Practice-based 
Interdisciplinary Education and 
Training Courses
Course ID: Urban Agricultural and Sustainable Cities

"Training for Capacity Building to Design and Implement Urban Agricultural Entrepreneurship for Urban Food Security, Economic Diversifications and Sustainable Cities'

Background

Population in urban areas around the world has grown more than four times during the past 60 years to 3.9 billion (Sun et al., 2015), it is mostly by people migrating towards the cities in an attempt to escape the deprivations associated with rural livelihoods (Cofie and van Veenhuizen, 2008, Flynn et al., 2016). According to UN global urbanization is progressing at an unparalleled speed (van Leeuwen and Sjerps, 2015). Presently about 50 % of people live in cities and by 2050, this will be 67 % (Lyons, 2014, UN, 2012). In developed countries, this percentage is even higher (more than 86 %). That means more food supply, more goods, more services and more employment opportunities must be provided.

In urban areas, consumers are almost exclusively dependent on purchased foods, mainly from rural areas or imported into the country. Even many city-dwellers have very less time for shopping and cooking and they depend increasingly on processed and convenience foods, including street foods. Similarly, a growing number of urban poor also face a daily struggle to feed their families. Within this reality, key question is to ask, how city itself can develop alternative survival strategies for providing a significant contribution to the urban fresh food supply chain. Experiences from several global cities (Burkina Faso, Guinea, Mali, Tanzania and Uganda) show that urban and peri-urban food production help to increase the availability of healthy and affordable food, mainly fresh fruits, vegetables, eggs and dairy products in cities. Urban Food production, processing and marketing also contribute to diversifying income opportunities and employment for many urban households.

Moreover, building more resilient cities is a key issue for future urban development. Due to high demand by a growing population, urban authorities are facing hard for the efficient management of water/wastewater and supply of water in sufficient quantity and of appropriate quality (Martínez and Bandala, 2015, Woetzel and Pohl, 2014). This is leading to the biggest challenges to urban water supply, the deterioration of water quality due to pollution, changes in urban land use, drainage and sewage infrastructures in most cities (Sun et al., 2015, Martínez and Bandala, 2015, Zimmer, 2015, Bach et al., 2014). City adaptation to climate change has also become a growing concern in many countries. So, according to FAO, by using the urban open spaces, enhancing vegetation cover and water infiltration, it contributes to sustainable use of urban water and other natural resource management. As water becomes increasingly scarce, urban and peri-urban agricultural/horticulture provides an ideal opportunity to productively use urban organic wastes and wastewater as well as collected rainwater within the official guidelines (standards) of the use of wastewater as sufficient risk reduction strategies. However, there are significant management challenges to create the opportunities for urban and peri-urban food security through the agriculture/horticultural food production and an effective supply chain.
Course Aim & Output

This interdisciplinary training course will enable students (with all educational and professional background) to learn about the essential factors involved for the development of structure of urban and peri-urban agricultural/horticulture-business model and management practice. This will be done through a case study from relevant agricultural/horticulture business firms (gardens) and associations in program host city (list of case-study based confirmed firms/gardens in host city will be available soon).

In the case study students will learn about business planning, economy and marketing strategies of the urban agricultural/horticulture gardening and businesses. Students will visit businesses involved in some locations in program-host city, urban agricultural/horticulture gardening and will discuss with key persons. They will also visit urban gardening events and will meet involved-groups for developing broader business concepts and practical knowledge (dates will be available to students).

Students will explore the business models, steps, conditions and regulations those were considered and applied for urban agricultural/horticulture project development in Berlin. One of the key elements of urban agricultural/horticulture-business marketing is the water and wastewater use regulations of urban agricultural/horticulture with emphasizing of sustainability and climate change adaptation. Thus, student will also explore the regulations/EU standards behind the development urban agricultural/horticulture-business service quality provided by the firms (gardens) they will visit.

Based on the experiences from the case study and field visit, students now will design similar/ or new urban agricultural/horticulture gardening and business plan for a case of their choice. Finally, students will write a short report and will present their results.

