

GIS CERTIFICATE TRAINING COURSE FOR COUNTY SPATIAL & INTEGRATED STRATEGIC URBAN DEVELOPMENT PLANNING

A TRAINING COURSE FOR
COUNTY PLANNERS

Time: 18 November - 06 December, 2019

Venue: AICAD Juja, Kenya



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FOR A BETTER URBAN FUTURE



BACKGROUND

Introduction

Kenya's National Spatial Plan (NSP 2015-2045) seeks to provide a spatial structure that defines how national space is going to be utilized for the realization of optimal and sustainable use of land and a spatial framework upon which various sectoral plans and policies will be anchored and is a basis for preparation of all other lower tier plans. The National Spatial Plan provides a framework for efficient, productive and sustainable use of land as advocated for in both the Constitution and the National Land Policy. This broad national spatial vision also provides strategies and policies to facilitate sustainable exploitation of agricultural, tourism, energy, water, fishing and forestry resources for local economic growth and development. It is expected that the NSP should be operationalized through the preparation of lower tier plans such as the county spatial plans (CSPs) and integrated strategic urban area plans (ISUDPs).

The County Governments Act (No 17 of 2012) provides a framework through which the lower-tier plans are supposed to be prepared. Specifically, County Integrated Development Plans (CIDPs), County Sectoral Plans, County Spatial Plans and cities and urban areas plans are listed as lower-tier plans that should be the basis for guiding, harmonizing and facilitating development within counties. Further, the Urban Areas and Cities Act (UACA 2011) provides an additional framework through which a city or urban area shall prepare an integrated city or urban area development plan together with the governance mechanisms.

GIS and the Physical, Land-Use, Spatial & Integrated Strategic Urban Development Plans

Section 104 of the County Governments Act (No 17 of 2012) requires that counties should have planning frameworks that integrate economic, physical, social, environmental and spatial planning and section 107 of the Act further requires counties to prepare a five-year County Integrated Development Plan (CIDP) with clear programmatic goals and objectives; implementation plan with clear outcomes; provisions for monitoring and evaluation; and clear reporting mechanisms, as basis for appropriation of public funds. Additionally, each county is required to prepare County Sectoral Plans, County Spatial

Plans and cities and urban areas plans as basis for guiding, harmonizing and facilitating development in counties. While the sectoral plans are the detailed thematic frameworks for operationalizing the CIDP, the County Spatial Plan (CSP) is a 10-year **GIS-based spatial development framework** that must be prepared by each county as part of the CIDP. The CSP is a tool for guiding county-level management and use of land and other natural resources as well as development control including zoning for industrial, commercial, agricultural and residential developments. The CSP provides a basis for investment in infrastructure development (transport and communication and other infrastructure networks) and services delivery (water supply, sanitation), environmental protection and conservation within counties. On the other hand, the Urban Areas and Cities Act (UACA 2011) requires that a county government shall initiate an urban planning process for every settlement with a population of at least two thousand residents and that a city or urban area shall prepare an integrated city or urban area development plan. The ISUDP is a plan that guides development within the urban area and that stipulates vision for the long-term development of the city or urban area with special emphasis on the most critical development needs of the city or urban area.

Training Course Justification

While most counties have prepared second generation CIDPs with sectoral plans currently under review, there is inadequate capacity in counties to prepare **GIS-based spatial and integrated city or urban areas development plans** that could guide urban and rural settlement development, spur local economic growth and enhance investment opportunities. This Training Course for County Planners has been developed jointly by United Nations Human Settlements Programme (UN-Habitat) and United Nations Development Programme (UNDP) to build the capacities of County planners in the preparation of GIS-based Physical, Landuse, Spatial & Integrated Strategic Urban Development Plans building on the recommendations of the GIS Needs Assessment in Kenya Report prepared by UNDP in 2017, as well as previous training activities conducted by UN-Habitat and partners to both the county executives and policy makers. The Training Course for County Planners aims to strengthen the nexus between

planning needs and policy decisions in counties. To this end, the training course will seek to promote better understanding of GIS and planning needs in counties to enable prioritization of GIS and planning needs in the county budgeting processes.

Training Course Organizers

UN-Habitat, the United Nations' agency mandated to provide adequate shelter for all and support sustainable urbanization and human settlements development has been supporting the government of Kenya in developing well-planned and efficient human settlements, with the objective of achieving adequate access to housing, infrastructure, and universal access to employment and basic services such as water, energy, and sanitation. UN-Habitat is currently supporting counties such as Marsabit and Garissa to prepare their respective ISUDPs through a participatory and inclusive approach that also incorporates the principles of New Urban Agenda. Within this Training Course for County Planners, UN-Habitat, based on global best practices and experiences, will provide technical skills training to Participants on preparation of GIS-based Physical, Landuse, Spatial & Integrated Strategic Urban Development Plans.

