

# Application of RS to Migration, Urbanization and Health Issues

# High Spatial Resolution Sources

| Examples            | Geographic Extent | Cost to acquire and analyze | Current Limitations | Future Prospects   |
|---------------------|-------------------|-----------------------------|---------------------|--|
| Ikonos<br>QuickBird | Local<br>(ad hoc) | High<br>And<br>High         | Cost barrier        | Archives will grow and be opened.<br>Costs will gradually decline. |

# Moderate Resolution Sources

| Examples                                 | Geographic Extent                   | Cost to acquire and analyze | Current Limitations   | Future Prospects  |
|--|-------------------------------------|-----------------------------|---|---|
| Landsat<br>SPOT<br>IRS<br>SRTM<br>others | Local Scenes<br>-<br>Global Mosaics | Medium                      | Long delay for large area land cover products – short on spatial detail for some applications | Shortcut to global urban and periurban land cover from global mosaics |

# Coarse Resolution Sources

| Examples   | Geographic Extent                     | Cost to acquire and analyze | Current Limitations                     | Future Prospects                       |
|--|---------------------------------------|-----------------------------|---|--|
| MODIS<br>SPOT-Veg.<br>DMSP-OLS<br>SRTM<br>Others | Regional orbits -<br>Global composite | Low if agency subsidizes    | Not enough detail for many applications | Product quality will improve over time |

# Where Can The Most Progress Be Achieved in the Next Several Years?

- Exploitation of the NASA-Earthsat global Landsat mosaics => land cover – land cover change. High grade the global mosaics using nighttime lights.
- Exploitation of the SRTM database – one time mapping of built up areas (year 2000).
- Design of a moderate resolution (30-50 m) nighttime lights sensor – ready to propose to NASA opportunities as they arise.

# If Requested, NGDC Could Develop an Urban Landsat Access System

- Start from the two global Landsat mosaics from NASA-Earthsat.
- Extract urban and periurban subset, reducing overall data volume by > 75%.
- Implement online access system
  - User views lights with selectable set of vectors
  - Point and click to view Landsat browse images from both dates
  - Drop selected images into shopping basket
  - Email to user provides ftp link to download data.