation, en dépassant le seul angle de la production.

Joëlle Diani
Directeur d'études
Chargée de mission agriculture/nature
Agence d'urbanisme pour le développement de l'agglomération lyonnaise
France

Contribution by Mary Krane Derr from USA

Hello,

I am not a technical expert on food security; I am an urban organic community gardener. I belong to a 30 year old organic community garden in the inner city of Chicago, USA. Our garden takes up one vacant lot, previously owned by the city. It serves about 20 households & when we can, the local food pantry.

As gentrification encroaches on so many poor urban neighbourhoods around the world, I wonder how urban farmers and gardeners without the money to purchase land can hold onto it. This has definitely been a problem facing our garden. Before the global economic downturn, real estate developers were buying up & building overly expensive housing on so many vacant lots in our neighbourhood. We were continually anxious about having our land sold out from under us. Finally we were able to join forces with NeighborSpace, <http://neighbor-space.org/main.htm>. This is a charity that buys up community garden lands to preserve them from development. Is this a model of land preservation that could work in other countries? If not, what else can be done? After all there is no food security without land security. Dreams of hydroponic skyscraper farms in the cities are dreams for the very rich.

Mary Krane Derr

Contribution by Ganesh Parida from CYSD, India

Dear all

Food security in rural areas is a big concern at this point of time as fast changing in climate, low production in agriculture etc. Specifically the small and marginal farmers are facing further problems due to such adverse conditions.

Please find a case study; how the group farming initiatives helps to ensure food security and also linked to rural-urban market in terms of supply of farm produces.

This is an executive summary of the case study.

Making Market Work for Poor Farmers: A Case of Group Farming in Tumajore Village

Poverty is a major global concern and rightly the first of eight millennium development goals (MDGs) specified reduction of world poverty by 50 per cent by 2015. Several steps are being taken by the respective national governments along with assistance from world communities to achieve this objective. Amidst the government measures, the civil society also has been playing an important role in ensuring livelihoods of the deprived communities and thus enhancing poverty reduction through providing access to productive assets, building capacity of the deprived communities to raise the level of their production while exploiting the natural resource base in a sustainable manner and also facilitating or lobbying for an accessible market where producers can sell their produce at remunerative prices, and thus generating more income for the

community. Besides, there are also several other measures taken up by the civil society to achieve the goal of poverty reduction.

Orissa, an eastern state of India, is a focused state with nearly half of its population living below the government defined poverty line. The present case study is about the efforts by CYSD (www.cysd.org); a Bhubaneswar based civil society organization, to raise the economic condition of villagers of remote Tumajore village under Hemgir block of Sundargarh district. The case study explains how introduction of *group farming* has brought cheers on the faces of Tumajore. *Parwal* (a green vegetable) cultivation was introduced in Tumajore in December 2007 in a patch of 3.5 acres of barren upland involving 19 most deprived and vulnerable households in the village. Presently 66 of the total 74 households of Tumajore are engaged in this activity in 15 acres of land.

Apart from documenting the process of bringing the community together for *parwal* cultivation in a common patch of land and building their capacity through handholding support, an attempt has been made in the case study to document the facilitating role played by CYSD in establishing market linkage. With an average production of nearly 100 quintals of *parwal* every week during the peak season between August and September, the efforts would not have been beneficial but for proper market linkage. It may be noted here that the Tumajore *parwals* have carved a niche in the neighboring states of Chhatisgarh (Raipur, Bilaspur and Raigarh), Madhya Pradesh (Bina, Babina, Jhansi, Gwalior and Sagar and also to the nearby cities of Jharsuguda and Sundargarh.

The case of Tumajore strived to explain that through formation of social and human capital at the grassroots level agricultural production capacity of the community can be raised provided the natural resources are exploited in a sustainable manner. On the other side, if the produce can be linked to a remunerative market, it is definite to raise the income level of the poor, thus helping in reduction of poverty and contributing to the wider goal of global poverty reduction as specified in MDGs.

Regards
Ganesh Parida
Program Manager, CYSD
Orissa, India
www.cysd.org

Responses by Julien Custot, topic raiser and facilitator

[Response to Maria van Heemstra from the World Council of Churches, Switzerland](#)

Dear Maria,

Thanks for this first contribution to the forum.

Your first comment addresses the rural-urban linkages. Food production is a component of this issue that also includes population migration and nutrition patterns. Your post stresses the fact that local strategies dealing with both urban, peri-urban and rural areas are necessary. It's particularly true for employment policies that have to find the good balance between urban and rural employment. You warn of possible risk but would you agree to read it the other way around? That is:

- 1) small producers can be efficient growers and may bring high value products that can be produced in urban and peri-urban areas; and
- 2) development of cities (with employment) is a driver for local development (including local agriculture).

Your second comment is focused on consumption and nutrition patterns. A lecture as recently been given by Marion Nestle at FAO on World food day (<http://www.foodpolitics.com/2009/10/world-food-day/>). Marion Nestle brings an academic analysis on how people behaves, how behaviours are shaped (marketing, media...) and how urban consumption patterns are linked with local production.

As you write in conclusion, it clearly needs a coherent and holistic approach.

Response to Edward Mutandwa from RDA, Rwanda

Dear Edward,

There's indeed an important need to work on the food chain, and particularly on the added value at the different steps of the process and the price linked to it.

As you underline, it concerns a very wide range of actors. It therefore needs a strong political commitment in order to implement policies that will have structural effects on the market and to follow them up for a long period.

Besides, the chain value issue concerns all countries. The differences between the production cost and the selling price can be very important, with the supermarket playing an important and probably growing role in this chain. A recent communication of the European Commission, on the 28-10-2009, identifies the problem and proposes a "better functioning food supply chain in Europe". (http://ec.europa.eu/economy_finance/thematic_articles/article16028_en.htm) Already, propositions are made to shorten the food chain, some informal like the AMAP in France (<http://www.reseau-amap.org/>), other quite official as, in the USA, the «Know your farmer» initiative (<http://www.usda.gov/wps/portal/knowyourfarmer?navid=KNOWYOURFARMER>).

Response to David O. Ojo from the National Horticultural research institute, Nigeria

Dear David,

Thanks for your contribution. FAO was present during the All Africa Horticulture Congress held in Nairobi.

You insist on the need to take into account the specificity of the territory and of the supply chain. As you write, there are still important ways of improving local food production. It strongly relies on political will and long term investment (but not necessarily important).

Response to Girma Taddese, from the International Livestock Research Institute (ILRI), Ethiopia

Dear Girma,

Thank you for your technical contribution.

The recycling of waste water for irrigation can be done in very safe conditions. Regarding the difficulties to have access of water in some territories, the cost of agricultural inputs and the risk of fertilizer shortage, particularly of phosphorous deficit in the next decades, this recycling is a necessity. It needs a good management and a control of the effluents. Industrial pollution, that is very different of domestic wastes, when it may include heavy metals, has to be prevented.

When it is well done, recycling waste water becomes a resource for productive and high value activities. FAO is working to promote it: information is available on the dedicated part of the Food

for the cities web site (<http://www.fao.org/fcit/environment-health/water-sanitation/it/>) and, on a more general perspective, on the FAO water unit website (<http://www.fao.org/nr/water/>)

Response to Joëlle Diani, from the Urban Planning Agency for the Development of Greater Lyon, France

Dear Joëlle,

Your contribution highlights the links between the different territory on a metropolis areas that includes urban, peri-urban and rural parts. It explains how new approaches are, or can be, made between, on the one side, urban planning and land tenure, and, on the other side, local agriculture activities. You show the necessity to work on theoretical and legal basis as well as on projects building and management.

