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Ministry of Housing, Utilities  
Housing and building National research center  
**The REGIONAL BRANCH OF THE METROPOLIS  
INTERNATIONAL INSTITUTE**

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**GEOINFORMATICS PRACTICES in  
UPGRADING INFORMAL SETTLEMENTS**  
April 2015

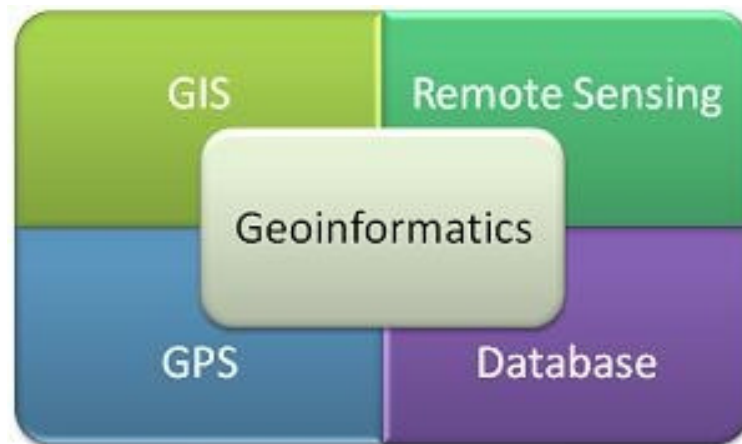
**Background:**

Geoinformatics is a science which develops and uses information science infrastructure to address the problems of geosciences and related branches of engineering. Geoinformatics combines geospatial analysis and modeling, development of geospatial databases, information systems design, human-computer interaction and both wired and wireless networking technologies .

Geoinformatic technologies include geographic information systems, spatial decision support systems, global positioning systems (GPS), and remote sensing. Geoinformatics uses geocomputation for analyzing geoinformation.

Geoinformation is used by many disciplines including hydrology, agriculture, forestry, climatology, land use planning, geology, demography, sociology, economics, business, etc.

This workshop focuses on the informal areas' upgrading through a strategic approach to control the urban informalities using Geoinformatic technologies.





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**Introduction:**

The Egyptian Government is currently concerned with the process of upgrading informal settlements as it's a fundamental problem facing the Egyptian Urban. To overcome most of these problems, it is important to utilize the modern technology. Geoinformatics is an effective tool used to monitor and analyze the growth of these settlements. It is used universally in most of the developed and the developing countries of the world.

Leading the Way in Egypt and Middle East - Urban upgrading, Mapping, Mobilizing and Building Capacity of Workers in urban development and upgrading informal settlements.

In Egypt, where most Cities are experiencing Aggravation of slums, there has been increasing emphasis on using geoinformatics (GIS, SDSS; GPS; and Remote Sensing) in the urban upgrading and informal settlement.

But how to achieve this and what difference does it make anyway?



**Learning Objectives:**

This workshop draws on multiple partners' experience\* in urban upgrading, mapping, mobilizing and building capacity of all stakeholders participating in the informal settlements' upgrading including planners and GIS experts. Highly participatory and interactive, the workshop will combine government, planners and experts from this sector to understand informal settlement issues.

It will provide guidance on using geoinformatics in urban upgrading process, and specifically aims to:

- Build knowledge about strategic information (and gaps), including risks and vulnerabilities in urban upgrading process especially by using geoinformatics;
- Showcase regional experience in working with and for upgrading informal settlements by using geoinformatics technology, and core components of success;
- Assess participants' personal and institutional capacity to respond to upgrading informal settlements needs by using geoinformatics technology;
- Prepare a models and introduce tools for GIS in practical reality of Egyptian urban upgrading and informal settlements;
- Share resources/mechanisms for strengthening capacity.



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**Workshop Format:**

Lecture	Outline	Time/ Location	Tool
<b>First Day, Mon (Date TBD)</b>			
First Lecture 9:00 am – 10:30	Introduction to learning objectives, methodologies and programme	30 minutes LR	PowerPoint presentations
	Presenting the different phases of informal settlements' upgrading and methods of implementing the Geoinformatics among them.	60 minutes LR	Brainstorming session
10:30 – 11:00	Break		
Second Lecture 11:00 am – 12:30	The main components of Geoinformatics technologies, elements, databases, and phases.	60 minutes LR	PowerPoint presentations
	Methods of applying the Geoinformatics technologies through the different phases of informal settlements' upgrading and the utilized software in their different intervention levels.	30 minutes LR	SWOT analyses
12:30 – 1:00 pm	Break		
third Lecture 1:00 –2:30	Comparative analysis for the different Geoinformatics technologies with presentation for the regional case studies in this domain.	90 minutes LR	Focus groups discussions
<b>Second Day, Tue (Date TBD)</b>			
First Lecture 9:00 am – 10:30	Control Strategy for informal settlements' sprawl.	90 minutes LR	PowerPoint presentations
10:30 – 11:00	Break		
Second Lecture 11:00 am – 12:30	Strategy development methods through the utilization of the Geoinformatics technologies.	90 minutes CL	Applications
12:30 – 1:00 pm	Break		
Third Lecture 1:00 –2:30	Strategy development methods through the utilization of the Geoinformatics technologies.	90 minutes CL	Applications
<b>Third Day, wed (Date TBD)</b>			
First Lecture 9:00 am – 10:30	Preparation of the Geographic databases for the case studies.	90 minutes CL	Applications
10:30 – 11:00	Break		
Second Lecture 11:00 am – 12:30	Future prediction growth model for the urban informal settlements.	90 minutes CL	Applications
12:30 – 1:00 pm	Break		
Third Lecture 1:00 –2:30	Strategy development methods through the utilization of the Geoinformatics technologies.	90 minutes CL	Applications
2:30 – 3:00	Closing ceremony		



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**Workshop Dates:**

The expected duration for the workshop is 3 days through the second half of January 2015.

**Maximum Enrollment:**

20 - 25 participants in Lecture Room, 12 - 15 participants in Computer Lab

**Target Group:**

Stakeholders in informal settlements upgrading from intermediate and advanced expertise level.

**Materials:**

Handouts, PowerPoint presentations/videos, Applications on computer, evaluation

**Experience/Expertise:**

Dr/ Tarek asead

Dr/ Mona Mahrous

Eng. / Safaa abo bakr