Agriculture Extension Training Institute

Agargaon

By
Nuzhat Jahan Hossain
Student ID: 09208001

Seminar II

Department of Architecture
BRAC University
August 2014

Abstracts

This paper examines the role of postsecondary agricultural education and training (AET) in Agargaon, Bangladesh in the context of the region's agricultural innovation systems. Specifically, the paper looks at how AET in Dhaka can contribute to agricultural development by strengthening innovative capabilities, or the ability to introduce new products and processes that are socially or economically relevant to smallholder farmers and other agents in the agricultural sector. Using AET as the primary system, the paper argues that while AET is conventionally viewed in terms of its role in building human and scientific capital, it also has a vital role to play in building the capacity of organizations and individuals to transmit and adapt new applications of existing information, new products and processes, and new organizational cultures and behaviors. The paper emphasizes the importance of improving AET systems by strengthening the innovative capabilities of AET organizations and professionals; changing organizational cultures, behaviors, and incentives; and building innovation networks and linkages. The paper draws on two main sources of information: the emerging literature on innovation systems in developing-country agriculture, and data gathered from secondary sources and semi-structured existing scenerios. The paper offers several recommendations that can contribute to enhancing the effectiveness of AET's contribution to agricultural innovation and development. Key reforms include aligning the mandates of AET organizations with national development aspirations by promoting new educational programs that are more strategically attuned to the different needs of society; inducing change in the cultures of AET organizations through the introduction of educational programs and linkages beyond the formal AET system; and strengthening individual and organizational capacity by improving incentives to forge stronger linkages between AET and diverse user communities, knowledge sources, and private industry.

Keywords: Agricultural education and training, innovation systems, city context, spaces, functions

Acknowledgements

I would like to thank my thesis advisor, Sir Habib Reza and Miss Sheikh Rubaiya Sultana and also my design instructors Ehsan Nayeem A Kibria and Dr Mohammad Faruk for their patience and support and my few batch mates for their insightful critical perspective. This thesis is also indebted to the help of many individuals outside the Brac University. While a fully inclusive list would be far too long for this format, those that must be mentioned include the people and instructors of the organizations that provided co-operation and support to provide with enough information for the site.

Table of Contents

02.Chapter 1
Background of the Project

Project Brief

The role of agricultural extension is to help farmers make efficient, productive and sustainable use of their land and other agricultural resources, through the provision of information, advice education and training.

In the context of Bangladesh the following definitions have been adopted:
agricultural extension is a service or system which assists farm people, through educational procedures, to improve farming methods and techniques, increase production efficiency and income, better levels of living, and lift the social and educational standards of rural life .

Clearly, agricultural extension is an extremely important process which can accelerate technological, social and economic development. In particular, effective extension:- helps farmers identify and overcome production, farm management and marketing problems at farm level through the exchange of information among farmers, extension staff, input suppliers, credit agencies and marketing agents.

Project Introduction

Many of the conventional AET approaches common in the region are designed to build the stock of human and scientific capital through technical training. However, these approaches are often limited in that they are based on a narrow interpretation of the skills and expertise needed to promote development; reliant primarily on formal and inflexible public sector institutions and programs; and only weakly engaged with other economic sectors and knowledge sources. More innovative approaches argue that AET also has a wider role to play in building the capacity of organizations and individuals to transmit and adapt new applications of existing information, new products and processes, and new organizational cultures and behaviors. However, more analysis is needed on how alternative strategies and selective approaches might shift AET into this role and, ultimately, into closer, more productive relationships with other actors in the agricultural sector and wider economy that build on the comparative advantages of different actors to reduce transaction costs, achieve economies of scale and scope, exploit complementarities, and realize synergies in innovation. This project attempts to fill this gap by examining alternative approaches to strengthening the innovative capabilities of AET organizations and professionals; changing organizational cultures, behaviors, and incentives; and building innovation networks and linkages. The project also examines the role of AET within the wider context of an agricultural innovation system. This innovation systems perspective offers a broad analytical framework with which to examine technological change in agriculture as a complex process of interactions among diverse actors engaged in generating, exchanging, and using knowledge, and conditioned by complex social and economic institutions. reliant primarily on formal and inflexible public

sector institutions and programs; and only weakly engaged with other economic sectors and knowledge sources.

Aims and objectives

A necessary objective for sustainable agriculture is that large numbers of farming households must be motivated to use coordinated resource management. This could be for pest and predator management, nutrient management, controlling the contamination of aquifers and surface water courses, coordinated livestock management, conserving soil and water resources, and seed stock management. The problem is that, in most places, platforms for collective decision making have not been established to manage such resources. The success of sustainable agriculture therefore depends not just on the motivations, skills, and knowledge of individual farmers, but on action taken by groups or communities as a whole. This makes the task more challenging. Simple extension of the message that sustainable agriculture can match conventional agriculture for profits, as well as produce extra benefits for society as a whole, will not suffice.

Sustainability is commonly seen as a property of an ecosystem. But Sustainability can be seen from other perspectives, which are more relevant for extension. Environmental issues emerge from the human use of natural resources. Sustainability can therefore be defined in terms of human reasons, activities, and agreements. The definition of Sustainability then becomes part of the problem because people need to agree on how they define Sustainability and what priority they will give it.

The Key Principles of Farmer Field Schools.

1. What is relevant and meaningful is decided by the learner and must be discovered by the learner. Learning flourishes in a situation where teaching is seen as a facilitating process that assists people to explore and discover the personal meaning of events for themselves.

2. Learning is a consequence of experience. People become responsible when they have assumed responsibility and experienced success.

3. Cooperative approaches are enabling. As people invest in collaborative group approaches, they develop a better sense of their own worth.

4. Learning is an evolutionary process, and is characterized by free and open communication, confrontation, acceptance, respect, and the right to make mistakes.

5. Each person's experience of reality is unique. As people become more aware of how they learn and solve problems, they can refine and modify their own styles of learning and action.

Sources: Adapted from Kingsley and Musante, 1994; Van de Fliert, 1993; Kenmore, 1991; Stock, 1994.

Given Functions

Functions	Sft per person	No.of users	No. of rooms	Total sft
Administrative:				
Lobby	15	20	1	300
+ toilet:			1	
Male	30	4		120
Female	30	4	1	120
Vice Chancellor		1	1	300
+ toilet	36	1	1	36
Dean		1	1	250
+ toilet	36	1	1	36
AVC / Vice Provost		1	1	200
+ toilet	36	1	1	36
Conference room	40	10	1	400
Dept Head / Director				
Instructional & Professional	100	5	1	500
Staff Area + storage				
Accountant	100	1	1	100
Steno Typist	100	1	1	100
Cashier	100	1	1	100
Academic:				
Class rooms		60	4	1600
Computer Lab			1	
Laboratories			3	600
Toilet				
Male	30	4	1	120
Female	30	4	1	120
Teachers room	40	10	1	400
+ toilet				
Male		1	1	36
Female		1	1	36
Seminar Hall				
Outdoor Gatherings				
Poultry shades:				
Cow shade			1	
Other animal firm			1	
Machinery Shed			1	
Farm Workshop			1	
Library:				2000