New types of local governance are needed in order to implement new projects.

Besides, your contribution clearly reminds us that food, agriculture and cities issue concern both developing and developed countries. Including agriculture issues in urban planning is a way to shape and to build sustainable cities, reducing their environmental foot print and giving a friendlier environment to the inhabitants.

Response to Mary Krane Derr from USA

Dear Mary,

Thank you for sharing your experience. Land tenure is a clear issue in order to secure local food production and the harmony in the use of land.

Besides production of food, there are positive outputs at keeping garden in and around cities as reducing heat island effect, favouring water infiltration, providing leisure places...

As you point out, there's a particular need of financial help in times of speculation. There may also need help if times get hard so people don't have to sell their piece of land in order to desperately grab some little money.

Therefore, there need to be organisation of producers as well as some forms of financial or regulation back up by local (and national if possible) authorities. I've already heard a proposition to implement a fund to by pieces of land around cities in order to subtract them from the market.

Response to Ganesh Parida from CYSD, India

Dear Ganesh,

Thank you for this presentation of the project of Tumajore. It brings up the question of rural development, which will be addressed at the World Summit on Food Security next week. You insist on the necessity to link the rural and urban areas. A good way to help rural areas is indeed to make the good connections to enable farmers to have access to local markets and to help the development of distribution channels.

You focus on human and social capital. We should never forget that this un-material capital is a key to fight hunger in the long, but also the short, terms.

Contribution by Marc Cohen from Oxfam, USA

The International Institute for Environment and Development and the UN Population Fund recently published a paper by James Garrett and myself on the impact of rising food prices on urban food security.

Please find below an abstract. The complete paper, titled “**The food price crisis and urban food (in)security**” can be found at

http://typo3.fao.org/fileadmin/user_upload/fsn/docs/The_food_price_crisis_and_urban_food_in_security.pdf or at <http://www.iied.org/pubs/display.php?o=10574IIED>.

Regards,
Marc J. Cohen, Ph.D.
Senior Researcher
Oxfam America
Washington
USA

Abstract

Rapid increases in food prices in 2007 and the first half of 2008 attracted high-level policy attention. During the course of 2008, the United Nations organized an inter-agency High-Level Taskforce on the Global Food Security Crisis and issued a Comprehensive Framework for Action. Over 40 heads of state and government attended a High-Level Conference on World Food Security, sponsored by the Food and Agriculture Organization of the United Nations (FAO), and focused mainly on how to address the price increases. Donors pledged more than US \$12 billion to assist low-income, food-importing countries in coping with the effects of soaring prices.

The speeches, declarations, plans, and pledges all duly noted the vulnerability of poor urban dwellers, who rely primarily on market purchases for their food, and for whom food purchases account for the bulk of expenditures. Yet most policy prescriptions focused on addressing constraints to rural-based food production. In addition to strengthening of social protection schemes, the declarations called for increased investment in smallholder agriculture, attention to macroeconomic and trade measures, and the development or rebuilding of national and regional food stocks. While action in these last three areas potentially contributes in the longer term to greater urban food security, policymakers and analysts nevertheless paid less attention to efforts that would have a direct impact on preventing urban hunger.

In this paper, we argue that the disproportionate attention that policy solutions to the food price crisis give to rural dwellers is likely misplaced. Although in developing countries rural poverty is often deeper and more widespread than urban poverty, rural dwellers are often net producers of food, frequently of the very staples whose prices are rising. We outline the pathways of impact of food price rises on urban dwellers; highlight the evidence so far on how those impacts have played out during this crisis; and describe current policy responses and suggest how to improve them to better protect the urban poor in the short- and longer-term.

Contribution by Colin Shaw from UK

Like Mary Krane Derr I am not an expert on food security but have been involved in organic gardening in the UK the 20 years – <http://organicgarden.org.uk>. The recent economic downturn hit many poor families very hard. One result has been a big upsurge in growing food which cannot be satisfied by the provision of traditional allotments. Various high profile schemes aimed to provide small parcels of land to have been much publicised but none address the real issue of access to land. Where there is competition between urban food growing and development the developers win every time. With increasing demand on land in urban and rural locations the

situation does not seem likely to improve in fact the resurgence in house prices will make it even worse. I cannot see any real answer other than government intervention. If the UK is to work towards increasing its food security in the coming years then there has to be a shift in priorities for land use. From what I have read this is a common issue.

Colin Shaw.

Contribution by Violet K. Mugalavai from Moi University, Kenya

Hello Julien Custot and all,
I am trying to put a research proposal together.
Please help me understand my work in the city by providing feedback on the document attached below, that is my contribution to this discussion.

Thank you.

Violet Dr. Violet K. Mugalavai,(PhD).
Senior Lecturer, Head of Dept,
School of Agriculture & Biotechnology, Moi University,
Department of Family & Consumer Sciences,
Eldoret, Kenya

Using a Small-scale Cluster Model for Sustainable Urban Agriculture and Development among Interactive Livelihood Groups in Eldoret, Kenya.

1.3 General objective

The general objective of this study is to indulge UA interactive livelihood groups of producers and sellers, and consumers in climate adaptation practices in the midst of climate change and climate variability within the context of the UA small-scale cluster development model and to determine the effect of the new practices on their livelihoods and household food security.

1.3.1 Specific objectives

The specific objectives of this study are:

1. To establish the livelihood characteristics that identify the low income UA interactive livelihood groups before and after the implementation of the small-scale cluster development model.
2. To determine and implement better climate adaptation ecological practices within the small-scale cluster development model and compare returns on UA livelihoods and their impact on the consumers.
3. To consider gender issues in the performance of interactive livelihoods during the implementation of climate adaptation practices within the small-scale cluster development model.
4. To examine the extent to which the small-scale cluster development model for UA interactive livelihood groups may impact on the food security of the UA households after implementing better climate adaptation practices.

1.4 Research questions

1. What are the general livelihood characteristics that identify the low income UA interactive livelihood groups within a chosen small scale cluster development model?
2. What climate adaptation ecological practices do/should community members engage in so as to mitigate climate change vulnerabilities towards sustainable UA and how do the UA returns compare?
3. What gender issues come into play within the small-scale cluster development model during the implementation of climate adaptation ecological practices?
4. To what extent does the household food security of UA interactive livelihood groups and consumers improve when using the small-scale cluster development model approach?

Theoretical and conceptual framework

This study will use the livelihood framework (DFID, 1999) which distinguishes seven types of assets or 'capitals'. These include financial capital (e.g. credit, cash); physical capital (e.g. transport, markets); human capital (e.g. labour, knowledge and skills); natural capital (e.g. land, water); political capital (e.g. policies and infrastructure); social capital (e.g. support groups, friends), and cultural capital (e.g. indigenous knowledge and values), which will be examined using the ecosystem approach in the context of climate adaptation practices, sustainable livelihoods and food security, within the context of the small scale cluster development model. Applying the sustainable livelihoods approach highlights the multifaceted interactions between groups and the vulnerability context of households, their asset bases, natural resource management, intervening institutions, and livelihood strategies. Therefore, a collective driven development approach between interactive livelihood groups and consumers in the use of livelihood resources will be an important aspect for integration to understand how UA impacts on livelihoods and consumers within the cluster.