UNDP works to eradicate poverty and reduce inequalities through the sustainable development of nations, in more than 170 countries and territories. In Kenya, UNDP is supporting the Government of Kenya to institutionalize climate change sensitive tools for informed planning at the national and the county levels. Within this framework, UNDP has been supporting counties in Kenya to mainstream Climate Change (Adaptation and Mitigation) and Disaster Risk Reduction (DRR) into the County Spatial Planning processes, as well as the formulation of tools and instruments to guide the County Integrated Development Planning and County Spatial Planning. UNDP has also been supporting counties to prepare detailed Hazard Maps, as avenues of supporting resilience building within the counties and has contributed funding for this Training, in collaboration with UK-AID/DFID.

African Institute for Capacity Development (AICAD) is an autonomous International Institute that deals with poverty reduction in Africa through human capacity development. The Institute is jointly financed by the three East African governments; Kenya, Tanzania and Uganda, with the support of development partners. The establishment of AICAD came as a result of high level negotiations and commitments that led to signing of records of discussion, memoranda and articles of association by the three governments of East Africa and Japan. Following these agreements, AICAD was established on the 1st of August 2000 on the guiding principles of partnership and ownership among its member states. AICAD collaborates with both governmental and private organizations such as Universities, Research Institutions, Industries, NGOs, CBOs and Government departments and Agencies, within and outside Africa. It utilizes human resources and other suitable facilities in these institutions through partnerships. The Vision of AICAD is "To be the leading African institution in building human capacity for poverty reduction."

The Regional Centre for Mapping of Resources for Development (RCMRD) is an inter-governmental organization established in 1975 under the auspices of the United Nations Economic Commission for Africa (UNECA) and the African Union (AU). RCMRD focuses on provision of Geo-Information services with an aim to promote sustainable development through generation, application and dissemination of Geo-Information and allied Information Communication Technology (ICT) services and products in the Member States and beyond.

The Government, through the Ministry of Lands and Physical Planning and the Council of Governors of Kenya (CoG), will be part of the technical working group that identifies the trainees and coordinates development and delivery of the training course.

Training Course Objectives

1. Improve the GIS skills capacity of County Planning Staff to enable them develop the GIS-Based County Spatial Plans.
2. Facilitate peer to peer learning between counties at different stages of GIS based spatial planning
3. Support prioritization of GIS-Based Physical, Landuse, Spatial & Integrated Strategic Urban Development Plans in counties
4. Sensitize counties on GIS needs financing
5. Develop a long term normative framework for a continuous capacity development programme on GIS for County Planners
6. Share local and international best practices and experiences on GIS based spatial planning

Participants

Participants selected for the training course will be mid-career planners in counties. Nomination of women is encouraged. Two (2) participants per county will be selected from the 47 Counties to participate in the course scheduled for 18th November to 6th December 2019. The course will be implemented in three cohorts with each undergoing a six days intensive training as follows:

- Cohort 1: 17th -23rd November 2019 (32 Trainees)
- Cohort 2: 24th – 30th November 2019(31 Trainees)
- Cohort 3: 1st – 7th December 2019 (31 Trainees)

NB: Nominated participants are requested to fill attached forms and to indicate their preferred cohort for ease of placement.

Curriculum of the Training¹

The curriculum of the “GIS Certificate Training Course for County Planners” is organized into two (2) distinct but inter-related modules of Theory and Practice. Lecture topics and field studies constitute the modules. The principle objective of each module is to articulate and expose participants to the basic tenets of development theory and practice;

¹ Details of all the course sessions will be contained in the course prospectus to be shared with the nominated course participants.

and to ensure emerging issues in local and regional development planning using GIS receive adequate coverage. The course duration is one week during which participants will be trained on the practical process of GIS in planning, which links knowledge to action and theory to practice. Thus, the modules cover the domains of theory, analysis, project planning and implementation as well as exchange of practical experience in GIS application to local and regional development planning and management. The tentative contents of each of the 2 modules are described below:

MODULE 1: Nexus Between Policy, Planning and GIS

Session 1: Policy, Legislative & Governance Frameworks for GIS-based Planning in Kenya

Under this Session, participants will be exposed to existing theory, legal, regulatory and policy regime on GIS and Planning in Kenya with a view to improving the participants' understanding of the theory and laws governing such processes. Global frameworks on planning and sustainable development will be discussed in this module. This module will also expose the participant to a deeper understanding of the current governance structures and the role of such structures in plan preparation, approval and implementation. Trainees will also be made to understand the role of the urban boards, county executives, county assemblies, civil society & local urban forums as well as residents' associations

Session 2: Preparation, Approval and Implementation of GIS-based Spatial Plans

Under this Session, the participants will be guided to understand the processes involved in the preparation of the various GIS-based plans for sustainable local and national economic development including submission of plans to the relevant approving institutions. The session will also take the participants through the plan implementation processes including the role of the various institutions involved in the approval and implementation processes. Various types of plans: Physical, Landuse, Spatial, Neighbourhood, Part Development and Integrated Strategic Urban Development Plans in counties and the inter-relationship that exists between these plans will be highlighted during this Session. The Module should be able to cause the learner to link these plans to local economic development (LED).