Librarian's room	225	1	1	225
Assistant librarian	160	3	1	480
+toilet	36	1	1	36
Reception				150
Book Stack	600 books		1	5000
Reading Area	30	100	1	3000
Copy Machine	100		1	100
Locker				200
Toilet Male Female	 30 30	 4 4	 1 1	 120 120
<u>Food Court:</u> Seating	 18	 100	 1	 1800
Counter			1	200
Kitchen			1	900
<u>Research Unit:</u> Laboratories			 4	
Publishers			1	
Libraries			1	
Toilet: Male Female		 3 3	 1 1	 90 90
Outdoor Farms				
Workshop			1	
Storage			1	
Tabulation Room			1	
Student Dormitories: Boys +toilet	 30	 200 4	 2	 120
Girls +toilet	 30	100 4	 2	 120
Teachers and Staff Housing +toilet	 30	 4	 2	 120
Officers Quarter				
Labours housing				
<u>Mosque:</u> Prayer Area: Male Female Wash Area: Male Female	 6 6 	 10 7 4 3	 1 1 1 1	 72 48 120 90
Green House: Nursery				

Storage Cashier				
Farm Areas				
Medical unit		3	1	

03.Chapter 2
Site Appraisal

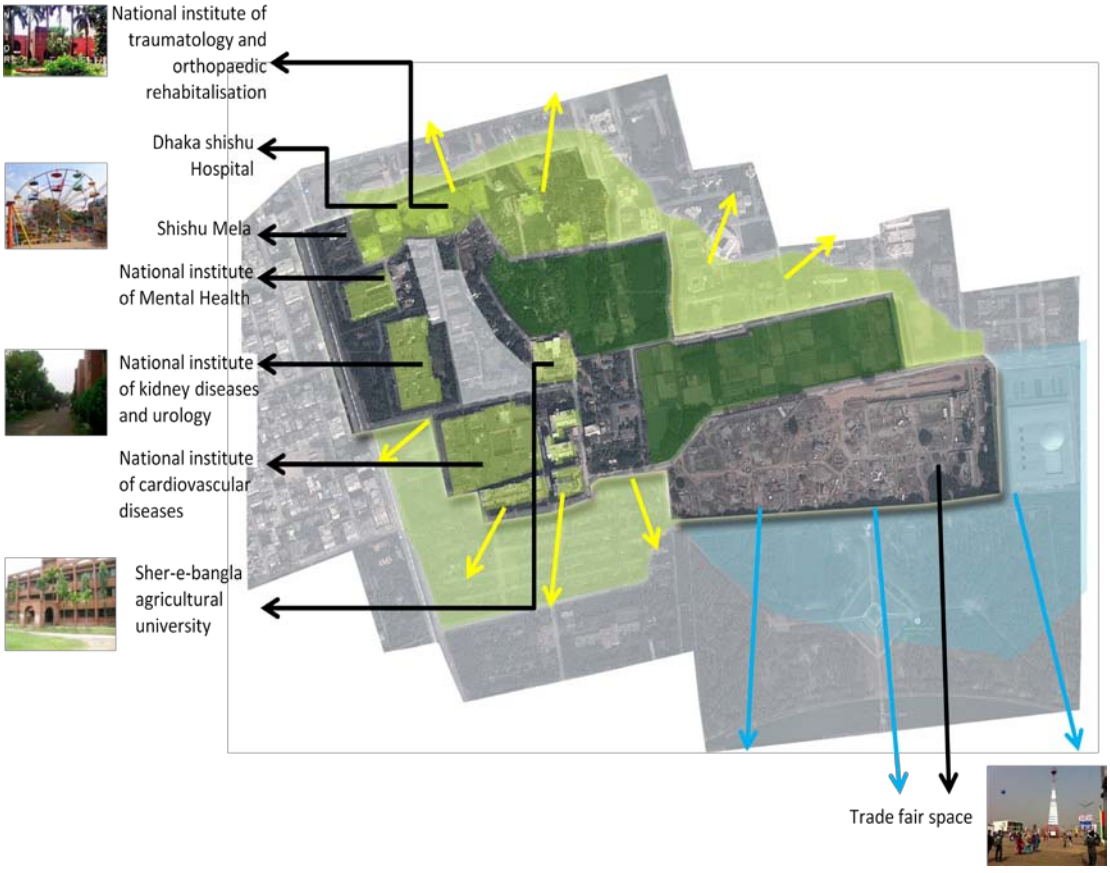
| The place |

Sher-e-Bangla Nagor meaning City of the Tiger of Bengal is one of the thanas of Dhaka city, the capital of Bangladesh.] It is located near Agargaon and it is home to the National Parliament. The area has been named after A. K. Fazlul Huq, a renowned statesman and one of the most prominent political figures of Bangladesh who was popularly known as "Sher-e-Bangla" (Tiger of Bengal). Sher-e-Bangla Nagor is a busy commercial and central neighborhood in the city and home to many offices of government and public institutions, educational institutions, banks and financial institutions and shops.

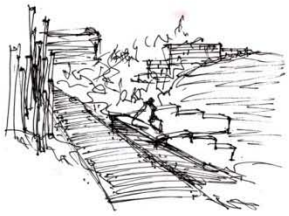
Offices and organizations: The Ministry of Defense and Election Commission of Bangladesh are in Sher-e-Bangla Nagar. Furthermore Asian Development Bank Bangladesh Resident Mission is across from the Local Government Engineering Department (LGED). Sher-e-Bangla Nagor houses the Department of Immigration and Passports, an attached department under the Ministry of Home Affairs of the Government of the People's Republic of Bangladesh.The National Parliament is located here which is one of the country's prominent aesthetic architectural structures designed by American architecture Louis I. Kahn. Bangladesh Institute of Development Studies and Sher-e-Banglanagar Telephone Exchange Dhaka are here as well. Islamic Development Bank Bangladesh branch is right beside BCS Computer City. Bangladesh China Friendship Conference Center, the predominant international convention center in Bangladesh isin Sher-e-Bangla Nagar.

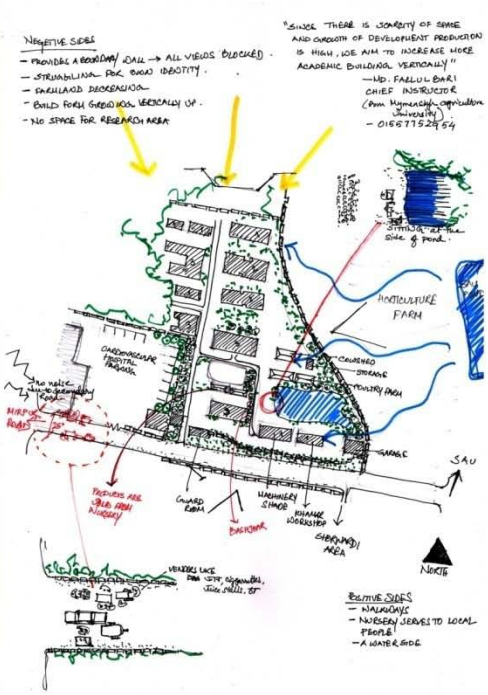
Educational institutions: One of the country's best agricultural universities, Sher-e-Bangla Agricultural University, is located here. Shaheed Suhrawardy Medical College is near the Ministry of Defense. Some well-known schools like Gonobhaban Government High School, Sher-e-Bangla Nagar Government Boys' High School are here.


