

GST for Sustainable Development in Africa: Partnerships & Applications

Government-led Initiatives
Cambridge, MA
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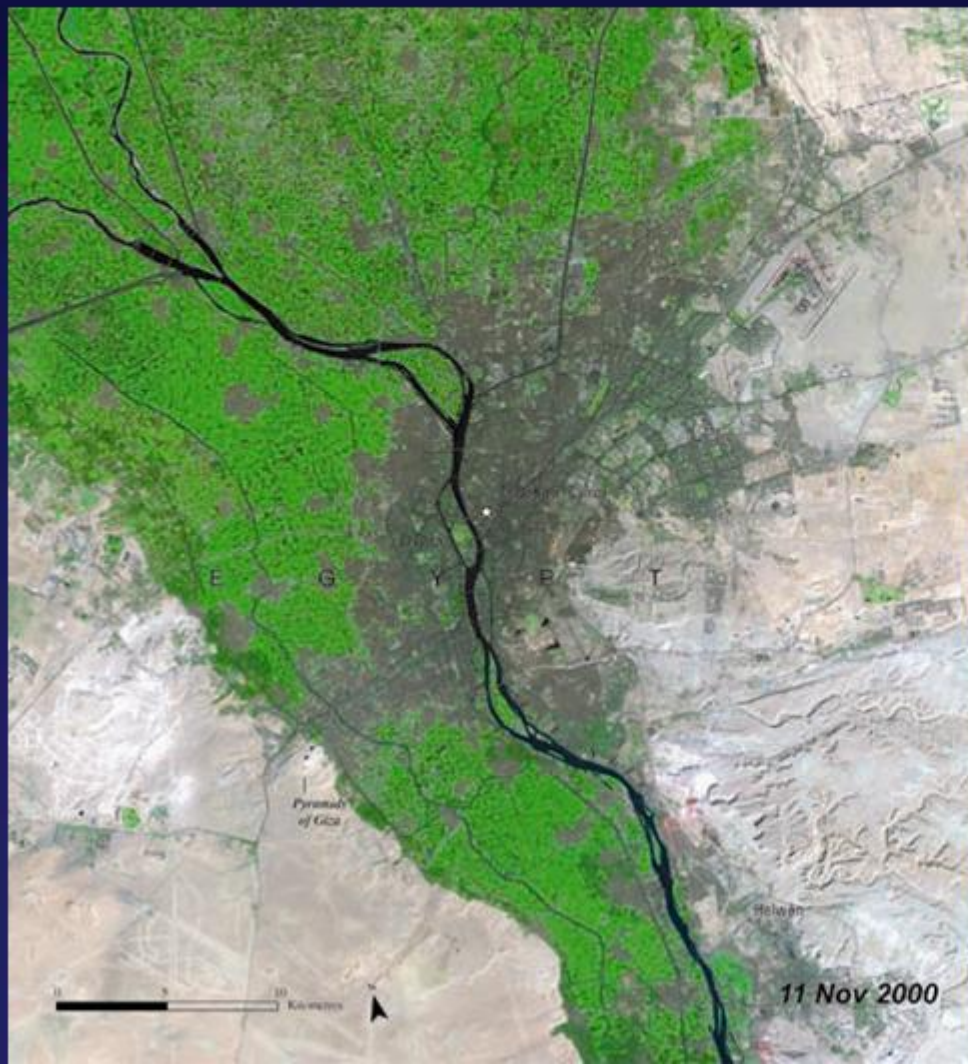


Outline

- Where we have been w/ PPP?
 - “*Geoinformation for Sustainable Cities*”
- Where we are and where we are going?
 - UAE
 - Egypt
 - Saudi
- Lessons learned and personal observation



“Geoinformation for Sustainable Cities”



Theme:



Harnessing the power of *geospatial sciences & technologies* (the synergy of earth observation, GIS, GPS, web-based mapping tools) to improve the efficiency of urban infrastructure services: water, energy, transportation, sanitation, planning, slum rehab., health, poverty reduction, etc.



Public Private Partnership

“GeoInformation for Sustainable Cities” Workshop

Amman, Jordan,
July 16-20, 2006



USAID
FROM THE AMERICAN PEOPLE



The Urbanization Challenge

- Medium population estimates predict the world will go from 6.5 billion in 2005 to 9.1 billion in 2050.
- Most of this growth will occur in new or existing cities in the developing world.
- Half the infrastructure needed by 2050 will have to be built by some of the poorest countries in the world.
- This is equivalent to building a new city of 1 million every week for the next 44 years!