Session 3: Environmental conservation, Climate Action and the role of GIS-based Spatial Plans

During this session, the trainees will be exposed to the environmental conservation, and climate resilience issues, carbon emission reduction and the role of GIS-based Spatial Plans in climate change mitigation and adaptation as well as the impact of the recent climate summit on cities and human settlements. The Session will inform trainees on how public and open spaces could be planned to support climate resilient human settlements and for disaster risk reduction in cities and human settlements.

MODULE 2: GIS Application in Planning (Theory and Practice)

Session 1: Introduction to GIS Practical and its Application to Planning

This session will introduce and define Geographic Information System (GIS), its structure, components and elements. It will also look at different Geospatial data formats and how they are generated. Furthermore, this introductory session will impart knowledge on:

- How GIS is applicable for different functionalities including spatial planning
- The basic concepts and terminology related to Geographical Information Systems (GIS)
- Introduction into Geospatial data and its use in mapping
- The role/benefits of GIS for County spatial planning

Session 2: Functionalities of a GIS System / County GIS Labs

Building on the recommendations of the GIS Needs Assessment in Kenya Report prepared by UNDP in 2017, the session will involve physical interaction with an existing LAB to demonstrate how such a typical GIS LAB operates. It will provide the trainee with ideas on what an ideal "Planning Studio and GIS LAB" should constitute for effective preparation of various Plans. This module will expose the participants to:

- The basic and advanced methods and functionalities of GIS software (ArcGIS)/ Qgis to manage/organize and analyze County Spatial Planning data
- Identify, search, collect, organize and analyze geospatial related data/information
- Use available tools/solutions to collect, access, communicate and disseminate spatial data/information for county spatial planning
- Undertake the process to create thematic maps for the County Spatial Plans
- Apply GIS to different application domains such as DRR, Land& Environmental management and others

Session 3: County GIS LABS, Practical Applications and Field Visit

Using available county data, participants will be taken through practical exercises in generating GIS data, using it for mapping and formulation of spatial plans. Using a practical example from a county GIS lab, participants will be expected to learn from the model and work towards replicating the LAB approach in their respective counties with the technical assistance of Course organizers. After a field visit to a satellite, fast urbanizing town, two hours' drive from the training centre, the participants will be taken through the County GIS implementation process (*GIS planning, GIS requirement analysis, GIS design, GIS acquisition and development, GIS operations and maintenance*) and GIS post-implementation (*GIS staffing, Hardware, software and data management*).

Data: For counties that have already initiated GIS based Spatial Planning, trainees are requested to come with GIS/ spatial data that have been generated. Such data will be used as training baseline for specific counties upon which future update and generation of different datasets will be undertaken by the counties. Trainees from counties without digital data are requested to carry available manual data to be used in demonstrating conversion into digital data.

Training Methods

An output-oriented participatory approach

The course will utilize a combination of training techniques including lectures, workshops, group and panel discussions, case study analysis, and field study. The training methods will be participatory and output-oriented, based on three-way dialogue. Experts will conduct lectures and panel sessions followed by group work by participants who will be divided into three or four groups. Participants will utilize lecture worksheets to identify and record the key issues for development, tasks to be performed, and skills to be acquired during each lecture session. For group work, participants will be assigned to further analyze the day's inputs and collate the key issues, tasks and skills using daily worksheets.

Results and feedback will be presented at plenary sessions, at which lecturers and resource persons will be present in order to ensure that full understanding has been achieved. In this regard, the lecturers and resource persons will provide supplementary comments and lecture inputs where gaps in knowledge appear.

Theoretical, practical and experiential approaches to GIS learning

Through a combination of theory and practice in GIS, participants will be able to use the different learning methods and therefore, have more avenues at their disposal to acquire new information and knowledge. Visualization and practical projects will help participants explore the GIS topic through the many available and possible perspectives.

Training Faculty

The training faculty will be drawn from leading experts from UNDP, UN-Habitat, AICAD, RCMRD and key resource professionals in Kenya. The faculty will conduct training of various modules in accordance with the participatory and output-oriented training methodology.

Application and Criteria for Admission

1. Respective county governments should nominate applicants. A Letter of Endorsement/Cover Letter in the letterhead of the County must accompany the Application Form from the county committing to have the applicant attend the training course.