DHAKA SHISHU HOSPITAL
SHISHU MELA
NATIONAL INSTITUTE OF MENTAL HEALTH
NATIONAL INSTITUTE OF CARDIOVASCULAR HOSPITAL
SHAHID SHARWORDI HOSPITAL
SHER-E-BANGLA AGRICULTURAL UNIVERSITY
TRADE FAIR GROUND
CHANDRIMA UDYAN
GONO BHABAN
NATIONAL PARLIAMENT HOUSE
Mixed Use Buildings
Site
Boundary

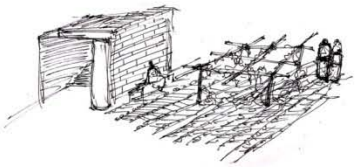

National institute of traumatology and orthopaedic rehabitalisation
Dhaka shishu Hospital
Shishu Mela
National institute of Mental Health
National institute of kidney diseases and urology
National institute of cardiovascular diseases
Sher-e-bangla agricultural university
Trade fair space

Environmental Considerations







The existing site is a calm and quiet area of the sher-e-banga nagor, a secondary road that defines the entry of the existing site. Zonings are scattered, each a small building of red bricks and white plaster which are lead by thin walkways surrounded by trees and flowers. In between each building is local vegetations and few small temporary plots of farmlands. These farmlands are mostly experimental and are re plotted when an error occurs with the experiment. Though small still they contain vegetations of rare fruits and flowers as well. Also small farmlands of rice and cabbages. This vegetation serves the people in there. And also a small poultries for training purposes. Vehicle is overlooked in the existing site and walking habits is what encouraged over here. These considerations made a beautiful impression of the site and encouraged me to consider them as design considerations in the initial phases of the project.


Existence:
Total area – 3.12 ha
Farm Area- 0.76
Residential Area- 1.57
Pond- 0.27
Build Area- 0.56

04. Chapter 3 Literature Review

“Extension will need to build on traditional communication systems and involve farmers themselves in the process of extension”

-Niels Röling , Extension's role in sustainable agricultural development

This approach is exemplified by the training and visit (T&V) system. It was first implemented in Turkey in 1967 and later widely adopted by governments. It was designed to be a management system for energizing extension staff, turning desk-bound, poorly motivated field staff into effective extension agents. Extension agents receive regular training to enhance their technical skills, which they then hope will pass to all farmers through regular communication with small numbers of selected contact farmers.

But the contact farmers are usually selected on the basis of literacy, wealth, readiness to change, and "progressiveness," and so this sets them apart from the rest of the community. The secondary transfer of the technical messages, from contact farmers to community, has been much less successful than predicted, and adoption rates are commonly very low among noncontact farmers. Without a doubt, T&V is now widely considered as ineffective.

Important lessons have been learned from the problems associated with T&V, and there is clearly a need to address the systemic issues facing extension (Zijp, 1993; Antholt, 1994). Extension will need to build on traditional communication systems and involve farmers themselves in the process of extension. Incentive systems will have to be developed to reward staff for being in the field and working closely with farmers. There must be a "well-defined link between the well-being of field officers and the extension system, based on the clients' view of the value of extension's and field workers' performance". Participation, if it is to become part of extension, must clearly be interactive and empowering. Any pretence to participation will result in little change. Allowing farmers just to come to meetings or letting a few representatives sit on committees will be insufficient

“Agricultural extension itself is a form of non-formal education offered to the farmer”

- Anders Närman

Education, training and agricultural development in Zimbabwe

Agricultural research is one of the pillars upon which may be based increased farming productivity. Through experiments, new crops with a higher yield can be developed, and these crops can be tried out under various natural conditions. A shift in research priorities, in favor of communal land production, would probably result in a growing emphasis being placed on drought-resistant varieties. These researches and learning goes together in extensions systems which provide the farmers with wide ideas and innovation and aware them of easy ways for farming.

"Agricultural extension is the channel of communication through which the findings of agricultural research are passed on to the farmers. The value of agricultural research is largely lost if research findings are not communicated to the farmers in a way that will enable them to improve their farming practices".

- Anders Närman
Education, training and agricultural development in Zimbabwe

Ma y AGRTTE X officials, working at both the provincial and district levels, have been critical of the efficiency of the established networks in this respect. The reasoning they use is not exclusive: if information and training on new technologies does not reach individual farmers, whether small- or large-scale, technological advances of the greatest distinction are of little value in real terms.

05. Contextual Analysis

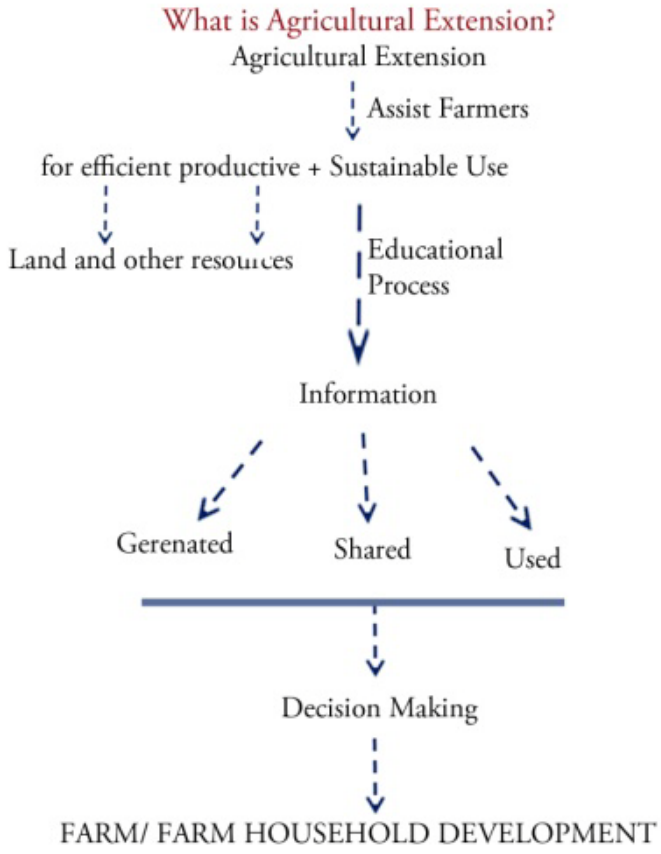
The Syllabus Preparation subcommittee of the Technical Education Board (TEB) of Bangladesh approved the inclusion of fertilizer deep placement (FDP) technology in the Plant Nutrition and Fertilizer Management course in the Agriculture Diploma Course Syllabus. The sub-committee's decision validates the relevance and value of the technology and will help sustain and diffuse FDP in Bangladesh.

Plant Nutrition and Fertilizer Management is taught to fourth semester agriculture diploma students. Current students are being taught about FDP technology from both theoretical and practical perspectives during the May-September 2013 semester of the current session. As a result, agriculture diploma students from 14 government Agricultural Training Institutes (ATIs) and 142 private ATIs will gain understanding and knowledge of the yield-increasing, cost-saving and environmentally friendly FDP technology. The first group of these students will enter the job market in 2015. They will begin impacting Bangladesh's agriculture sector in a similar manner to the nearly 6,100 students who received diplomas in the 2011-2012 session.