Workshop Description :

- 50 urban planners, scholars, geospatial technologists, and decision makers
- 10 countries in the MENA region:
Morocco, Tunisia, Egypt, Libya,
West Bank-Gaza, Jordan, UAE, Iraq,
Kuwait, Yemen
- 15 women; 7 from Libya, 7 from Iraq
- 3-days of training in ESRI and Trimble
tools Technology
- 2-days of policy discussions and
presentations

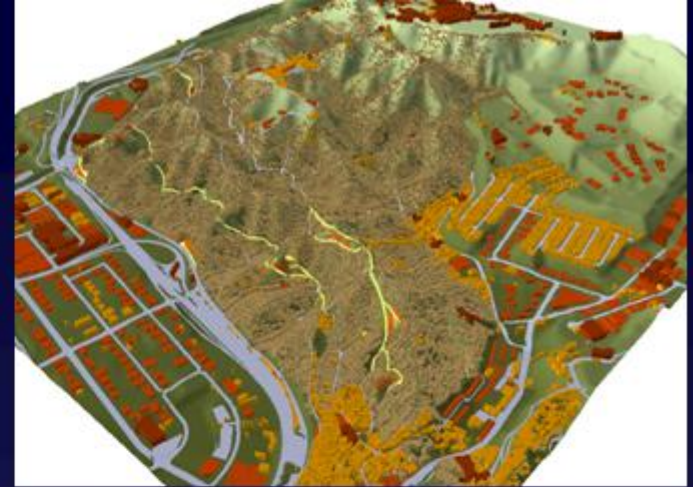


Workshop Outcomes:

- Capacity building through review of lessons learned & lectures on GIS and GPS by ESRI and Trimble
- Dissemination of information
 - Resources DVD
 - Latest literature ESRI and Trimble
 - www.icma.org/internationalGIS
- Discussion on potential funding sources
- Building of geoinformation networks
- Abu Dhabi Environmental Agency & ATO offered to host the next meeting as well as the website.
- U.S. public diplomacy outreach (3 newspaper articles & 1 radio interview)
- Reviews in SCIENCE (Sept. 29, '06), ESRI, DOS online articles



Policy Outcomes:



- Outreach to the Muslim World through S & T
- Showcase a U.S. public private partnership that highlights ICT strengths
- U.S. support for sustainable development including addressing critical challenges to urban populations
- Encourage transparency, science-based decision making through S & T
- Facilitate better governance of cities, nat. resources
- Build partnerships, particularly with MENA (and Gulf) countries, to leverage similar programs in the region
- Offer opportunities for greater participation of professional women