2. Applicants should have at least a bachelor's degree or equivalent qualification from recognized universities and more than three years work experience in GIS, urban and or regional development planning and management.
3. Applicants should have a high level of both written and spoken proficiency in English language.
4. Once selected and the participant is unable to take up the offer, organizers should be informed immediately to enable utilization of the training slot by another applicant.
5. No late arrivals or early departures will be permitted under any circumstances and participants should confirm beforehand that they will arrive by the expected date and are required to attend all the training sessions.

Application Procedures and Deadline for Application

Duly executed Nomination Form, County Profile Questionnaire and Participant Profile Questionnaire in the annex below together with a cover letter in the letterhead of the County Government, should be scanned and sent to jeremiah.ougo@un.org, eva.sawe@cog.go.ke and wakhu@aicad.or.ke by 31st October 2019. Late and/or incomplete applications may lead to disqualification. The following documents must be attached to the nomination form:

1. Copy of Identification (National ID or Passport)
2. Two copies of a recent passport size photograph

Criteria for Certification

Unless under special circumstances, such as sickness or family tragedies, reported and approved by the organizing committee, participants must register full attendance in all sessions and will not be eligible for certification unless 90 per cent of the course is attended.

Funding Support

The full cost of the training course is USD 1,200 (Ksh. 120,000) per Participant. UN-Habitat and UNDP are jointly meeting the cost of full board accommodation, training including resource persons/lecturers' fees; training materials, stationery and other supplies; course prospectus; certificates and cost of training venue; and preparation and dissemination of Training Course Report. UN-Habitat and UNDP will, however, not meet the costs for medical insurance and transport of participants from counties to the Venue of the training.



PARTICIPANT NOMINATION FORM

GIS TRAINING FOR COUNTY SPATIAL & INTEGRATED STRATEGIC URBAN DEVELOPMENT PLANNING

Name of County: _____

Physical and Postal Address: _____

Email Address: _____

Telephone No.: _____

Contact Person: _____

We nominate the following two (2) County technical staff to attend the GIS Training for County Spatial & Integrated Strategic Urban Development Planning to be held at AICAD from **17th November to 6th December 2019**.

S/NO.	NAME OF NOMINEE	DESIGNATION
1.		
2.		

Once the organizers accept all our nominees, we shall cater for the travel costs for the nominee(s) from the County to the venue of the training and back to the County. We do hereby confirm that the nominee(s) has/have accepted and will be available to attend and participate at the training course.

SIGNED:

NAME OF NOMINATING OFFICER: _____

DESIGNATION: _____

SIGNATURE: _____

OFFICIAL STAMP:

NB: 1. Nominated Officers should fill the attached County Profile Questionnaire (Annex 1) and Participant Profile Questionnaire (Annex 2) To be forwarded to the course organisers with a cover letter.

2. Nominated candidate are ready and committed to undertake the training for a full week (six days) without interruption.



Annex 1 COUNTY PROFILE QUESTIONNAIRE

Name of the County.....

1. How many Planners and GIS Specialists do you have in your county
 - a. Planners
 - b. GIS Specialists

2. Have you formulated your Spatial Plan? (tick one)
 - a. Yes, finalised and approved
 - b. Yes, finalised formulation but not approved
 - c. In formulation stage
 - d. Have not started

3. Is your spatial plan GIS based?
 - a. Yes
 - b. No

4. Does your county have a GIS Lab?
 - a. Yes
 - b. No

5. If yes, state the condition/ status of the GIS Lab
 - Under construction
 - Constructed
 - Constructed and equipped but not operational
 - Constructed, equipped and operational

6. If equipped, please list four main equipment in the GIS Lab
 - i.
 - ii.
 - iii.

7. If your GIS LAB is equipped and operational, state the GIS software that you use

.....

.....

8. List the GIS officers in your county and their level of GIS qualifications
 - i.
 - ii.
 - iii.

We do hereby confirm that the information provided in this form is true to the best of our knowledge

SIGNED:

DIRECTOR /HEAD PHYSICAL PLANNING: _____

OFFICIAL STAMP:



Annex 2

PARTICIPANT PROFILE

Name of the Nominee

County Government

1. List your academic qualification, starting with the highest

- i.
- ii.
- iii.
- iv.

2. List your three major work responsibilities in the planning department of your county

- i.
- ii.
- iii.

3. Do you have knowledge of GIS? Yes..... No.....

4. If yes, state your level of GIS training?

- Certificate
- Degree
- Masters
- Other (state)-----

5. If you are trained in GIS, please list the GIS software you most comfortably use in your day to day planning activities

- a.
- b.

I do hereby confirm that the information I HAVE provided in this form is true to the best of my knowledge

SIGNED:

NAME OF NOMINEE: _____

DESIGNATION: _____