Natural systems function in a sustainable fashion by recycling all essential elements for the next generation of life. One of the toughest challenges facing urban planners is trying to incorporate the concept of sustainability into waste (both solid and liquid) management. Even in the best of situations, most solid waste collections are compacted and relegated to landfills. In a few rare instances they are incinerated to generate energy. Liquid wastes are processed, then treated with a bactericidal agent (e.g., chlorine) and released into the nearest body of water. More often than not in less developed countries, it is discarded without treatment, greatly increasing the health risks associated with infectious disease transmission due to fecal contamination. From a technological perspective, all solid waste can now be efficiently re-cycled (returnable cans, bottles, cardboard packages, etc.) and/or used in energy generating schemes with standard methods that are currently in use. Incorporating modern waste management strategies into the vertical farm model should work the first time out without the need for new technologies to come to the rescue. It must be emphasized that urban sustainability will only be realized through the valuing of waste as a commodity, deemed so indispensable that to discard something –anything - would be analogous to siphoning off a gallons' worth of gasoline from the family car and setting it on fire. Since agricultural runoff despoils vast amounts of surface and groundwater, any water that emerges from the vertical farm should be drinkable, re-cycling it back into the community that brought it to the farm to begin with. Harvesting water generated from evapo-transpiration appears to have some virtue in this regard, since the entire farm will be enclosed. A cold brine piping system could be engineered to aid in the condensation and harvesting of moisture released by plants. The only perceived missing link is the ability to easily handle untreated human and animal wastes in a safe and efficient fashion. Several varieties of new technology may be required. Perhaps lesions learned from the nuclear power industry in handling plutonium and enriched uranium may prove helpful in designing new machinery for this purpose.

ATI diploma graduates' knowledge of FDP will contribute significantly to sustaining and diffusing the technology. The graduates typically join the DAE as sub-assistant agriculture officers (SAAOs) and as field officers in many agriculture projects and programs implemented by donors, the government and local

non-governmental organizations (NGOs). The SAAOs implement and monitor agriculture programs with farmers at the block level. Their education, knowledge and cooperation are important to the success of government and development organizations' agricultural activities.



block supervisor

field workers

06. Precedents

Trinity Avenue

The Trinity Avenue Farm Design Competition is a competition developed to inspire creativity and innovation as the City of Atlanta works to establish an effective and inspirational model for urban agriculture within Atlanta communities—showcasing how fresh food can be grown locally and sustainably.

The competition was open to professionals, students and educators in agriculture, architecture, construction, design, development, engineering, horticulture, landscape architecture, planning and others fields interested in urban agriculture.

Their concept was for an urban garden and farm containing multiple plots and ADA accessible paths shaped and arranged to match the roads and blocks of downtown Atlanta. When viewed from the surrounding high rises and Atlanta City Hall, the garden presents itself as a map of the downtown core of Atlanta. You can easily make out the Fairlie Poplar area which is the pedestrian plaza in the center of the site as well as the domed green house which represents the GA Dome. The most challenging aspect was selecting the right area and scale of the map to create effective plot sizes in the 1 acre site.

Value Farm / Thomas Chung

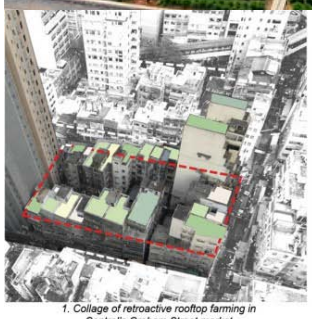
Shenzhen residents were invited to help plant the space, and then come back to harvest and taste the food. “Value Farm creates value by cultivating the land as a collective effort,” Kee says. “We’re exploring the possibilities of urban farming in the city and how that can integrate with community-building.”

The exhibition was designed to spark more farming projects. The architects laid out designs explaining, for example, how a market district in Hong Kong could be blanketed in rooftop farms. “This is arguably a viable future for a post-urban Hong Kong, to transform untapped a potential artificial land resource--rooftops--in dense urban areas into productive terrain,” Kee explains.

In Hong Kong, like other cities around the world, there's already a growing interest in rooftop farming. “Local initiatives stem from residents’ continuing worry about food safety, as well as the obvious attraction of creating a green oasis above the urban chaos,” says Kee. “It’s reconnecting city dwellers with nature, teaching consumers about homegrown food, and offering a more sustainable, accessible food supply.”

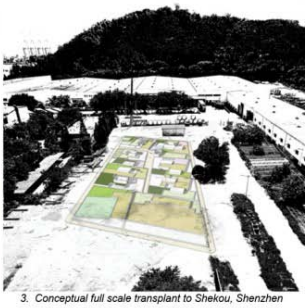
Though the Biennale has just closed, and plants have been harvested, the space will likely stay a garden. Kee says the chief curator wants to turn it into a public park.

Architects: Thomas Chung
Location: Shekou, Nanshan, Shenzhen, Guangdong, China
Design Team: Gary Law, Bill So, Sam Wong
Area: 8120.0 sqm
Year: 2013
Photographs: Value Farm



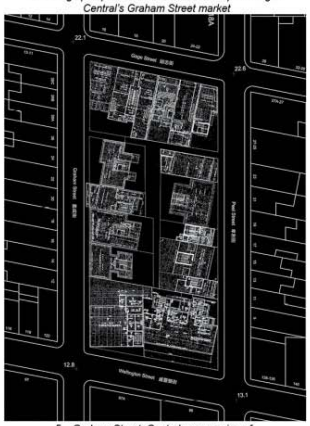
1. Collage of retroactive rooftop farming in Central's Graham Street market