Geoinformation
Cities
الجمعية الجغرافية
أمم
البحرين
July 2006

mt



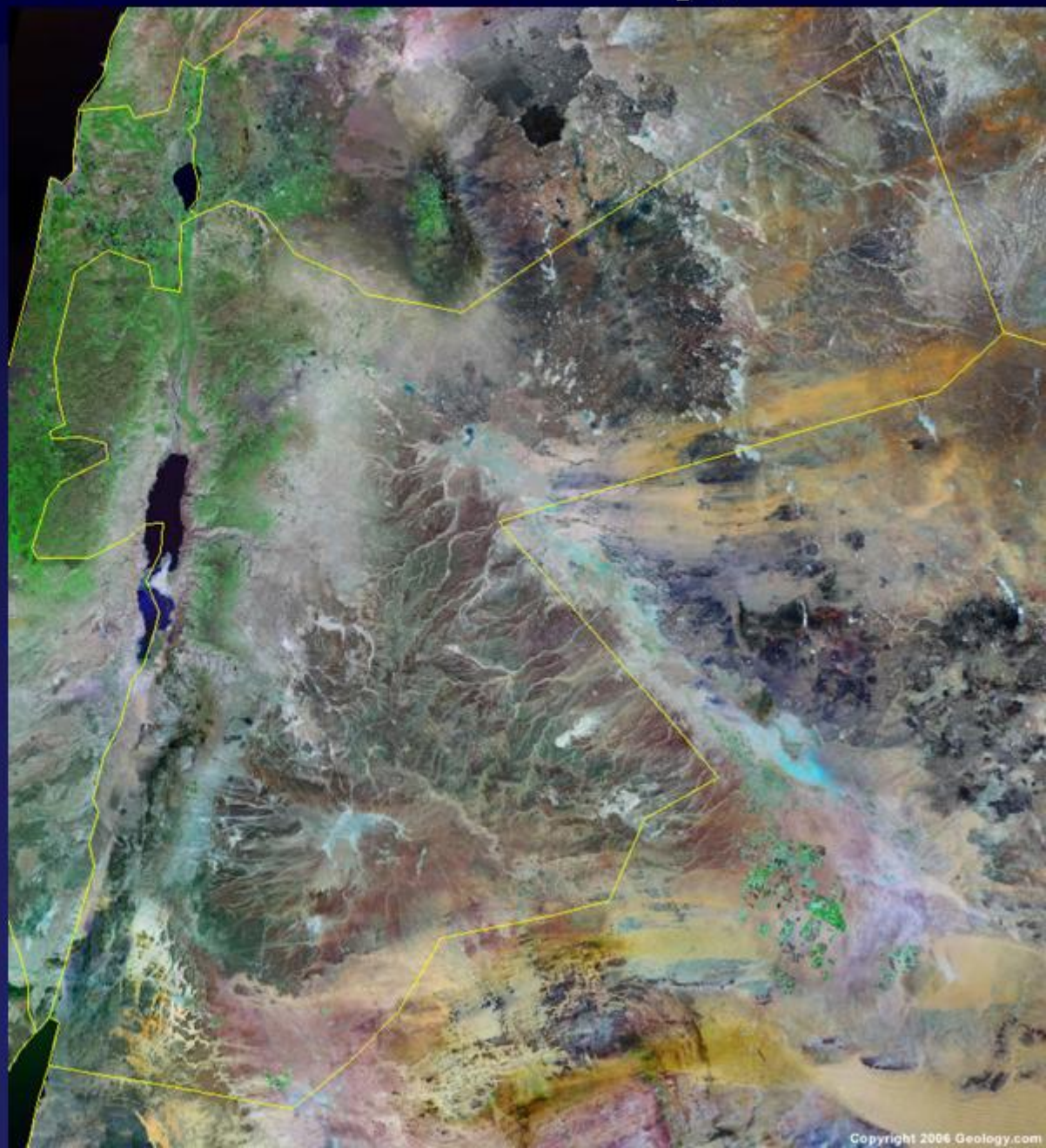
Case Study: Amman Water Authority, Jordan