Output Skills & Experience

Through this intensive training course, student will learn the specific problems, challenges and opportunities of urban agricultural/horticulture gardening and businesses. They will also have:

1) the insight into the urban agricultural/horticulture gardening and business processes in specific firm/garden circumstances (from case study and gardens/firms visit in Berlin),

2) understanding the main steps of urban agricultural/horticulture gardening and business project development which are: Project identification (focusing on topic that best fit in the context by not only with the name but also with potential opportunity of economic diversification) and project definition, then project planning and implementation through intensive surveys and investigations, and finally project completion (including production of final report together with reports in all phases).

Focused Content: Gaining field experiences from real situations.

Course Duration

- Package 1: One Week
- Package 2: Two Weeks
Course ID: Environmental Education & Training in Refugee Operations

‘Training for capacity building to design and implement sustainable resource management through environmental education for refugees and displaced immigrant operations’

Background

Are you already involved with welfare activities linked to refugees and displaced immigrants? Or are you interested to activities in future related to refugees’ welfare? If yes, then it is important that you are well equipped with necessary capacities for implementing the greening strategies into your activities with refugees and displaced immigrants. Your capacity to design and implementing environmental education for refugees and displaced immigrants will make the sustainable resource management where large numbers of refugee people live in a limited area. By improving refugees’ environmental knowledge, degradation of hosting environment will be reduced significantly.

During the war or violent conflict or natural disaster, large number of people rapidly become refugee and live in a limited area. With rapid movement of refugees, degradation of environment occurs, especially access of clean water, proper sanitation, firewood for cooking can result in serious consequences for hosting environment. Therefore, protecting the hosting environment is very important while developing strategy of protecting mass refugees and displaced people. These challenges can be mitigated be an environmental education program especially environmental management program, which is to change behaviour of learners towards environmental degradation into all phases of refugee operations. This means educating refugees and raising environmental awareness in the camps, with the focus particularly on women, children and the elderly is immediate solution for protecting environmental deterioration. Specially, focusing the refugee children who affects more than any other group when it comes to accessing natural resources and therefore situation can be reversed through improved environmental education and information sharing.

Thus, the main objective of this training course is to equip participants about how to design environmental education for refugees and how to implement it step by step during refugee operation.
Learning objectives:

- **Energy efficient behavior:** Focus to reduce consumption of fuel, mainly wood for cooking and warmth. Solar-based cooking will be introduced.

- **Sustainable housing & shelter:** In the early stages of an influx, significant proportion of wood use in refugee camps. Environmental education will help for realizing the design and construction of sustainable refugee housing by using alternative materials.

- **Conservation natural biodiversity:** Promotion of domestic tree planting, protecting other biodiversity will be introduced through environmental education to protect nature.

- **Soil and water conservation:** Focus of topics include the management of soil by reducing the erosion and improving the conditions. Soil and water pollution control concepts and protection of water sources with the concept of integrated water management will be provided.

- **Gardening and cash crops production** (agricultural and horticultural production): Education and capacity building training to produce vegetables and other cash crops or gardening plants.

- **Children’s theme parks:** Topics to focus refugee children for environmental management. They can easily play with nature and improve their awareness by using their curiosity, energy and natural instincts.

- **Health safety:** Topics for learning how to take disease prevention measure through appropriate sanitation, water pollution, hygiene issue link to health education.

- **Local laws and traditions on natural resource use:** Topics to learn traditional resource-management practices of the local people, understanding the regulation of local access into land, wildlife protection laws, fire regulation and right over other natural resources. This is important to minimize the conflict with local host communities.