2. Collage perspective of retroactive rooftop farming in Central's Graham Street market

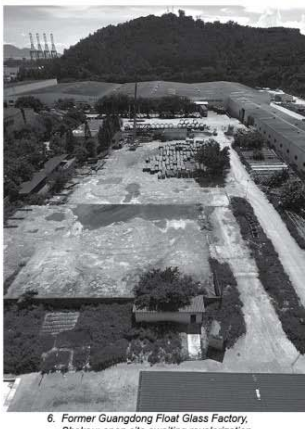


3. Conceptual full scale transplant to Shekou, Shenzhen

4. Graham Street, Central: current condition with open-air wet market, urban block on right demolished.



5. Graham Street, Central: summoning of rooftop configuration of disappeared urban block.



6. Former Guangdong Float Glass Factory, Shekou: open site awaiting revalorization

Reuse of Beykoz Leather and Shoe Factory

Revitalization and Mixed-use Building Design
Europe - Turkey – Istanbul

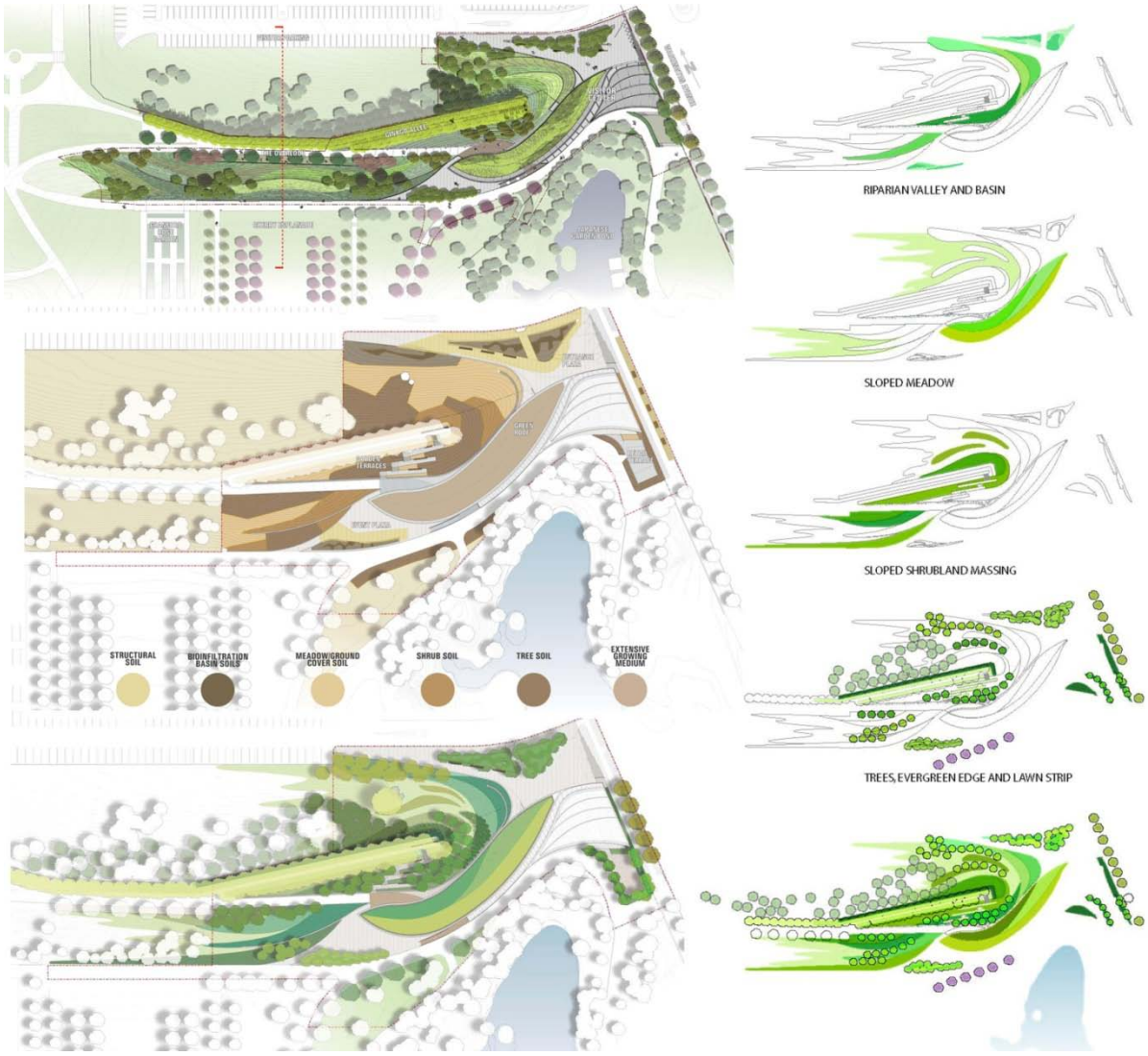
---The project's aim is to revitalize the factory grounds as a social space that will provide a benefit to the people of Beykoz and to all of Istanbul. It is with this aim in mind that according to the project, the registered buildings within the area will be preserved, put to new uses and new buildings as harmonious with the general plan of the factory as possible, will be built in place of existing low quality buildings.--- In addition to this the Product Warehouse, which stands at the east of the site, will be kept because of its impressive look even though it is not registered.

--The area will be used mostly for educational (faculty of architecture and arts, students center) and cultural (conference center, library, industrial museum...) purposes.-- However it will also include shopping, eating and recreation areas since these will contribute to the vitality of the complex.

--The traces of existing buildings will offer a basis for construction of the proposed new buildings.-- The buildings, that positioned according to this method and the green belt, will keep alive the relation between factory grounds and Beykoz Meadow.

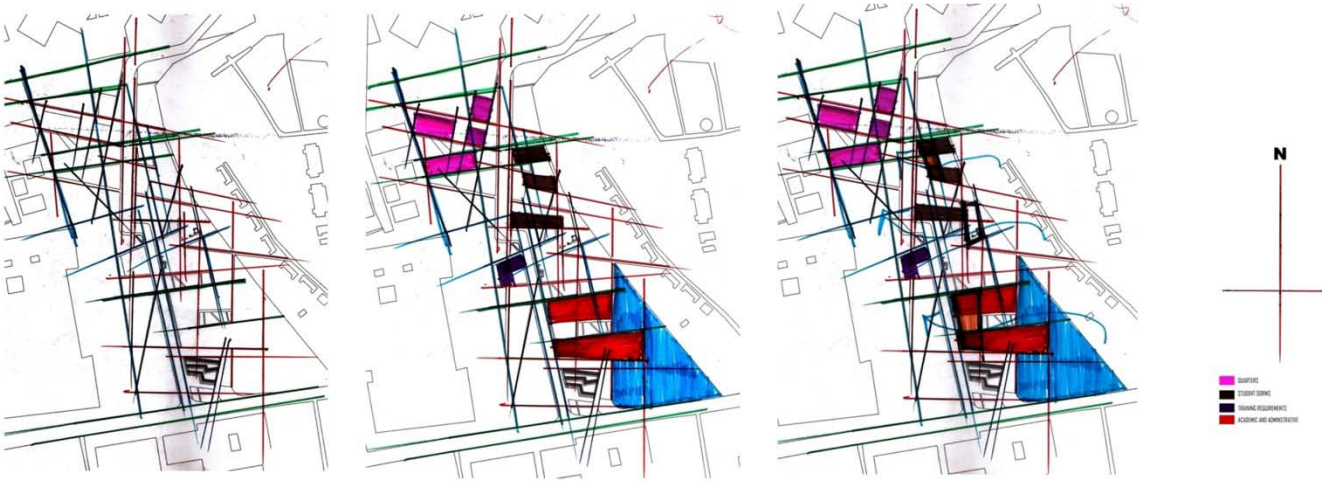
Civil And Structural Engineers: **Weidlinger Associates**
Lighting: **Brandston Partnership**
Landscape Contractor: **Kelco**
General Contractor: **EWHowell**
Contractors Construction Manager: **LiRO**

From the architect. Honored by the NYC Design Commission with an Award for Excel- lence in Design in 2008 for integration of form, function and sustain- able practice, the new visitor center to the Brooklyn Botanic Gar- den establishes a visionary public interface between the city and the garden. The landscape's central feature is the building's living roof design, conceived as a seamless, inhabitable extension of the Garden that mergers landscape and architecture and redefines physical and philosophical relationships between visitor and garden, exhibition and movement, culture and cultivation.



07. Design Phase

Initial Design developed from the existing site from the series and walkways and the orientations of the building. The first attempt for the project was to develop the zoning and develop the orientation according to the site. The orientations chosen were to face the extended façade to the orientation of North South so that the people living get a experience of the sunlight and also south winds. East side of the site contains a view of the green spaces of the Horticulture firm of the Sher-e-bangla Nagar Agriculture University. An existing water body defined the place to be a huge civic space welcoming the visitors and the people from the buildings.