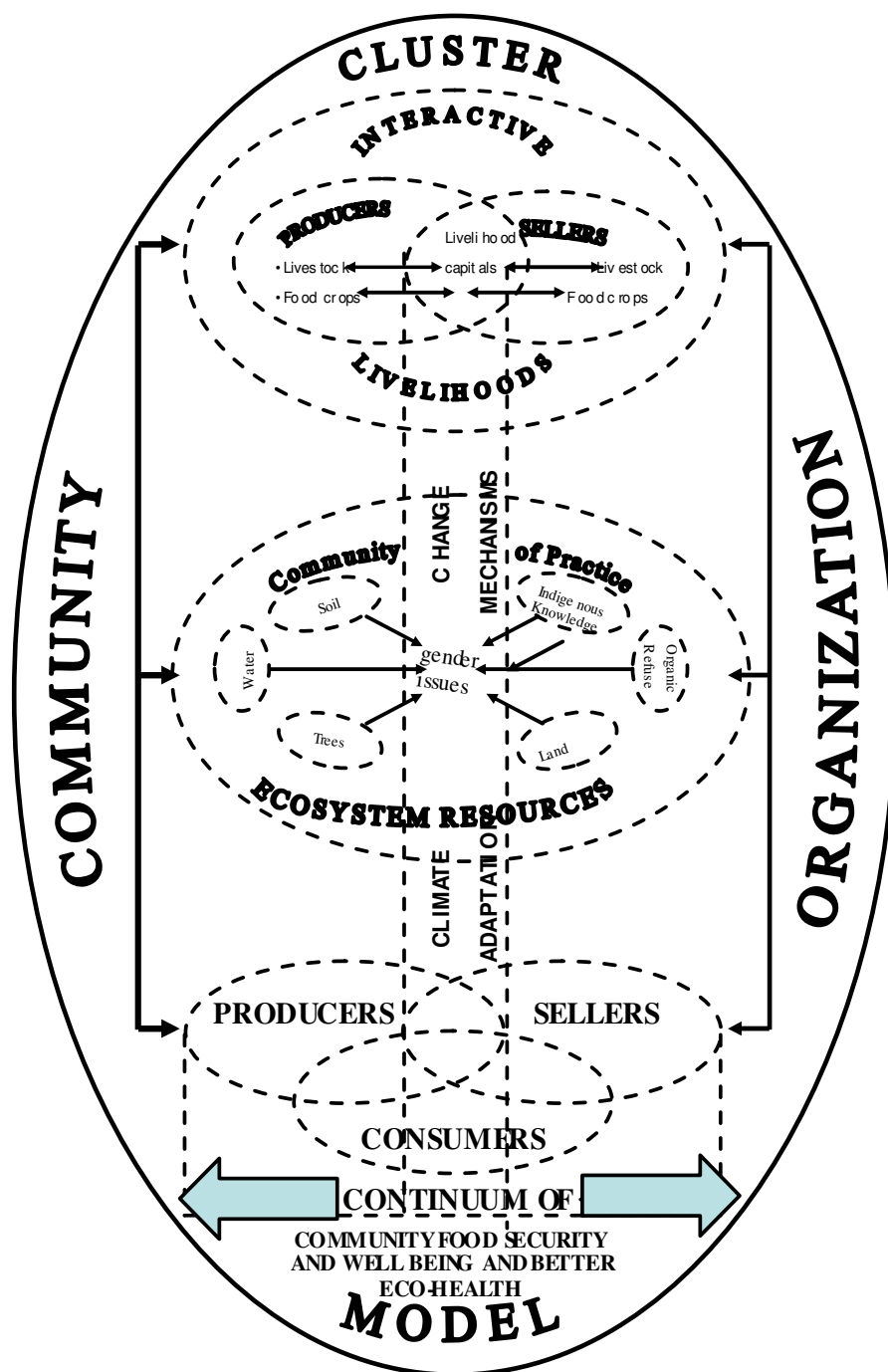
The small-scale cluster development model of interactive livelihood groups and consumers, forecasts that communities can work together towards better livelihoods and food security of their households and their contextual ecological health. Acknowledging and using community resources and strengths may reduce the effects of global environmental change through climate adaptation practices such as redeeming and re-using natural resources that are recyclable in order to reduce on environmental damage and to counteract climate change vulnerabilities. This approach is expected to impact positively on economic growth, consistency in employment, income, well-being, and food security. This approach aims at enhancing small-scale farming using a contextual community development approach within small-scale cluster models. Committed harnessing and aggressive use of available community resources in the midst of climate change vulnerabilities due to shifting climate variability that mainly affect the poor is the answer to food security in a contextualized community development initiative and may lead to a win-win end for the common good of interactive livelihood groups and consumers towards sustainable agriculture and development (SAD), (Mugalavai, 2008).

The small-scale cluster development model with an eco-health perspective is proposed (See Fig.1) with a view to putting the idea into a food security context. The model envisages that low- income livelihood groups and the consumers within their context may interact and affect each others' livelihoods and food security while using the available livelihood capitals and carrying out climate adaptation practices. In this regard, redeeming, recycling and reusing livelihood resources such as rain and grey water, organic refuse, indigenous knowledge, maximum utilization of land, growing of food/fruit trees to green the environment, sustainable harvesting, preservation and better marketing systems will be practiced.

For the purposes of improving the livelihood outcomes, community development frameworks that enhance collective action and information exchange and enhance best environmental and livelihood practices will be put in place and practiced so as to enhance sustainable agriculture and development. Interactive livelihood groups can share a common commitment to group learning and information exchange towards socially constructed activities that would enhance group multi-sustainable development. The communities of interaction will work together on the UA livelihoods to improve their contextual ecosystems.

In the midst of a community of collective action, exchanging knowledge and skills, using coping strategies, motivating one another, sharing, probing, prompting, and suggesting good practices, there is bound to be a motivational spirit towards collective driven development. With boundaries that are not rigid, community groups of practice will not use knowledge and skills that are static, rather, innovative skills and ideas that are created through practice and shared both internally and externally. An equal participatory approach between the livelihood groups of interaction and the consumers of all gender is necessary for an all-win situation. This will bring about meaning and values and enhance social relations towards deeper community bonding and bridging within the small scale cluster development model's ecosystem approach.

Figure 1: Urban Agriculture Small Scale Cluster Development Model



Contribution by Siddharth Agarwal from the Urban Health Resource Centre, India

This is an important subject which is being discussed in the FSN community. Like many others who have shared their contributions, I am not a food and agriculture professional. I am a physician by training working in the field of public health and nutrition for some time now. I am sharing some thoughts.

Factors contributing to high levels of food insecurity among city dwelling poor:

1. A key factor contributing to high levels of food insecurity among the urban poor living in cities is the near total dependence on cash purchase of food, mostly on a daily or weekly basis and the rapid increase in food prices in 2008-2009. The support of extended family relationships and more cohesive social networks are lacking in urban poor habitations. The possibility of producing own food are also very limited in cities.

2. Urban market systems which lead to the end-user paying the load for all middle-men in the market chain also add to the challenge of the poor 'citi'zens. Consequently impoverished families in the swelling cities of Asia and Africa end up spending a large share of the household budget on food and are more vulnerable to swings in food costs than rural folk. Unlike rural areas where food grown can be eaten even during non-employment months, in urban areas only those who have enough cash at hand can afford a satisfactory diet.

3. Experiencing low access to food owing to low wages and casual nature of employment remains a daily reality among the urban poor. Since quantum of employment is lower; overall income in comparison to urban food prices is also low. Hence on a day when the urban poor daily wage earner is not lucky to get employment, her/his family often sleep with a suboptimal meal.