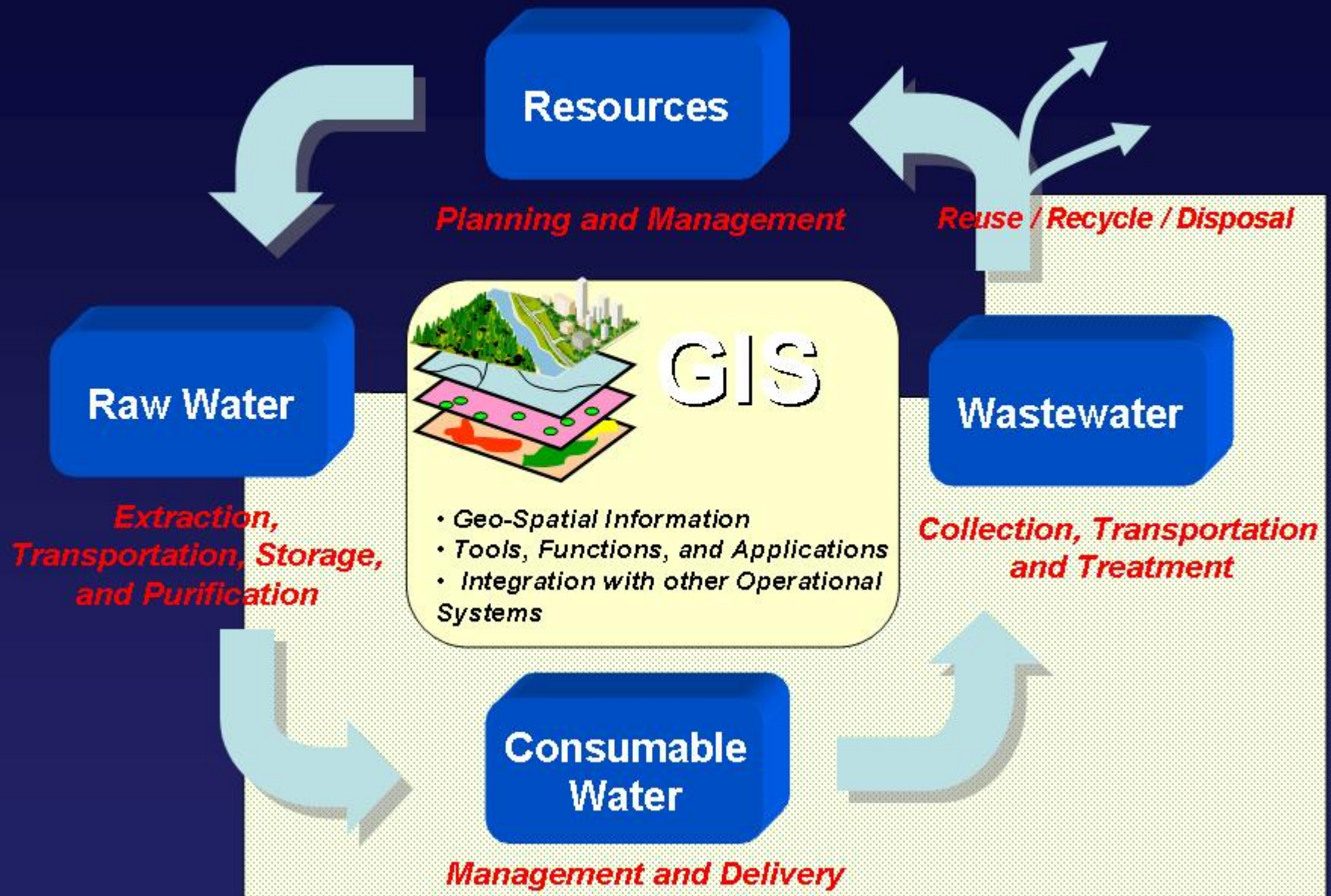
GIS

- *Geo-Spatial Information*
- *Tools, Functions, and Applications*
- *Integration with other Operational Systems*

Nidal Saliba,
GIS Manager
the Water Authority
of Jordan, Ministry
of Water &
Irrigation