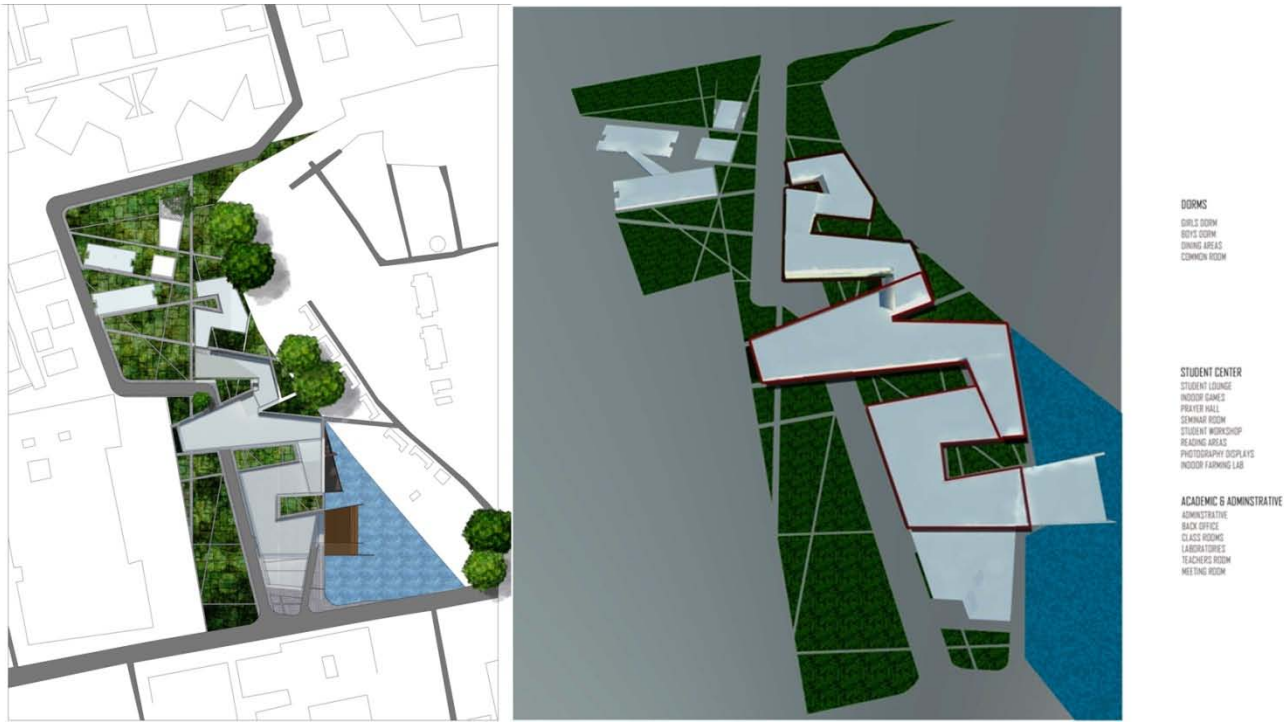


The second attempt of next phase was to work out a series of walkways within the building forms and to connect each building to make up a compilation of one single unique area. The lines are derived from site forces and North south orientations. In the next phase those building forms are extruded from the walkways complimenting the lines. And the intermediate spaces between the lines are the farmlands- the experimental plots for training purpose. The graphic lines define the farmlands of different sizes according to their purposes. The concept was to play with the different farmland shapes to grab the attention of the visitors and the students to encourage agriculture farming in a new and fun way. The buildings remained orientated with the extended façade to north south. Then a linkage is sorted out with each functional building. Those functions work as a transition space and connect the building to form one building center serving a particular function of the institute. In the Next phase the linked spaces are opened out to allow free flow wind from the east.

Now the farmlands are placed orienting to the west side to grab sunlight as required and the main buildings of the institute are on the east side to allow view of the Horticulture and the water body.

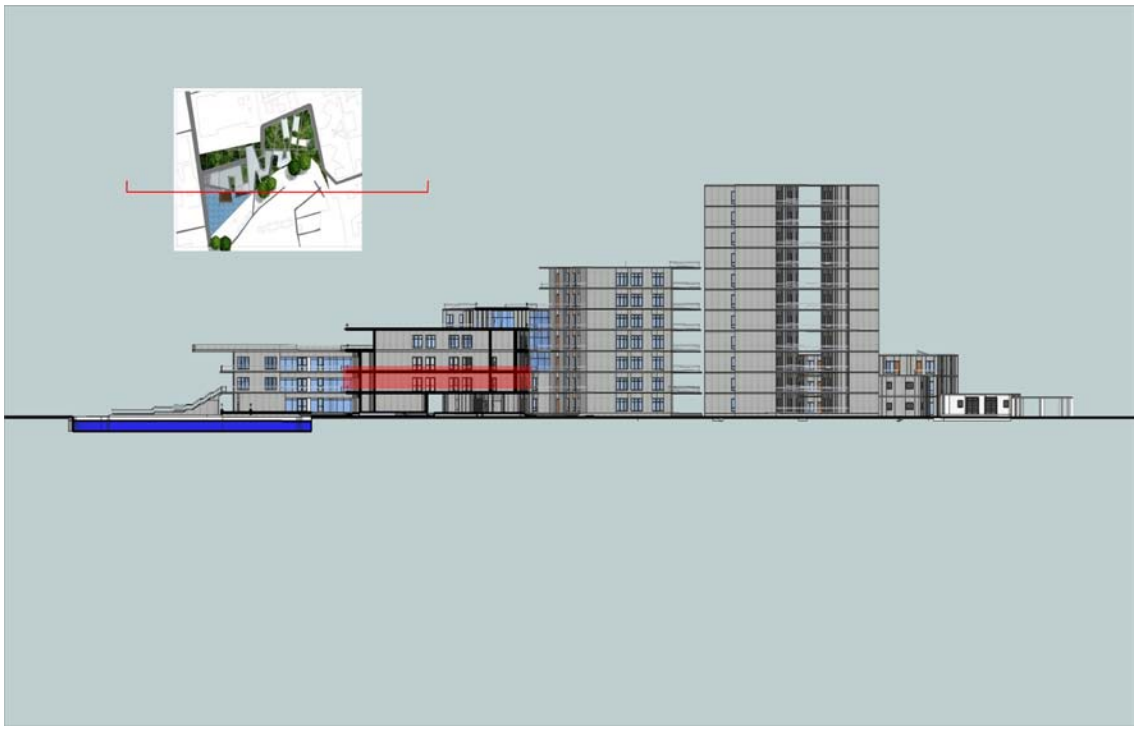
Each building is now defined as different functions. The south facing building is the main building of the institute as it is the administrative and academic building where lobbies and information desk also welcomes the visitors to grab information about agriculture. The second building behind the main building is the student center that opens to the water body and is connected to the whole site by pedestrians and walkways. This student center includes seminar halls, indoor games, prayer halls, student workshop, temporary display gallery and a visitor's research lab. This facilitates both the