4. Compromised access to food subsidy programs: Many countries have food subsidy schemes which take different forms. In India there is the Targeted Public Distribution System which is designed to provide the poor with substantially subsidized food grains and other commodities. In most states of India there are a few gaps in implementation of the scheme: a) less than one-third (29%) of India's urban poor have below poverty line cards, an essential requisite for subsidized access to food and other commodities of India's food assistance program named the Targeted Public Distribution System (PDS) (Press Information Bureau, Government of India 2007; b) often a "quota" system is followed implying that at an administrative unit (such as a District) there is an upper limit for the number of families who can be issued BPL cards. Consequently the managers of the scheme are not sensitized enough for the need to proactively reach out to the most vulnerable and voiceless families; c) operational inefficiencies also contribute to the nemesis of this scheme. A recent scientific study conducted on implementation of the TPDS in Maharashtra (Sharath Kumar et al) showed that 50.3% of TPDS beneficiaries (possessing BPL cards) stated that the grain were generally not available when they listed the shop for purchase.

5. Rural people are being forced to migrate to urban areas as environmental migrants owing to various climatic factors as well as other contemporary reasons that marginalize the poor farmer. Also disorganized sprawl as result of spatial growth of the city, leads to those living in city fringes, getting included in city limits, many of whom end up living in peri-urban slums. In addition natural increase in population of existing poverty clusters in cities also contribute to increase in population of urban poor population. These trends are also contributing to an upsurge in the number of urban-based, food-insecure populations, a trend that is likely to grow since it is projected that nearly all global population growth over the next 30 years will occur in cities of developing countries. India is projected to become 50% urban by 2030 (India Urban Poverty Report).

6. Environmental and human factors are contributing to over food shortages, which are afflicting the urban poor most. A study (Battisti and Naylor, 2009) suggests that half of the world's population could face severe food shortages by the end of the century because rising temperatures take their toll on farmers' crops. Drought and changing patterns of plant and livestock diseases and pest infestations, reduction of income from animal production, decreased crop yields, lessened forest productivity, and changes in aquatic populations will all affect food production and security. Climate change will compound existing food insecurity (Brown and Funk, 2008).

Magnitude of the problem: There are very few published studies on urban food insecurity. A recent study conducted in a densely populated slum in Delhi, among 400 households showed that, in the past year, 51.7% households reported facing the problem of 'food not lasting for the purchased period and having no money at hand to buy more food' and 15% families faced situations 'when one or more family members were hungry but family could not afford to buy food'. The study used a 4-item version of short-form six-item HFSS developed by Blumberg et al. (1999) was used after pretesting and adaptation to context. The questions were asked in Hindi. The sequence of questions that was revised by U.S. Department of Agriculture (2008) was used in the present study.

Even if 51% is taken as an overestimate in view of it being a self-reported response, 51% food insecurity in urban slum dwellers of Delhi correlates well with a disaggregated data from the Third National Family Health Survey (Urban Health Resource Centre, unpublished data), which showed that in Delhi 57.7% under-five urban poor children are stunted and 14.8% women suffering from acute under-nutrition, which can be considered as nutritional outcomes of food insecurity. Factors significantly associated with experienced poor access to food were – fewer earning members in household and decreased monthly per capita spending on food.

Siddharth Agarwal
Urban Health Resource Centre
India

Contribution by Thilak T. Ranasinghe from Sri Lanka

Dear FSN Members,

Population expansion and ill-balanced development initiatives have contributed to the ever expanding differences between cities and traditional villages for many years. Due to the degradation of resource base rural populations convert themselves into urban dwellers changing living styles, food consumption habits and also social behaviour patterns.

In consequence, rural people have to produce for different food requirements of urban populations which are traditionally not consumed in larger quantities but help to gain considerable high income and profits. However, soil problems, droughts and flash floods and wild animal damages cause to restrict production benefits of those crops under sustainable basis. As a result, rural populations do not invest on appropriate investment for high outputs under high risk levels as discussed earlier. They fetch low farm-gate prices and their produces are subjected to heavy post harvest losses (e.g., nearly 30 to 40% loss) in reaching urban markets. This process lower the farm gate price and increase the market price of consumer products. At last it affects to increase the gap of trade balances as Governments tend to import essential food from outside. Due to the competition exists in socio-economic requirements in cities and towns, urban people are undergoing unsatisfactory levels of physical as well as mental health conditions which are greatly needed to be addressed by governments. For instance, according to the recent surveys stress related disease conditions and spread of non-communicable diseases are on the rise in Sri Lanka.

In recognizing the above situations, the concept of the **Family Business Garden** [FBG] introduced with "Vertical Living Structures" that addresses the value of utilizing limited vertical space available in cities for urban agriculture was launched in Sri Lanka in the year 2000. It has five strategic components in practicing "vertical-development" practices: i.e., family nutrition, technology adoption, crop management, post harvest management & value addition, and landscaping & housekeeping. The key technical input is to achieve better mix of "indigenous-technical-knowledge" and "scientific-advancements" in establishing sustainability of micro-agro-entrepreneurships by allowing urban communities to expose their creativity.

(<http://www.cityfarmer.info/category/sri-lanka>, <http://www.cityfarmer.org/colombo.html>,
<http://www.iwmi.cgiar.org/southasia/ruaf/Partner.html>).

The success of the conceptual approach of the FBG resulted to include the urban agriculture in the form of homestead development into the National Agriculture Policy of Sri Lanka in improving food security as well as women and family nutrition development of the nation first in 2003 and second along with the launch of present local food drive, namely “Api Wawamu Rata Nagamu – Let us Cultivate to Uplift the Nation” in 2007. Vertical living structures which provide to trap creativity and better mix of ITK and scientific knowledge helps not only do agriculture in urban areas but also build a urban-rural continuum where resource poor situations, wild animal damages and low youth population levels in rural areas. Because simple vertical structures provides to optimize cropping areas that can easily be protect from wild animals, climatic constraints and provide balanced diet as they tend to cultivate traditional food crops mainly leafy vegetables.

It is revealed that urban people are ready to respond positively as receiving mechanism of the FBG initiatives by organizing themselves into small groups or civil society groups in wider scale there is a need of change in delivery mechanisms of the service structures. In this respect extension services shall adopt novel and different extension methods in reaching urban population so as to reduce local food miles and in turn food exports. For instance, I experimented with Extension Street Walks, use of outdoor advertising methods like hoardings and road side information centres, and so on in addition to the latest IT methods with positive impacts while considering the busy life of urban populations. The dynamic form of intervention is a must in delivery of urban extension strategies in creating links between food security in cities through the implementation of conceptual and practical approaches like FBG and effective extension methods that suit to the present urban world.

Thanking all!

Thilak T. Ranasinghe, PhD
[Former Director of Agriculture (Western Province)],
Sri Lanka

Contribution by David O. Ojo from the National Horticultural research institute, Nigeria

Thanks for your response (*Julien Custot response to David's previous contribution*); further still the road networks and none or erratic electricity supply for agro processing industries plus leadership problems are suggested areas for possible improvement in rural-urban inter dependence.

David O. Ojo,
NIHORT,
Ibadan, Nigeria

Contribution by Remi Kahane from the Global Horticulture Initiative, Tanzania

It is never too late to discover or reveal one of the biggest challenges of the human being in the coming years. Supplying cities with fresh and safe food sounds quite simple, and most of the city mayors hardly pay attention to this issue. Most of them, except those who faced a crisis in the past. Antananarivo in Madagascar for instance, realized during the political crisis of 2003 when all linkages with the harbours were controlled by the opponents that it was not all that simple to provide food to the starving population, and that fruits and vegetables grown in the gardens or green belts were highly purchased. Strategically speaking, it revealed the dependency of the city toward the countryside, and the essential link, not only made of food, also of history, culture, humanity, between urban and rural areas. This is not to encourage and support urban policies on autonomy; this is to exemplify the importance to balance both developments of rural and urban areas. This is to advocate for coordination and consultation in any urban planning project with rural partners and communities. And in return, rural development programs like a new irrigation

zone, a new road or organizing farmers' groups will affect much city supply, either in quantity, or in quality.