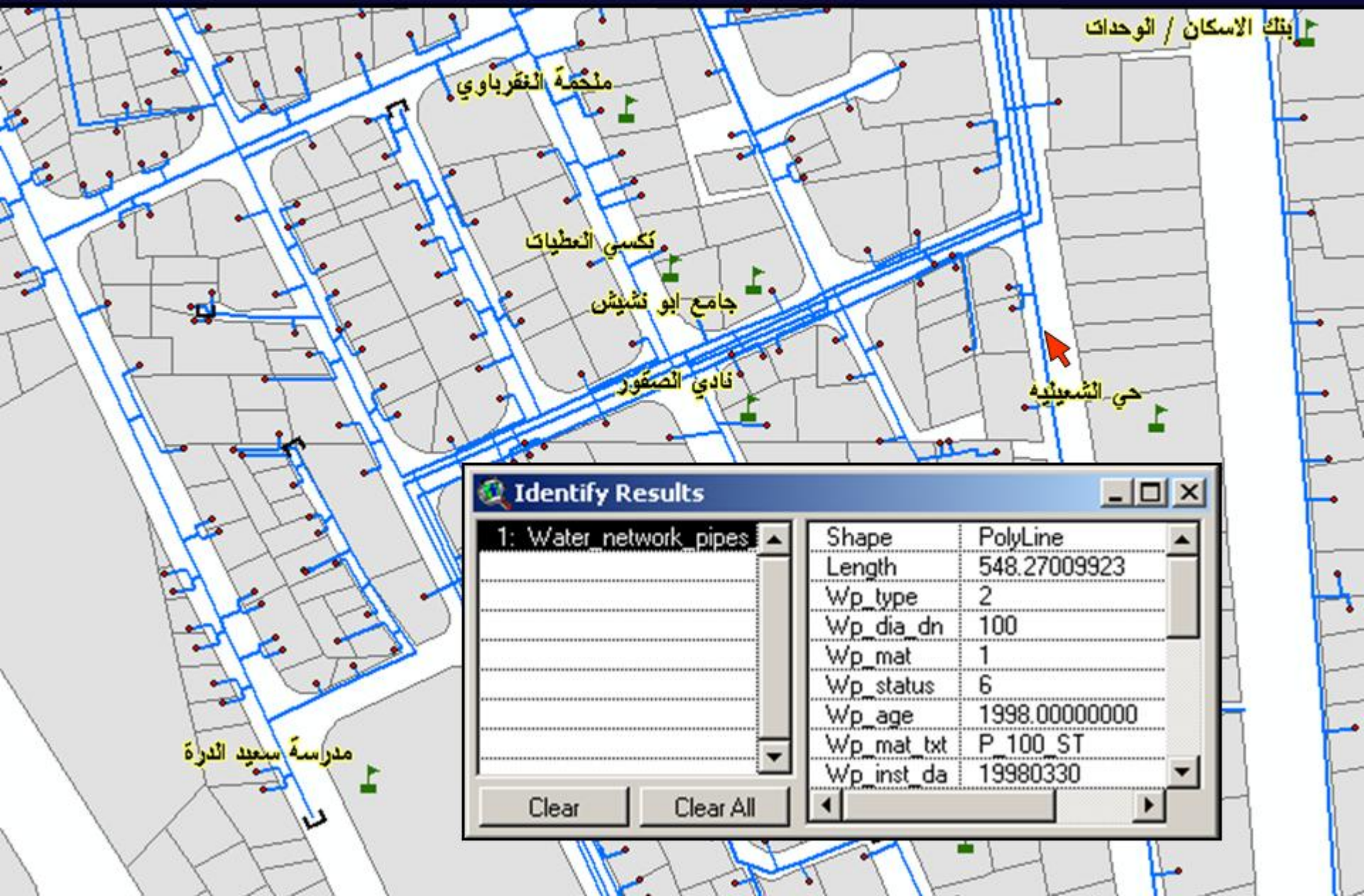
GIS and the Water Exploitation Cycle



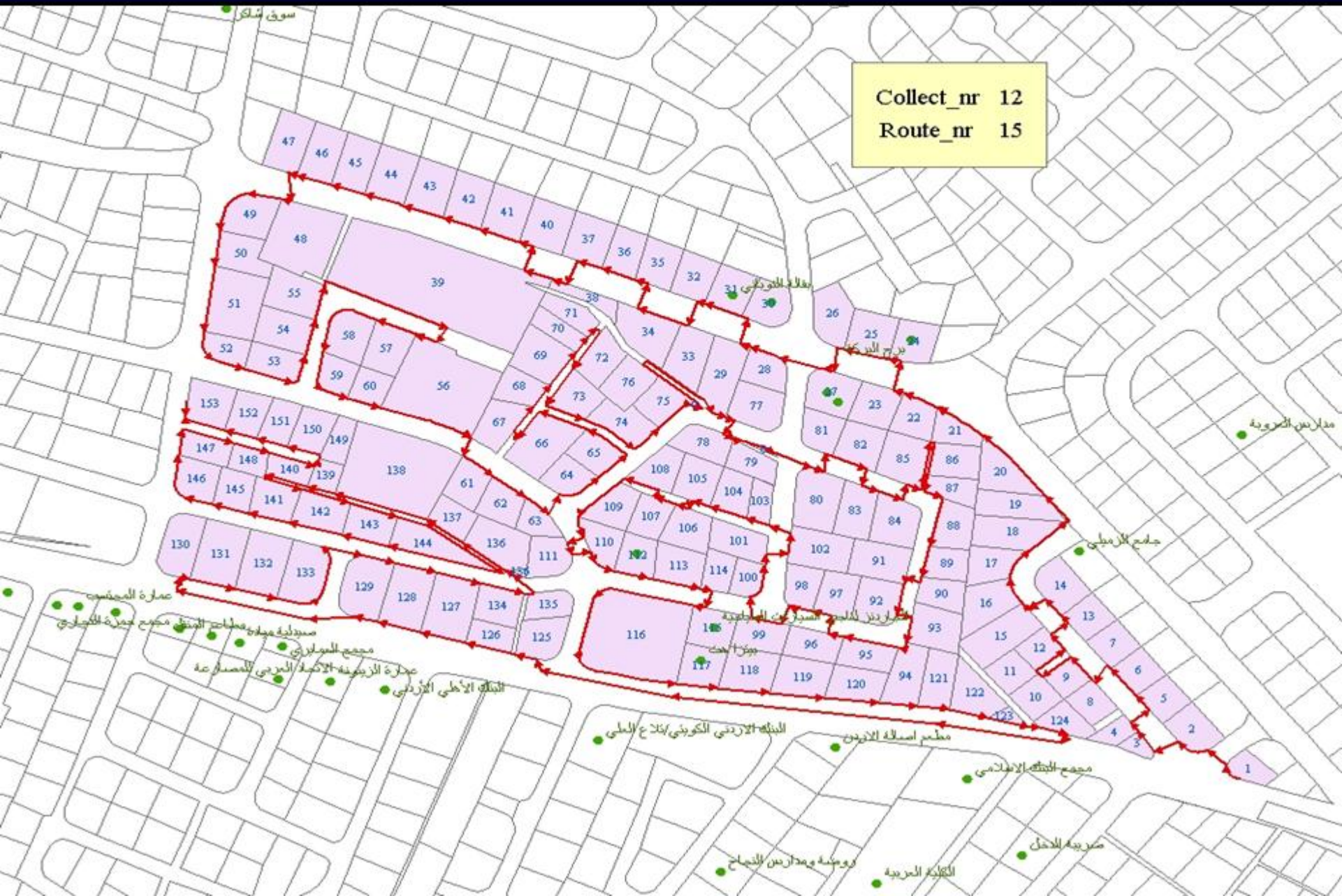
Water Distribution Primary System in GIS