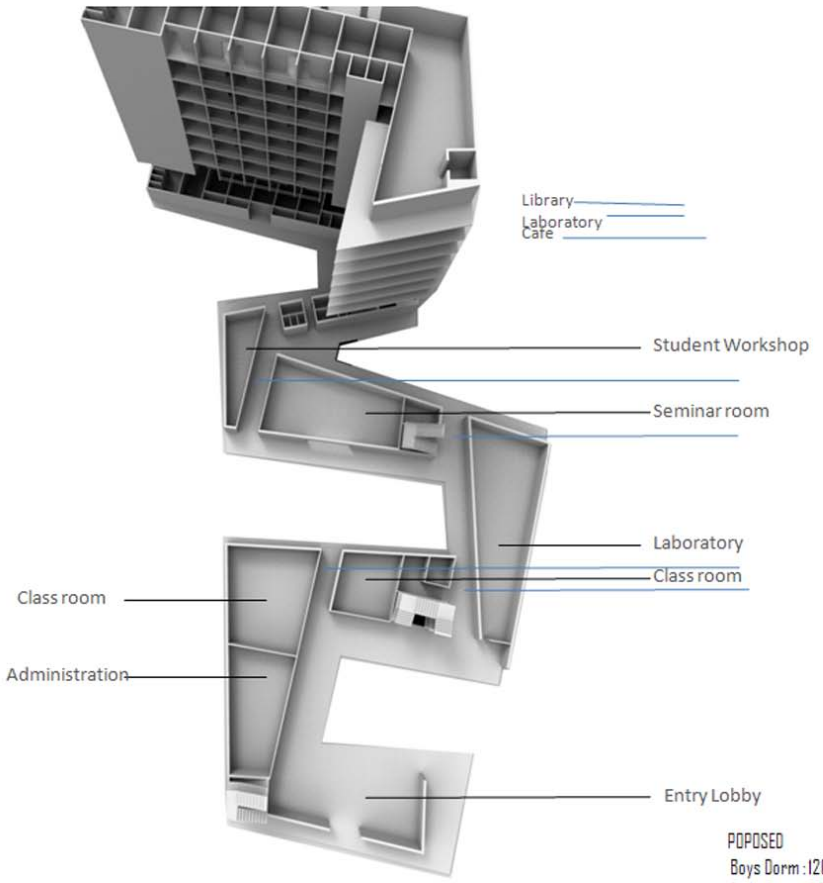
student and faculty and also welcomes the visitors to the idea of farming. The third and the fourth building is the dormitories for both girls and boys segregated which facilitates a floor of dining and indoor game rooms. The four building at the north side are the teacher's quarter, officer's quarter, principal quarter and a proposed labor quarter. The five building in the front plays the main roles of the institution and the four building plays the role for living and accommodation of the servicers. The main institution clusters have courtyard spaces in between each building forms opening to the water bodies and open green areas. These courtyards also open articulately to the farmlands wherever it is required for training purposes of the students. Each courtyard also has different functions and facilities. The courtyard with the Academic block is the meadow event for the students to celebrate institution on days. The second courtyard opens to the farmland as a digging ground is required as a fun training session for the students, so this courtyard serves as a facility for student center. The third courtyard is an outdoor playfields for the boy's dorm as the existing building had a pucca road in front. The rest of the courtyards serve divisions of local vegetations for the student to plot at different times. The farmlands that divide within the living areas are defined as lawn spaces of experimental local plantations and few as community green gardens.



The next phase of the design was to define the transition spaces. Each transition spaces links to the other building providing a walkways within the building interiors. And each opening in interior spaces of the building provides a visual opening and linkage to the next courtyard. So that the building while a expression of walkways does not devine the perpective facades but also the couryards and openings.


JAVA APPLE TREE
BANANA TREE
HUMMINGBIRD TREE
BASELLA ALBA
BROCCOLI
BRINJAL PLANT
ANGUR PEARA
BROAD BEANS
LEATHER FERN
COCONUT TREE
ARECENUT
BETEL NUT
BOTTLE GOURD
Nunia Gach
OKRA TREE
Jack Fruit Tree
ASTER
DAHLIA
GONDHO RAJ
CEDRUS DEODRA
RICE PLOT
LETTUCE
SNAKE GOURD
CACTUS PLANT
DRAGON FRUIT TREE
RIBBED GOURD
FAVA BEAN