The study case in Kenya (attached below) brings some evidence that the link between rural and urban areas is still strong despite the enormous growth of the cities, and shall be kept strong for harmonious and stable development. Agricultural activities shall not be criminalized but organized and integrated in densely populated areas. It can generate well being instead of pollution, with good practices of water and waste management. It produces employment, generates high value products, and diversify incomes of many women and some very poor people.

Creating forum and space for discussion between all actors of the city around these issues is a first step. Researchers shall provide some data, describe dynamics and present some probable scenarios for the next 5-10 years: without any public regulation, with little public regulation and with strong public measures like investments, enabling environment on food land natural resources for instance.

Remi Kahane
Executive secretary
Global Horticulture Initiative

The case study “Promoting Agricultural Value Chains: the case of Kenya”, can be found at [http://typo3.fao.org/fileadmin/user_upload/fsn/docs/Rural-Urban linkages in Kenya.pdf](http://typo3.fao.org/fileadmin/user_upload/fsn/docs/Rural-Urban_linkages_in_Kenya.pdf)

Contribution by Vide Adedayo from University of Lagos, Nigeria

Dear All,

I would like to dwell on the role of government in supporting urban agricultural activities in Lagos in specific and in Nigeria in general.

While it is obvious that food production, processing and distribution activities in urban Lagos have contributed significantly to the Lagos urban economy, the response of the state government to this, does not commensurate when compared to other sectors of the city and rural agricultural development. With the way things are, it appears it is still believed agriculture is a rural –based activity in this era of rural migration to cities and despite less infrastructural development (quality water and electricity supply) experienced in the rural areas. In most part of urban farm communities in Lagos, there is extensive decrease in urban agricultural land and the Lagos megacity development programme has been one key factor apart from the traditional urbanisation challenges (Anosike, 2008). Again, access to agricultural agents and other agricultural inputs is self and community efforts and it is associated with extremely bad and unhealthy practices that pose threats to consumers, farmers and the environment. For example, untreated waste (liquid and solid) from municipal drains and animals (Cattle and poultry) forms the main farm input and despite all the intended international and national ‘goals’ to ensure food security, healthy nutrition and secure environment food is being cultivated on old landfills to feed the ‘city people.’

Vide Adedayo, PhD
University of Lagos, Nigeria.

Contribution by Serge Bonnefoy from Terres en Ville, France

English summary

Suburban agricultural issues slowly started to take up in France in the early 70s.

At that time pioneering agri-urban projects sought to combine city and agriculture, conservation and multiple uses of peri-urban agriculture areas, development of short circuits and sustainability of farms.

All agricultural regions and all types of urban sites were involved. A French network of local actors of peri-urban agriculture, Terres en Villes, was established in Perpignan in June 2000.

New initiatives by local authorities, new actors from civil society, issues related to climate change and to food are currently contributing in renewing the efforts and strengthening local governances.

Terre en Villes groups 21 towns in France, each one jointly represented by its intercommunality and by the Departmental Chamber of Agriculture. The network organises exchanges between its members, conducts experiments and participates actively in national and European urban agriculture policies.

Terre en Villes activities aim at 4 main goals:

1. participating in the construction of peri-urban agriculture policies,
2. protection and enhancement of peri-urban open spaces
3. development of local circuits and food governance of urban areas
4. the inclusion of open spaces and peri-urban agriculture in European policies

On food governance, Terre en Villes and its partners have recently tried to identify the trends that lead communities to seek to establish food policy and governance between public and private actors in large cities.

This project was carried out in 18 cities of the network and compared with Barcelona, Turin and Greater London.

Among the outcomes it was found that there are crossing movements among urban municipalities and intercommunalities, where the first have moved closer to the second ones to maximise their social policies and find solutions to their supply problems in catering and to support people in disadvantaged neighbourhoods. This dynamic encourages new relationships with private actors from the associations and economic world.

Overall, we observed only "segments" of food peri-urban governance. Indeed, the places where dialogue and definition of these policies take place are not very institutionalized. Some existing sites such as consultative committees of local authorities, development councils or health workshops could evolve into that status, provided that they act as an established consultative body and that they offer a real place in the "joint construction" of policy for all stakeholders

Serge Bonnefoy
Terres en Ville

Original contribution in French

C'est entre planification, au début des années 70 en Ile de France, et projet agricole local - premier programme agricole périurbain en région urbaine lyonnaise en 1979 - que la question agricole périurbaine s'est frayée lentement son chemin en France. Intercommunalités d'agglomération, chambres d'agriculture, associations de développement agricole pionnières ont initié des projets agri-urbains qui ont cherché à concilier ville et agriculture, protection et multi-usages des espaces agricoles périurbains, développement des circuits courts et viabilité des exploitations. L'ensemble des régions agricoles, de la ceinture verte au bassin de production, et l'ensemble des types de sites urbains, en montagne, en plaine ou sur le littoral, ont été concernés. En témoignent la création et le développement *du réseau français des acteurs locaux de l'agriculture périurbaine*, **Terres en Villes** en juin 2000 à Perpignan.

De nouvelles initiatives des collectivités locales et territoriales, de nouveaux acteurs issus de la société civile (AMAP, Terres de liens, associations locales) de nouveaux enjeux liés au changement climatique et à la question alimentaire contribuent aujourd'hui à renouveler les démarches et les gouvernances locales.

Terres en Villes regroupe actuellement 21 agglomérations ou métropoles françaises, chacune étant représentée conjointement par son intercommunalité et la Chambre départementale d'agriculture. Le réseau cherche à faciliter cette évolution en organisant les échanges entre ses membres, en conduisant des expérimentations et en participant activement au débat national et européen sur la ville et son agriculture.

Pour cela, Terres en Villes conduit quatre grands chantiers :

1. *la co-construction des politiques agricoles périurbaines,*
2. *la protection et la mise en valeur des espaces ouverts périurbains*
3. *le développement des circuits de proximité et la gouvernance alimentaire des agglomérations,*
4. *la prise en compte des espaces ouverts périurbains et de leur agriculture par les politiques européennes : Terres en Villes, le réseau Arc latin et le réseau européen des régions périurbaines ont créé à cet effet un inter-réseaux.*

Concernant la gouvernance alimentaire, Terres en Villes et ses partenaires ont récemment cherché à identifier les tendances qui conduisent les collectivités et leurs partenaires à rechercher à mettre en place une politique et une gouvernance alimentaires entre acteurs publics et privés des grandes agglomérations, à en cerner le champ (notamment au regard de la prise en compte des productions agricoles locales et non locales) et le système d'acteurs, à en identifier les modalités actuelles de construction et de gouvernance partielle, à en pressentir les grands types d'impacts sur la nature et la localisation des productions agricoles et des « services alimentaires » ainsi que sur la solidarité inter territoriale.

Les travaux ont été conduits sur 18 agglomérations du réseau et enrichis par une comparaison avec Barcelone, Turin et le Grand Londres.

« Première marche de la gouvernance alimentaire à l'échelle des agglomérations, le rapprochement entre les « communes centre » et les intercommunalités par un double mouvement croisé témoigne des premières concrétisations. Les « communes centre » des agglomérations se sont rapprochés de l'intercommunalité pour optimiser leur politique sociale et trouver des solutions à leur problématique d'approvisionnement de la restauration collective, de soutien aux populations des quartiers défavorisés. Les Agglomérations jouent alors un rôle moteur dans la mise en œuvre de la gouvernance alimentaire. Cette dynamique créée par le partenariat entre la commune et l'intercommunalité enclenche des relations nouvelles avec les acteurs privés du monde associatif et économique. En effet, les programmes développés participent au maillage et à la mise en relation entre acteurs.