**Focused Content:** Gaining field experiences from real situations.

**Course Duration**

- Package 1: One Week
- Package 2: Two Weeks
  (Further can be developed according to need)
Course ID: Agri-Tourism Entrepreneurship as a Means of Economic Diversification for Rural Development

'Training for capacity to design a business and marketing plan through identifying the economic strengths and weaknesses of a specific context (regional or nature of firm) for developing an attractive agri-tourism hot spot'

Background

People’s demands for more specialized forms of vacation experiences have inspired growth for different forms of tourism and recreational activities in rural areas. Thus, with people’s demands and the rapid growth of tourism industry, the development pattern of economic diversification through agricultural tourism (or Agri-tourism or Agro-tourism) is becoming hugely popular in many countries. Especially, the desire of urban and suburban populations to experience the rural environment and nostalgia associated with a working farm enterprise. In addition, the context of agricultural restructuring due to the impacts of global climate change and human-induced negative effect on agricultural productivity, the emergence of concepts such as multifunctional agriculture and farm diversification have drawn increasing attention to alternative ways to use farms (Flanigan et al., 2015). Therefore, it is obvious that there are potential new opportunities to economic diversification and add revenue streams to this field of agri-tourism.

Agri-tourism or agro-tourism, as it is defined most broadly, involves any agriculturally based operation or activity that brings visitors to a farm or ranch and it is a subset of a larger industry called rural tourism. Agri-tourism is defined in many ways in different parts of the world, and sometimes refers specifically to farm stays, as in Italy. Elsewhere, agri-tourism includes a wide variety of activities, including buying produce direct from a farm stand, picking fruit, feeding animals, or staying at a bed and breakfast (B&B) on a farm. According to the Small Farm Center at the University of California (Davis) agri-tourism is "a commercial enterprise at a working farm, ranch, or agricultural plant conducted for the enjoyment of visitors that generates supplemental income for the owner." Staying in a farm can also connect visitors to other rural recreational activities which might include:

- Outdoor recreation (fishing, hunting, wildlife study, horse-back or elephant-back riding).
- Educational experiences (cannery tours, cooking classes, or traditional food tasting).
- Entertainment (harvest festivals or seasonal Mela).
- Hospitality services (guided tours).
- On-farm direct sales (u-pick operations or roadside stands).
Therefore, agri-tourism can be viewed as a strategy for improving the economic stability of rural communities and farming enterprises. However, it also facilitates better understanding of local natural resource management (e.g. crops, water and soil) and environmental adaptation by urbanized visitors who are disconnected from their food source (Kline et al., 2007). In upcoming years, growth of agricultural tourism is suggested mostly because of increasing tendencies of traveling to enjoy nature as a family (Gil Arroyo et al., 2013), shorter travels by car, multi-activity trips, and desire to help out local farmers and communities.

**Potential Challenge and Opportunity for Agri-tourism Business:** It is well accepted that there are differences among regions, countries, cities, societies and way of people behave for certain functionalities those they prefer. For example, people of Japan may have different tourism behaviour that people from Middle-east. Similarly, there are also differences among the nature of firms, for instance large pig firms with thousands of pigs have high unpleasant smell than the smaller one, or you may have a nice agricultural firm, but the road communication can be very terrible. *Then how will you design and implement an agricultural business plan in those challenging situations? Questions can be asked like, how can I develop a good business opportunity on my firm land, which has some specific characteristics?*

Therefore, it is really a big challenge to design a business and marketing plan through identifying the economic strengths and weaknesses of a specific context (regional or nature of firm) for developing an attractable agri-tourism hot spot.

**Course Aim & Output**

This intensive training course will enable students to learn about the essential factors involved for the development of agri-business structure and management practice through a case study from relevant agri-tourism business firms and associations in …. (location in Bangladesh). In the case study students will learn about business, economy and marketing strategies of the agri-tourism. Students will visit businesses involved in agri-tourism and will discuss with key persons. They will explore the business models, steps, conditions and regulations those were considered and applied for agri-business project development in Bangladesh. One of the key elements of agri-business marketing is ‘service cost and the standard of service quality’, based on multiple recreational activities on firms and surrounding rural areas. Thus, student will also explore the regulations/standards behind the development of service quality provided by agri-tourism firms they will visit.