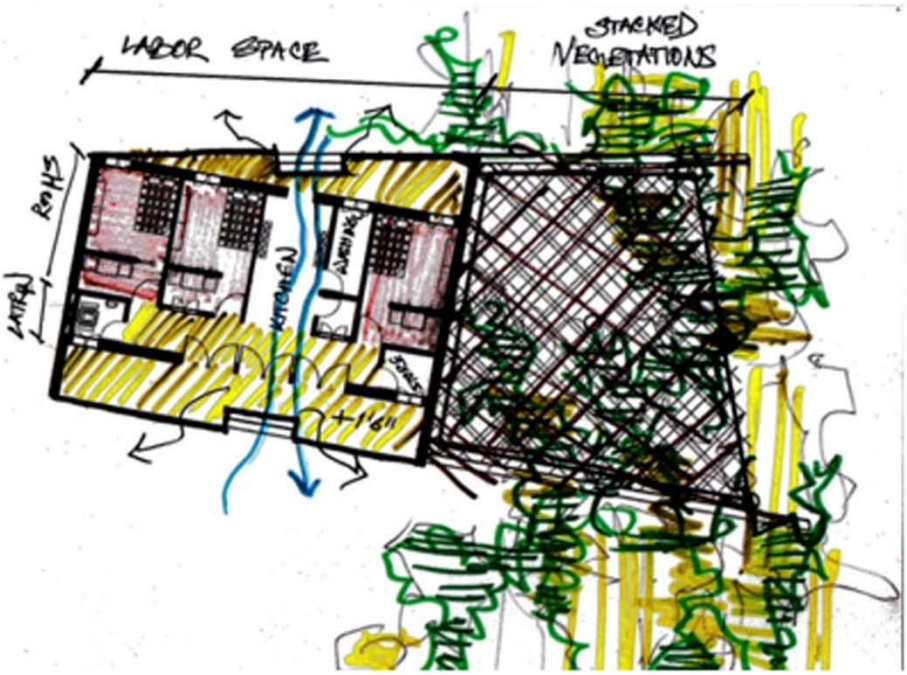


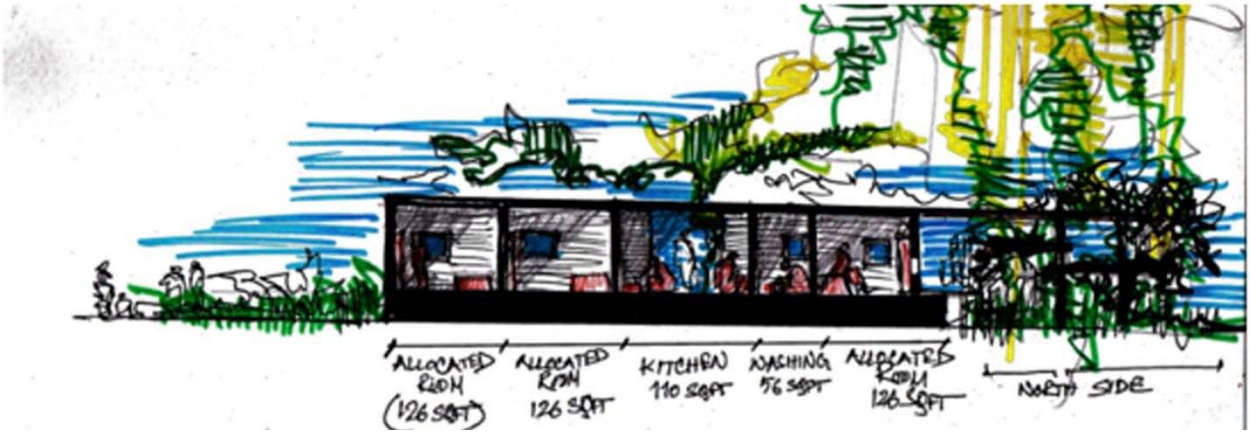


POPOSED	EXISTING
Boys Dorm : 120 student	Boys Dorm : 100 student
Girls Dorm : 98 student	Girls Dorm : 80 student
Teachers Quarter 1200 sqft – 6 Instructor	Teachers Quarter 800 sqft – 6 Instructor
Officers Quarter: 800 sqft – 4 Employee	Officers Quarter: 800 sqft – 4 Employee
Principal Quarter : 1600 sqft	Principal Quarter : 1200 sqft

The functions like libraries and temporary display galleries holds a expression of double and triple heights and is situated in a place from where the whole institution is visible. The functions itself is defined by transparency glass and openings so that the crowds gathered on the spots are also acts as a definition of the function from outside the building. Each of the building is connected by the terraces and each terrace are kept accessible for the students and at the same time privacy for particulate spaces like dormitories and living is considered and solved in a way where the privacy is unharmed but the visual opening of the spaces is defined through building heights. As the terraces rise gradually upwards the amount of privacy also increases with it. So the lower terrace does not allow the people to access to the higher terraces of the girl's dormitory.

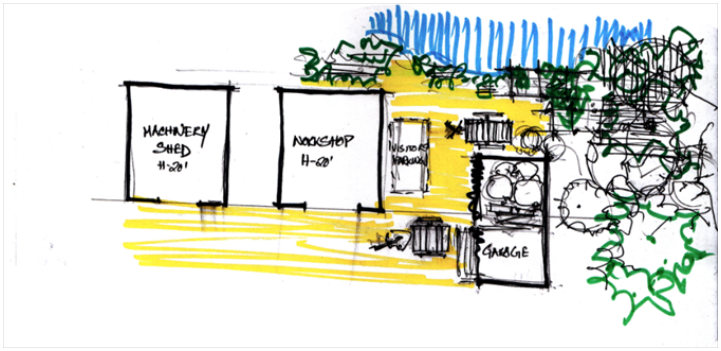
In the next phase of the design defined living and farming spaces are propose according to the existing studies. For example the labors who are permanent here in the institution work both on farmlands and the institution main buildings. They have a certain way of living. They work live and stay like they stay in villages within farmlands. In courtyard spaces of shared kitchen and washing. So the proposals went out with the considerations of stacked farming solutions outside the living and a courtyard in relation to the outside in the living spaces. A shared kitchen and washing is given to solve the communal issues they usually have within them.

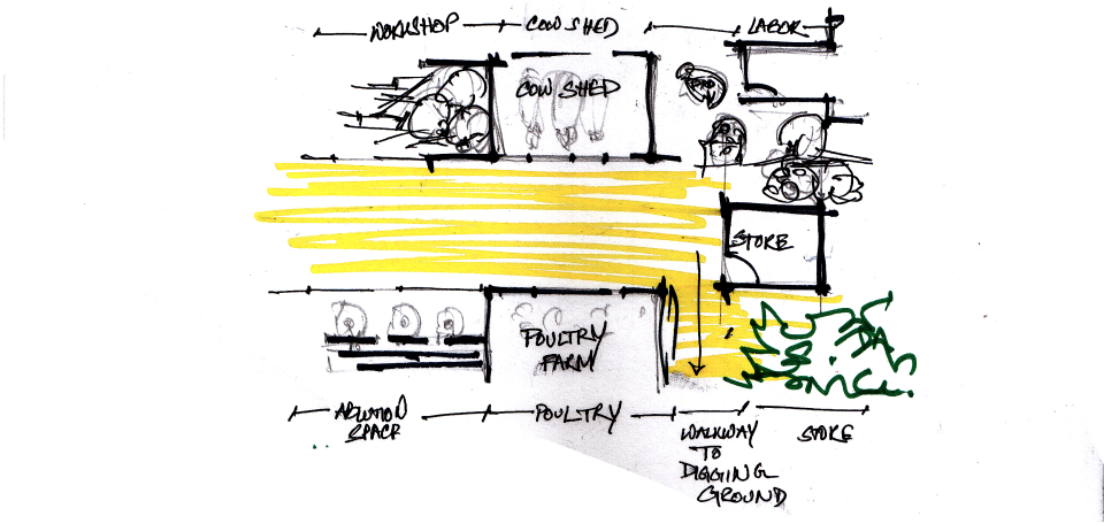




These studies are derived from the living existing situations. In the existing situations they gathered and made a shelter out of timber and stayed within the farmlands at the north end where the amount of farmland is more. And works in the workshop where they build their communal spaces like cooking and washing.

More design considerations as such the work connectivity of the existing situation is considered and put into the placing of the functions. Functions like poultry and machinery shades works together at the same time isn't aesthetically present while inside other important functions of academic curriculums. So these small unit functions are considered as a part of the farmlands functions and placed within the farmlands on the west side of the side.





Another design proposal at the end of details of the function was to treat the west facades. The proposals were to provide creepers in particulate spaces of the west facades where there is no functionality of living. These facades of green provides a sustainability as the heat from the west is absorbed on to it.

Due to the surrounding buildings material considerations of red bricks. Red bricks are used in some places of the west facade to relate the other buildings with it. And to remain more with the nature concrete as a material is used for the whole building institution.

07. Conclusions

In examining the role of AET systems in Agargaon, this paper relies significantly on an innovation systems perspective to make its case. Yet the innovation systems perspective is a relatively new application to the study of developing-country agriculture, and, thus, the body of methodological and empirical work that precedes this paper is still quite small. Moreover, efforts to link empirical analyses of innovation systems in developing-country agriculture and targeted recommendations that can inform public policymakers are still under development. This paper attempts to address these issues. However, continued analysis of AET from an innovation systems perspective is needed. Specifically, more discussion is needed of how to produce extension agents, researchers, educators, and skilled laborers in sufficient quantity to boost agricultural productivity and output, and in sufficient quality to play an active role in a changing agricultural scenario. This implies the need for closer consideration of the more nuanced challenges of strengthening innovative capabilities among both individuals and organizations; creating organizational cultures in AET that are sufficiently open and dynamic to facilitate change; and building innovation networks, partnerships, and linkages to foster greater adaptation, imitation, and use of available information and knowledge. And ultimately, recognition is needed of the fact that interventions designed to strengthen AET systems are a long-term undertaking—only through a long-term outlook on change can AET systems contribute to the development of more dynamic and competitive agricultural economies that engage farmers, entrepreneurs, extension agents, researchers, and many other actors in a wider system of innovation.