Water Distribution Network in GIS



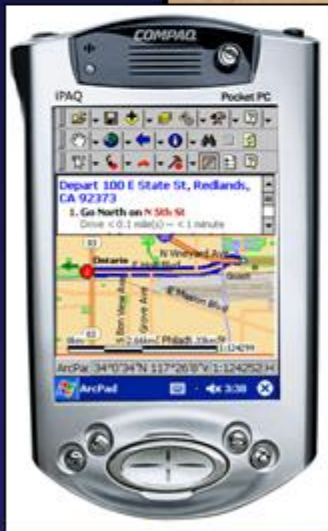
Managing Collector's Routes in GIS



Water Customers Geo-coded on Imagery



Field Mapping of Facilities Using GPS



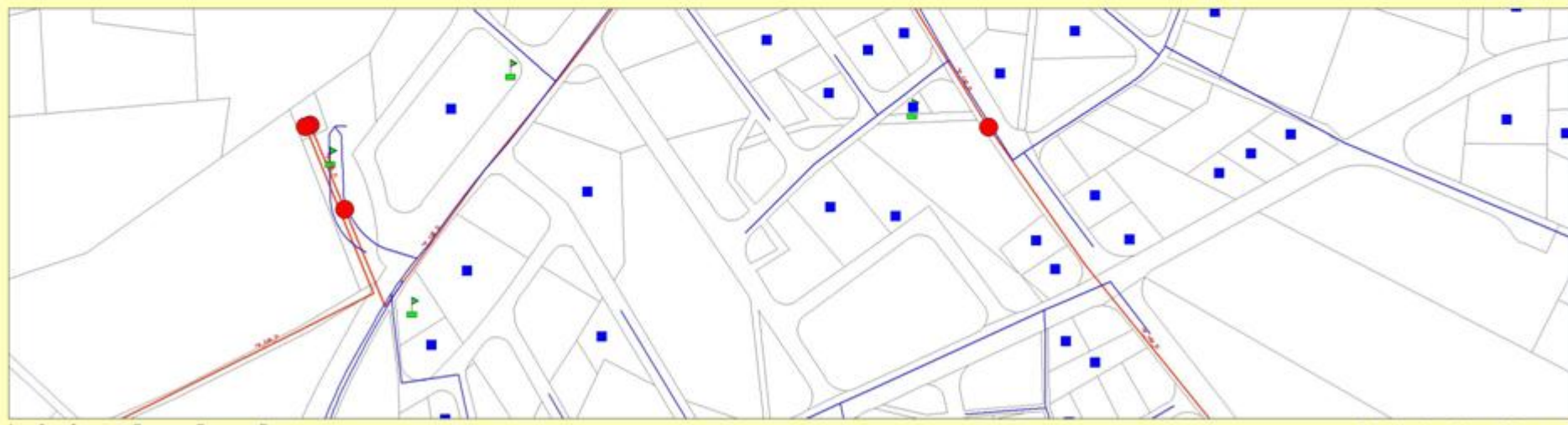
GIS-Based Cartography



Amman CIP Program



C09 Project Extent



Detailed outline of Sector

C09 Project

Northern Phase (within C07)