Globalement, on n'observe seulement « des segments » gouvernance. En effet, les lieux de concertation et de définition de ces politiques sont diffus et peu institutionnalisés. Certains lieux actuels de concertation tels que les commissions intercommunales, les conseils de développement ou les ateliers santé pourraient évoluer vers ce statut, à condition de jouer le rôle d'instance de concertation établie, stable et offrant une réelle place dans la « coconstruction » d'une politique à l'ensemble des acteurs concernés. »

Serge Bonnefoy

Contribution by Laurent Parrot from CIRAD, France

Dear FSN members,

Health and sanitary issues are important components of food supply for cities and urban consumers. A perverse effect of low consumer prices can be illustrated by the frozen poultry scandal which erupted in Cameroon in 2005. Since the mid -1990's, Cameroon had been importing large stocks of cut chicken from Europe. These stocks were then sold at an affordable price to urban dwellers who could have - at last - access to a food that had been previously inaccessible to them. Rapidly the number of urban consumers for poultry increased. Diets changed. Mothers could now feed their children with what was previously considered a luxury. In the beginning, low prices enabled urban dwellers to improve their access to food and new diets. However, this simplistic approach concealed several serious issues for the civil society. First, the low retail prices dismantled the local poultry production making it unable to compete. Second, no import taxes or import restriction rules were applied. Third, the cut poultry was considered as expired food in Europe, and as such, considered as waste. Nonetheless, the poultry was imported past its due date from Europe. Fourth, imports of cut chicken did not slow down during the Dioxin Affair in Belgium in the spring of 1999 when contamination of feedstock with polychlorinated biphenyls was detected in animal food products, mainly in eggs and chickens. Fourth, these imports involved many sanitary issues due to the lack of cold chain infrastructures: almost 85% of the samples collected in 2004 were considered unsuitable for human consumption. It should be noted that the darker the meat would look on the shelves the cheaper it would be. The scandal erupted in Cameroon in 2005 thanks to the investigation of several NGOs and consumer associations led by several Cameroonian researchers. To summarize briefly the end of this affair, the result was a revival of the local poultry production with the support of the government. This case study covers many of the topics discussed in the forum. It also reveals the need of managing different points of view and constraints for the various stakeholders.

The complete report on the frozen poultry scandal in Cameroon (in French) is downloadable from: http://typo3.fao.org/fileadmin/user_upload/fsn/docs/Poulet_congelé_Cameroun.pdf

Laurent Parrot
Economist,
CIRAD
France

Contribution by Jacky Ganry from the Global Forum for Agricultural Research, Italy

In spite of very recent food crisis, asking for more attention to be paid to food supply, particularly in cities we must state that very recent events such as the High Level Expert Forum on "How to feed the World in 2050" or the World Food Summit are still putting much more emphasis on food supply from and in the rural areas than on access to food in urban areas, as if a very great inertia and aversion to change were more powerful engine than the real needs, as if business as usual was more comfortable than new but so necessary pathways.

My contribution is articulated around these main ideas:

- Urban food systems must be considered as a major issue for research and development institutions and also as a driver for agriculture in rural and urban areas, without opposing both. Such a "urban food systems" driven approach would be a way to stimulate domestic markets and to give guidelines to agriculture in rural and urban areas to feed them in the right way (quantity/calories/nutrients; seasonality; quality, prices,...).

- The urban food systems are currently and increasingly the most exposed to food transition due to food habit changes for the growing populations from rural areas, but also to the imposed pressure from imported product which is far stronger in urban areas than in rural's.

- It is time to recognize the value of urban agriculture in terms of feeding the city (particularly in perishable products such as fruits and vegetable, milk, meat,...), in terms of employments, greening and cleaning the cities (waste management). It is time to stop the irreversible extension of concrete in the most fertile areas (as in Dakar, where the fertile Nyayes are now more and more part of the urbanized areas, or in Antananarivo where the small producers are obliged to grow vegetables on the non fertile hills around the city, and to try to built fertility, when the former one is now hidden under houses.).

- It is time to advocate for multisectoral approaches and policies, bringing together all ministries and administrations (agriculture, health, environment, transport, urban management,...) to address jointly these complex issues, rather than intervening through sectoral and fragmented approaches with, too often, opposite views and interests. The research and development agendas must be aligned accordingly around multidisciplinary and multisectoral projects.

Jacky Ganry

Facilitator in GFAR (Global Forum for Agricultural Research) c/o FAO, Italy

Contribution by Shashi Kumar from Bangalore University (India)

The whole issue of food security in the FSN Forum—Discussion topic “Food, Agriculture and Cities” and the problems and impediments to achieve the food security are analyzed in a suitable way. As observed, in many developing countries rapid population growth makes it difficult for agricultural production to keep pace with the rising demand for food. Most developing countries already are cultivating virtually all arable land and are bringing ever more marginal land under cultivation.

Although the global economy probably produces enough food to feed the nearly 6 billion people in the world and even more, if it were distributed equitably, this food is not readily available to many millions of people. Natural resources, population, and agricultural production technologies are distributed unevenly around the world. Some countries produce more food than they need for domestic use, while others do not produce enough to assure access to adequate diets for all of their people. Thus better distribution of food is an essential component of any world strategy to improve food security.

Declining commodity prices usually are good for consumers in wealthy countries, but in poor countries small-scale farmers suffer. In the 1970s and 1980s, for example, while real farm incomes increased substantially in most developed countries, real income from agriculture dropped for the average farmer in the developing world. To maintain their purchasing power, these poor farmers often try to bring more marginal land into production, even though this land yields less per hectare. Farmers may be pushed off their land altogether to make room for export- driven agriculture, as governments try to make up the short-fall in international trade revenues.

National governments and international organizations can help to improve food distribution systems and can adopt new policies that make food more available and affordable. Over the long run, FAO argues, increased regional trade and cooperation are important to raising living standards in poor countries and to providing more affordable food. In addition, better world markets for developing-country agricultural produce could help provide more jobs in these nations, raise incomes, reduce hunger, and minimize pressures from subsistence farming on the resource base.

In food-deficit countries substantial migration of subsistence and small-scale farmers from the rural areas to the cities undermines food production capacities. At the same time, urban economies cannot absorb the huge influx of people looking for jobs. The number of people living in urban areas of developing countries has risen from about 300 million in 1950 to about 1.8 billion today. The world's population, estimated by the UN to be 48 percent urban in 1995, is projected to be nearly 65 percent urban by 2015. By then, the urban population of the developing world will reach an estimated 4.5 billion.

Numerous problems abound in a food system that is highly concentrated in ownership and unresponsive to community needs. Small and medium-sized farmers are regularly squeezed out of business by high operating costs, low prices for their products, and poor access to markets. An increasingly globalized food system not only promotes unfair competition, but is also energy-intensive, threatens regional self-sufficiency, and discourages consumer acceptance of regional and seasonal foods. Suburban sprawl threatens prime farmland in many of the nation's metropolitan areas. After decades of struggle, farm workers continue to earn poverty-level wages while suffering from high rates of tuberculosis and pesticide poisoning. Hence, there is a need to study comprehensively, the impact of food problems on the growing cities.