Based on the experiences from the case study and field visit, students now will design similar/ or new agri-tourism business plan for a case of their choice. Finally, students will write a short report and will present their results.
Output Skills & Experience

Through this intensive training course, student will learn the specific problems, challenges and opportunities of agri-tourism. They will also have:

1) the insight into the agri-tourism business processes in specific firm circumstances (from case study and firm visit in Brandenburg).

2) understanding the main steps of agri-tourism business project development which are: Project identification (focusing on topic that best fit in the context by not only with the name but also with potential opportunity of economic diversification) and project definition, then project planning and implementation through intensive surveys and investigations, and finally project completion (including production of final report together with reports in all phases).

Focused Content: Gaining field experiences from real situations.

Course Duration

- Package 1: One Week
- Package 2: Two Weeks
  (Further can be developed according to need)
Course ID: Green Entrepreneurship in Integrated Renewable Energy Management

'Training for capacity building to design business models and how to use decision instruments which contribute to energy efficiency in economic diversification

Background

The need for a sustainable energy supply is becoming more important with declining fossil energy resources, environmental pollution and climate change. The program in Entrepreneurship in Integrated Renewable Energy Management is essential due to growing demand of energy and to contribute to the promotion of renewable energy sources via a holistic renewable energy management concept.

The profile of the program is PROBLEM-oriented, meaning that students and staff will be involved in dealing to explore the real problem-scenarios of the energy related topics. Thus, the aim is, next to providing the participants with an overview of the energy sector in general, to educate experts in the field of renewable energy management and sustainable development. This requires a diversification of their knowledge and leads to the capability of cross-linked thinking. The answer to complex environmental and energy related problems requires environmental, social, economic and managerial competencies more than classical technical knowledge.

The program is developed in a way to provide participants a better understanding about the transition of energy landscapes, develop renewable energy management strategies by integrating:

- Multiple energy sources and Energy saving strategies
- Natural resource management strategies such as water and land,
- Urban greening and Green-city strategies
- Rural agricultural development strategies and
- Capacity building strategies for climate change and environmental adaptation strategies.

The aim is to equip students with contemporary knowledge and management capacities of renewable energy through an interdisciplinary lens. Through this innovative, new, interdisciplinary program that focuses on hands-on learning and industry-based experiences with the valuable skills they need to shape the future of energy via exciting new career opportunities.
Course Aim & Output

Participants will apply an integrated approach to energy systems and technology choices and work as energy (project) experts and managers in public, private or civil society settings. The course provides engineers, architects, social scientists and natural scientists with additional subject-related knowhow dealing with appropriate renewable energy development and implementation, monitoring the conditions as well as with fundamental skills in resources management. The aim of the course is to impart knowledge concerning complex economic and technological aspects, taking into consideration social and ecological circumstances. In addition, students are also introduced to the methodological aspects, renewable energy project development and management principles. Students will become acquainted with and will learn how to develop business model (entrepreneurship) and how to use decision instruments which contribute to sustainable environmental, green-based energy efficient ecological and economic development.

Courses Offered:

Three separate courses are offered in ‘Entrepreneurship in Integrated Renewable Energy Management’

➢ Course 1:
   Green Entrepreneurship in the Nexus of ‘Renewable Energy-Smart Cities’

➢ Course 2:
   Green Entrepreneurship in Renewable Energy in Across Product Supply Chain (Agricultural to Industrial Products Linkages)

➢ Course 3:
   Green Entrepreneurship in Zero-Waste through the Nexus of ‘Renewable/Alternative Energy-Waste Management’

Focused Content: Gaining field experiences from real situations.

Course Duration

- Package 1: One Week
- Package 2: Two Weeks (Further can be developed according to need)
Course ID: ISO & International Certifications

Training for capacity building to implement ISO

Trainings are provided in the following ISOs:

1) ISO 14001-2015 Environmental Management
2) ISO 9001-2015 Quality Management
3) ISO 22000-2005 Food Safety in Food Chain (Mostly agriculture linked)
4) ISO 50001-2018 Energy Management and Efficiency
5) ISO 45001-2018 Occupational Health and Safety

Training Duration

- 1 days Package
- 2 days package
- 3-5 days package