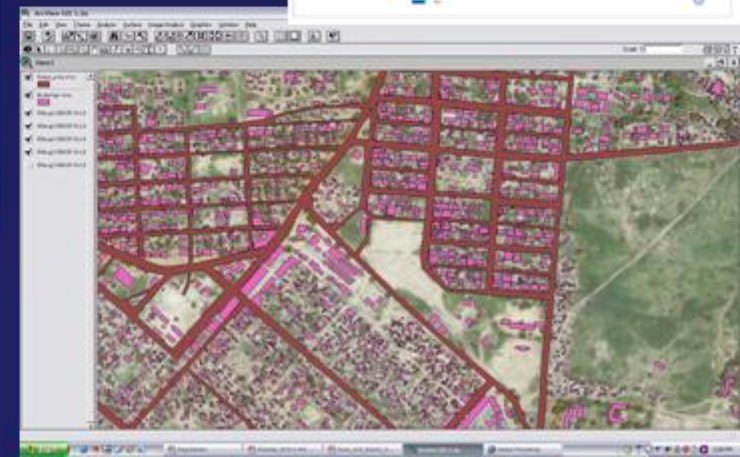
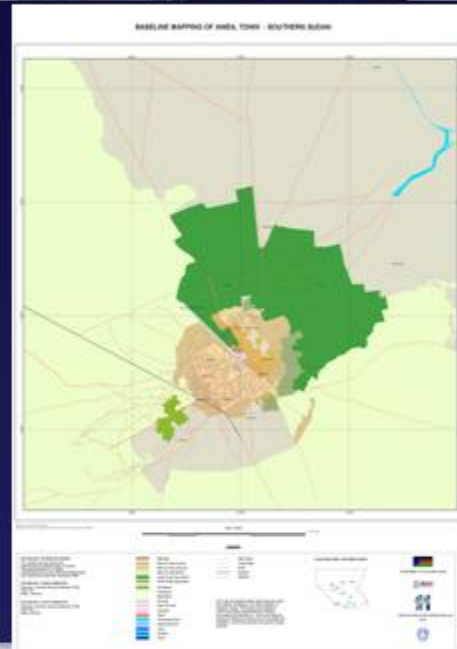
Programme Management Unit

Drawn By: Nidal Saliba

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211/C09/560

Checked by: Samer Garmout
Date: 6/5/2004

Case Study: South Sudan Participatory Town Planning



“Mapping Ten State Capitals of Southern Sudan”

see: www.southsudanmaps.org

Next Phase





Next

- **UAE:** Environment Agency-Abu Dhabi will host a meeting on AGEDI November '09.
- **Egypt:** activity under U.S.-Egypt Fund on Science and Technology Cooperation '09-'10
- **Saudi Arabia:** Potential collaboration with the King Abdulaziz City for Science & Technology, (KACST)

U.S. Saudi JCM May 12, '09, Riyadh









Strategic Priorities for Space and Aeronautics Technology Program

Haithem Altwaijry

Deputy Director –
National Satellite Technology Program

Strategic Priorities for Space and Aeronautics Technology Program

Potential Collaboration Areas		Sub Areas	
Remote Sensing and GIS	<ul style="list-style-type: none"> Monitoring and change detection Natural hazards National spatial data infrastructure 	<ul style="list-style-type: none"> - Urban development - Vegetation - Pattern recognition - Dust storms - Flood - Fires (forest, brush-fires) - Regulations - Standards - Networking - Intelligent transport systems 	

Strategic Priorities for Space and Aeronautics Technology Program

Potential Collaboration Areas	Potential Agencies (USA)	Potential Agencies (Saudi)
Remote Sensing and GIS	<ul style="list-style-type: none"> • Universities • USGS/EROS • NASA • NOAA • DoT • USDA • FGDC • ASPRS 	
<ul style="list-style-type: none"> • Monitoring and change detection • Natural hazards • National spatial data infrastructure 		

Strategic Priorities for Space and Aeronautics Technology Program

Key Saudi Stakeholders:

General Authority for Civil Aviation

Ministry Of Municipalities & Rural Affairs

Alsalam Aircraft Company

Advanced Electronic Company

Alhasebah Technology Company

Saudi Telecom Company

Aramco

KACST Space Research Institute

King Saud University

King Abdulaziz University

King Fahd University of Petroleum & Minerals

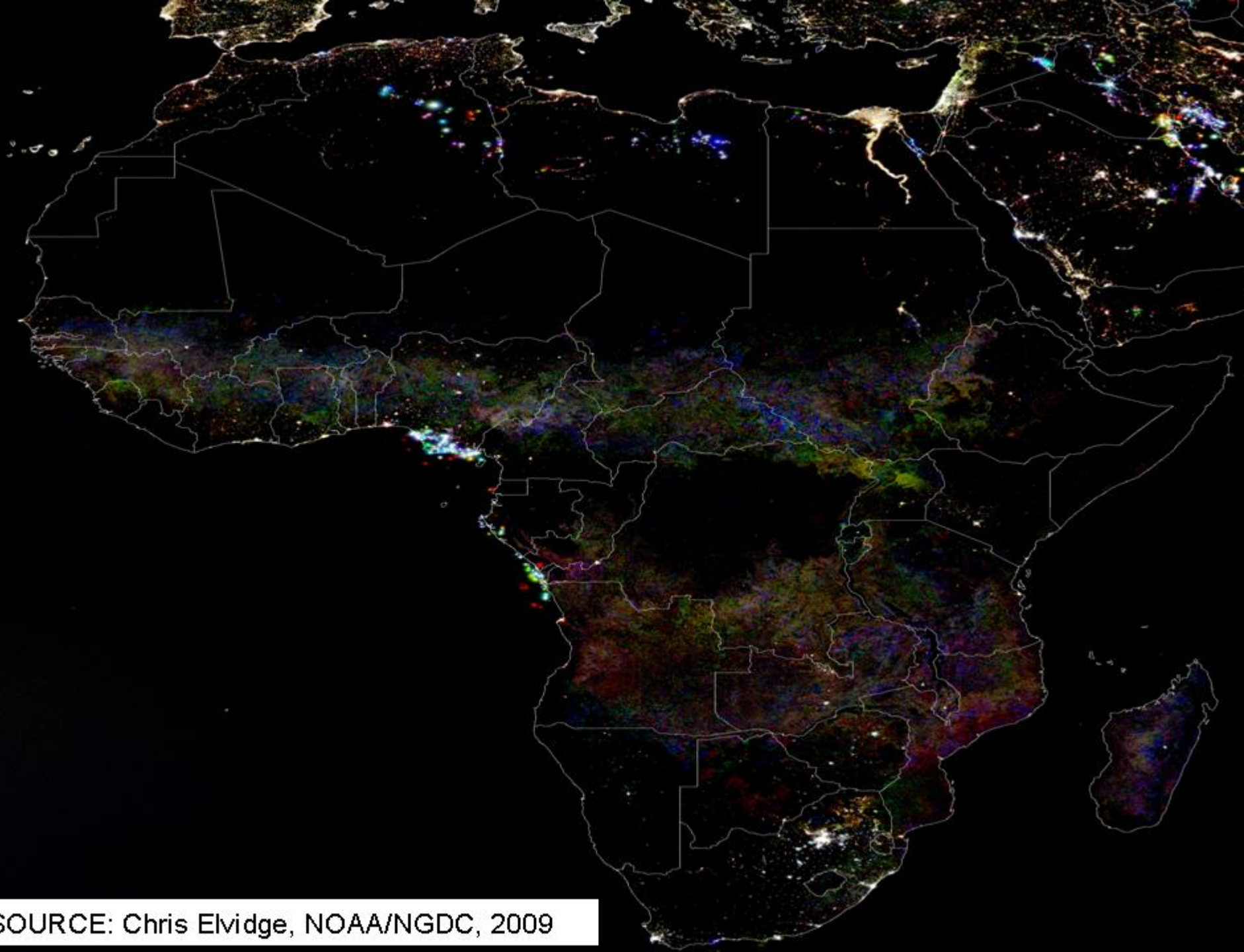
Makah & Almadinah Improvement Commission

Lessons learned-1

- How do you define PPP? Is the PPP exclusively defined by donors or does it include local stakeholders?
- PPP requires considerable additional time, effort and patience to reach consensus of who is going to do what, when, how, with who's \$
- Government agencies have strict time requirements on the use of their resources. They are bureaucratic. Foundations & companies also have strict rules.
- Identify partners with a long term commitment and passion, not just resources

Lessons learned-2

- Regional initiatives are challenging. Our definition of “regions” is arbitrary and often unrecognized by the countries in that part of the world: “Africa,” MENA
- Flexibility is a pre-requisite; partners need to compromise in order to succeed
- Partners need to clearly state objectives and assumptions, before tackling project implementation
- Project sustainability is important (i.e. GISD vs. MYCOE)
- Build on existing initiatives, avoid re-inventing the wheel
- Nevertheless PPP has the potential for greater impact



SOURCE: Chris Elvidge, NOAA/NGDC, 2009

Further resources:

- www.icma.org/internationalGIS
- www.ww2.unhabitat.org/programmes/guo/
- www.unep.org