Dr. R. Shashi Kumar
Reader in Economics
Bangalore University
India

Contribution by Marielle Dubbeling from ETC Urban Agriculture, The Netherlands

It is clear that feeding the growing urban population is a challenge we only begin to respond to. Urban food insecurity is still often overlooked since at aggregate level, economic and social conditions in urban areas are much better than those in rural areas. But such aggregate figures do not account for inequality within the urban population that is generally much greater than within the rural areas. Besides, such data mask the deep food insecurity and hunger issues in urban areas, which remain under-reported problems. Although already in 1999 the FAO Committee on Agriculture (COAG) during its 15th meeting urged the member states to give more attention to urban and peri-urban agriculture -production of food within and close to the urban centres- in order to enhance urban food security, in many countries the growing urban food insecurity and malnutrition problem remained largely unattended and did not yet translate into policy action. Poverty and hunger were still viewed by many as a largely rural problem, although many good examples exist of cities and countries that have developed innovative policies and programmes on urban and peri-urban agriculture (see www.ruaf.org for examples from countries as varied as Peru, Sri Lanka, Jordan, Zimbabwe, Burkina Faso and others).

Feeding their urban population requires urgent and adequate response from city and national authorities and international support organisations. Urban policies need to incorporate food security considerations and focus more on building cities that are more resilient to crises. The United Nations High Level Task Force on the Global Food Crisis (UN, 2008) states (page 15): “*A paradigm shift in design and urban planning is needed that aims at: (.....) reducing the distance for transporting food by encouraging local food production, where feasible, within city boundaries and especially in immediate surroundings. Without sacrificing core principles to observe public health standards, this includes removing barriers and providing incentives for urban and peri-urban agriculture, as well as improved management of water resources in urban areas*”.

At national level, urban and peri-urban agriculture needs to be integrated in national policies, like agricultural policy, national food security and poverty reduction strategies, national SCP (sustainable consumption and production) or Agenda 21 plans, etcetera. Various developing countries have already take such initiatives (Brazil developed an urban agriculture programme as part of its “Hunger Zero” policy, Sierra Leone included urban and peri-urban agriculture in its “Operation Feed the Nation” and in the draft National Sustainable Agriculture Development Plan,

Sri Lanka integrated urban food production in its National Campaign to Motivate Domestic Food Production 2007-2010), but in many other countries new initiatives are needed. Local initiatives on urban and peri-urban agriculture often are constrained by restrictions in mandates and restrictions in actual national legislation, that make local actors hesitant to develop more proactive policies and programmes or lack the financial and technical support from national level that they would require.

At city level, support measures should include amongst others:

- The integration of urban and peri-urban agriculture into land use and development plans
- The establishment of a municipal food programme
- The inclusion of urban agriculture in local strategies for adaptation to climate change and disaster reduction.

At international level, the inclusion of urban and peri-urban agriculture in the agenda of research, extension and education programmes, and in urban monitoring indicators should be promoted. It is only then that hopefully in future more attention will be paid to feeding the cities in international fora and meetings. Up to that date we should continue supporting local level activities, involving various sectors and disciplines: agriculture, urban land use planning, health, waste management, social housing and slum upgrading, parks and nature management, among others. Such multi-stakeholder processes will make the outcomes of policy development and action planning not only robust and comprehensive, but also better accepted and sustainable.

Ir. Marielle Dubbeling
Senior adviser ETC Urban Agriculture
Global coordinator RUAF-From Seed to Table Programme
www.etc-urbanagriculture.org; www.ruaf.org

Contribution by Violet K. Mugalavai from Moi University, Kenya

Dear FSN members,

Meeting MDGs in cities requires recognition, support and empowerment of the urban poor's own livelihood strategies. The urban population is setting new standards and cities must reinvent themselves with new references to cater for the growing population. Adequate practical skills are the essentials for any community of UA (Urban Agriculture) practitioners, and beneficial UA initiatives can lead to a healthier global world and a secure economy. Creating community based ownership and empowerment with interacting groups by relying on the exchanges of talents and knowledge that exists among them would be a positive step towards strengthening social relationships and nurturing sustainable development using community based resources and institutional help.

There is therefore need for innovative ideas such as multi-component approaches to food production and processing by harnessing and using available resources and indigenous knowledge that has been proved to beat climate challenges so as to meet the diverse nutrition requirements for urban populations.

I am therefore advocating for the use of a community based small scale cluster development model among UA interactive livelihood groups with proper organization and moral obligation among the urban community members, with equal gender participation, and equitable distribution of gains with the aim of up-scaling their livelihood and nutrition security. Multi-component food production, processing and selling should be encouraged so that food movement is minimized to maximize nutritional benefits.

The key to agriculture's successful adaptation is providing livelihood groups decision-support technologies and improving the resilience of agro-ecosystems such as diversifying farm

operations with a mix of crops and livestock that can thrive under the changing environment. There is therefore need for mechanisms to enable full exploitation of this important sector that feeds the cities growing population. Urban life should be combined creatively so as to strike a balance between the health of the ecosystems and of the people who live in them through proper management and organization of the UA livelihood resources to make it a sustainable livelihood venture that supplies fresh food to the cities. Thus the use of the small scale cluster development model using a community based participatory approach among interactive livelihood groups in UA and the consumers of the produce where knowledge, skills, and interests are pooled together to enable an up-scaling sustainable development of both their livelihood security, household and community food security, using an ecosystems approach where the community, environment and resources available are interdependent is advocated.

The small-scale cluster development practices with an ecological health perspective is proposed with a view to putting the idea into a food security context. In this context, low- income livelihood groups and the consumers within their context may interact and affect each others' livelihoods and food security while using the available livelihood capitals and carrying out climate adaptation practices. In this regard, redeeming, recycling and reusing livelihood resources such as rain and grey water, organic refuse, indigenous knowledge, maximum utilization of land, growing of food/fruit trees to green the environment, sustainable harvesting, preservation and better marketing systems will be practiced.

For the purposes of improving the livelihood outcomes, community development frameworks that enhance collective action and information exchange and enhance best environmental and livelihood practices will be put in place and practiced so as to enhance sustainable agriculture and development. Interactive livelihood groups can share a common commitment to group learning and information exchange towards socially constructed activities that would enhance group multi-sustainable development. The communities of interaction will work together on the UA livelihoods to improve their contextual ecosystems.

In the midst of a community of collective action, exchanging knowledge and skills, using coping strategies, motivating one another, sharing, probing, prompting, and suggesting good practices, there is bound to be a motivational spirit towards collective driven development. With boundaries that are not rigid, community groups of practice will not use knowledge and skills that are static, rather, innovative skills and ideas that are created through practice and shared both internally and externally. An equal participatory approach between the livelihood groups of interaction and the consumers of all gender is necessary for an all-win situation. This will bring about meaning and values and enhance social relations towards deeper community bonding and bridging within the small scale cluster development model's ecosystem approach.

Dr. Violet K. Mugalavai,(PhD)
Moi University,
Department of Family & Consumer Sciences,
Eldoret, Kenya

Contribution by Sharon Gordon

Dear All,

My name is Sharon Gordon and I do garden research in the USA.

SMALL KITCHEN GARDEN EXPERIMENTS

Some areas have been experimenting with gardening intensively in 100 square feet (~9 square meters).

In 2008 Rosalind Creasy in the USA did an experiment to see how much she could grow in a summer garden of 100 square feet (~9 square meters).

In her garden she planted:

Basil
Lettuce
Peppers, Bell
Tomatoes
Zucchini

All together she got 235 pounds/106 kg of organic vegetables from her plot.
In her area this would be over US\$700/470 Euros worth of vegetables.

There's a report with lots more info on the garden in the December 2009 issue of Mother Earth News of the 2008 garden.

<http://www.motherearthnews.com/Organic-Gardening/Square-Foot-Gardening-Food.aspx>

The magazine issue has many more photos.

They also include some great tips on getting lots of food from a small garden plot.

<http://www.motherearthnews.com/Organic-Gardening/Square-Foot-Gardening-Food.aspx?page=4>

For the 2009 garden year she planted some cool weather vegetables earlier in the year and also diversified her summer garden. So this year she has:

Beans, Pole	Onions, Scallions
Bok Choi	Peas, Snap
Broccoli	Peas, Sugar
Chard	Peppers
Collards	Radishes
Kale	Squash, Zucchini
Lettuce	Tomatoes
Mesclun	

Her 2009 yields were similar. A report and photos of the 2009 garden are located at

<http://www.rosalindcreasy.com/ros-trial-garden-2008-2009/>

In the UK several botanical gardens have planted 10 foot x 10 foot (~3meter by 3 meter) sample food gardens. Here is the link to 12/14 different sample gardens and matching shorter link in case the link splits. The first Harlow Carr plan link for fruit and vegetables has not been working, but the other 11 are ok.

<http://www.rhs.org.uk/Gardening/Grow-Your-Own/Events-Gardens/The-RHS-3x3m-plots>

And one at a garden show with tiered beds and a dining table where the 4x4 bed is in some of the sample plans.

http://mygarden.rhs.org.uk/photos/alison_mundie/picture20631.aspx

This tiered design could be used on steeper land and made out of rocks which are likely to be available in that type of terrain. If the soil is thin on the hillside, it can be increased by lasagna composting.

I have not seen any yield data for the UK gardens.

By managing the space intensively and building soil fertility, the 100 square foot/~9 square meter plots can produce 400 to 800 pounds/181-362kg of high nutrition vegetables per year. For planning and details on yield data see How to Grow More Vegetables and Fruits (and Fruits,

Nuts, Berries, Grains, and Other Crops) Than You Ever Thought Possible on Less Land Than You Can Imagine by John Jeavons, 2006.

Generally best use can be made of a small size plot near the house or apartment by growing high nutrition foods that yield well but don't travel well and which are expensive to buy. Food that travels well dry such as grain and beans can be grown in fields surrounding the city.

If you are aware of any small plot experiments, plans, demonstration plots, or medicinal herb plots such as this under 600 square feet/56 square meters please send information about where more details can be found to this Forum.

COMPLETE NUTRITION GARDENS

How much land does it take to grow sustainably a complete diet for one person? John Jeavons, Ecology Action, and other colleagues have been doing research to answer this.

Information on how to design a Complete Nutrition Garden can be found in the book One Circle: How to grow a complete diet in less than 1000 square feet by Duhon and Gebhard

<http://www.bountifulgardens.org/>

The sample gardens in the book are designed for the Pacific Northwest of the USA.

Other sample garden booklets available are for Kenya and Mexico:

Mexican booklet: <http://www.bountifulgardens.org/prodinfo.asp?number=BEA%2D0015>

Kenya booklet: <http://www.bountifulgardens.org/prodinfo.asp?number=BEA%2D0025>

Albie Miles grew a Complete Nutrition Garden in Santa Cruz, California, USA. This location has a nearly year round temperature of 50-75F/10-24C. This garden was still producing at the conclusion of the experiment, so the yield of fresh vegetables was higher than is included in the report. A detailed summary of the experiment can be read at <http://www.cityfarmer.org/albie.html>

If you are aware of any other Complete Nutrition Garden designs or experiments please send information about where more details can be found to gordonse@one.net.

EDIBLE LANDSCAPING AND PERMANENT AGRICULTURE

The Albie Miles experiment shows that during some parts of the growing season intensive gardening can take six or more hours a day. One way to help reduce this is through permanent plantings of food bearing trees, shrubs, and perennial plants. It helps if cities permit food gardening all around a house, have community gardens in every neighborhood, include garden space with each apartment, and use edible landscaping in parks and at businesses. A great deal can also be grown in containers on patios or balconies and roof tops that are designed to support the weight. Where needed due to climate, houses and apartments could also be built with deep windowsill greenhouse windows or attached greenhouse space.

See edible landscaping and permaculture books and periodicals at

<http://www.permaculture-magazine.co.uk/>

http://www.green-shopping.co.uk/books/book_pages/permaculture.html

<http://www.permacultureactivist.net/>

<http://www.permacultureactivist.net/booksvid/BooksVid.htm>

<http://www.rosalindcreasy.com/published-books/> (new one out April 2010)

MULTI-STORY GARDEN BUILDINGS

Toronto, Canada and Nevada, USA and other cities have multi-story garden buildings planned or proposed. Each floor could have a separately controlled climate.

<http://verticalfarm.com/designs.html>

FOUR SEASON HARVEST TECHNIQUES

Cold hardy vegetables can also be grown to full size in the fall and harvested all winter using four season harvest techniques. <http://www.fourseasonfarm.com/>

Sharon Gordon

Contribution by KV Peter

Late Arch Bishop of Trivandrum HE Dr Rev. Mar Gregorious of the late Seventeenth Century demonstrated successfully the DOUBLE DIG SYSTEM of vegetable cultivation. A pit size of 8' x 8' x 16' (2.4 x 2.4 x 4.9 metres) is sufficient to meet the vegetable requirement of a family of 5 members. The pit system provides moderate temperature both in tropical and sub-tropical conditions, conserves moisture with soil fertility maintained and human labour provided by family members only. Vegetables planted are one row each of amaranth/spinach, eggplant, tomato, cowpea, french bean, cabbage, cauliflower and carrot/radish. Two plants of perennial chillies in the pit would provide hot chillies throughout the year. We have authored a booklet NUTRITION GARDEN FOR SMALL HOMESTEADS published by Kerala Agricultural University.

K V Peter

Contribution by George Kent

Sharon Gordon's recent message on this list shows that there is excellent information available on household food production. However, little of it is designed for poor people, and it is not readily available to them. It would make sense to develop better means for sharing this information, especially among the poor.

Small networks could be created locally, linking together those who want the knowledge with those who have the knowledge and are willing to share it. These networks could begin informally. Then local organizations could help people share what they know about household food production through visits with individual householders and through workshops and other sorts of meetings. Meetings could be held in which not only information but also food—including household-produced food—is shared.

These local organizations in turn could be supported by larger, perhaps national organizations. What starts as a neighbours-helping-neighbours approach could be extended within nations, and then go across national borders.

Networking to support household food production could go much further if ways could be found for some individuals to make some money from their involvement. Perhaps knowledge providers could be paid for their services, either by interested agencies or by the clients themselves, through small fees, perhaps in a workshop setting. Or it might be possible to create small local businesses that would help householders start up their production systems. The businesses could provide not only information but also start-up equipment and seed stock, and they could offer consulting services.

While poor people may not have much money individually, together they add up to a substantial market for goods and services. Entrepreneurial people could set up businesses through which they help the poor set up small-scale food production at their homes.

The Internet could be used to help build household food production by linking websites that provide information in user-friendly forms, and by supporting networking among interested users.

The network could connect with established organizations that are interested in household food production. Existing sites could be drawn into the network, and new ones could be created. They

could specialize in terms of language, geographical region (e.g., municipal or national websites), or in particular types of production such as aquaculture or mountain agriculture.

A central global website could provide links to relevant documents and also links to other specialized websites on household food production.

There are ways to bring the benefits of the Internet and other technologies to local communities that are not directly connected. For example, local nongovernmental organizations could serve as the bridge between the Internet and people in their own neighbourhoods. These organizations could be supported by other organizations that span the country, the region, or the globe. The linkage of modern technology with the old-fashioned neighbours-helping-neighbours concept could help to promote local food production on a whole new scale.

Aloha, George Kent