



**USAID**  
FROM THE AMERICAN PEOPLE

# 10. SPECIAL TOPIC: INFRASTRUCTURE

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GLOBAL ENVIRONMENTAL  
MANAGEMENT SUPPORT

# SPECIAL TOPIC: INFRASTRUCTURE

## Learning Outcomes

1. Understand importance of infrastructure activities in USAID programming.  
*USAID funded facilities, buildings, and infrastructure must be designed/constructed to appropriate engineering standards to minimize risk to humans and environment*
2. Characterize potential adverse impacts of infrastructure activities.
3. Discuss USAID approach to assessing and mitigating impacts + preparation of compliance documentation.
4. Provide highlights from recent USAID construction survey and working group.



# USAID INFRASTRUCTURE WORK

- USAID infrastructure investments range from **small-scale** projects such as community water tanks to **large** power plants and water treatment facilities.
- USAID also makes direct infrastructure investments in **schools, hospitals, health clinics, and other public buildings**, as well as rural farm to market roads, trunk roads, and bridges.
- Agency's infrastructure projects are a **critical component of development programs** in post-conflict and post-disaster countries (but are not limited to those situations).

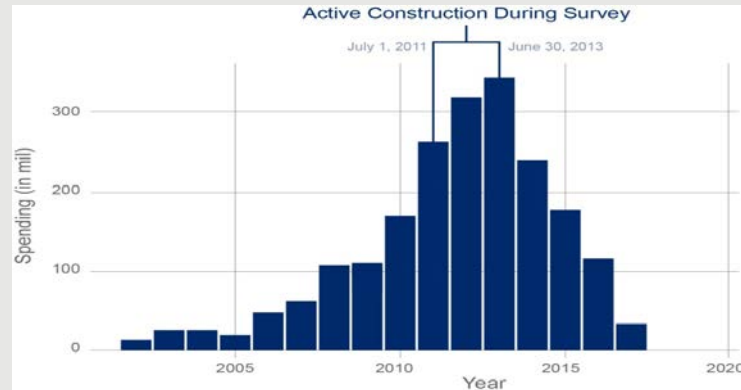


# USAID INFRASTRUCTURE PORTFOLIO 2011-2013

## \$5.6 Billion

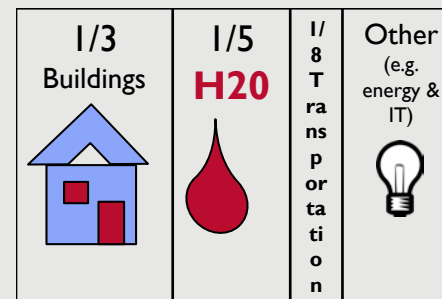
Estimated Construction Value

June 1, 2011 - June 30, 2013 --  
period assessed



## Highlights

- \$1.6 Billion construction  $\leq$  half of award
- \$2.9 Billion Conflict
- \$1.5 Billion Government to Government (G2G)
- \$5.4 Billion managed by Missions
- 3,304 Subawards



# LARGE SCALE INFRASTRUCTURE ACTIVITIES

- New, paved roads
- Hospitals
- Energy projects (e.g., wind and solar farms, Power Africa infrastructure)
- Agricultural warehouses; pharmaceutical storage; cold storage
- Large WASH municipal projects, e.g., water treatment facilities, flood protection for climate resiliency



# DIRECT, ADVERSE IMPACTS OF INFRASTRUCTURE ACTIVITIES

- Disturbance to existing landscape/habitat; devegetation
- Sedimentation/fouling of surface waters
- Standing water
- Excess water use
- Contamination of ground and water supplies
- Septic tank issues
- Occupational and community health and safety hazards
- Increased air and noise pollution
- Adverse impacts of materials sourcing
- Damage to sensitive or valuable ecosystems
- Compaction of the soil and grading of the site
- Erosion; land use



# ADDITIONAL IMPACTS OF INFRASTRUCTURE ACTIVITIES

- Use of unsustainably extracted timber
- Displacement of populations
- Worker impacts
- Waste management issues
- Spread of disease
- Damage to aesthetics of site/area
- Potential adverse impacts on workers
- In-migration of population to take advantage of new infrastructure such as schools or health posts
- Effects on fish spawning associated with siltation of streams from soil erosion at a construction site
- The spread of disease from insect vectors breeding in flooded and abandoned quarries and borrow pits
- Inefficient/non-renewable energy use



# INFRASTRUCTURE PRINCIPLES/ MITIGATION MEASURES

- Appropriate siting
- Environmental compliance best practices
  - Revegetation
- Occupational health and safety compliance best practices
- Monitor environment, health and safety performance
  - Water quality monitoring, usage
- Minimize greenhouse gas emissions and adapt to climate change by minimizing vulnerability through project design
- Use of alternative/renewable energy
- Practice environmentally and socially responsible construction contracting





# INFRASTRUCTURE ACTIVITIES AND ENVIRONMENTAL COMPLIANCE

- Need to consider environmental compliance/impact assessment components of infrastructure activities (as addressed in Unit 2)
- Many infrastructure activities will have a significant effect on the environment and an EA or Environmental Impact Statement might be required: see 216.2(d) ([https://www.usaid.gov/our\\_work/environment/compliance/22cfr216#216.2](https://www.usaid.gov/our_work/environment/compliance/22cfr216#216.2))
- Smaller infrastructure activities will usually be assigned appropriate conditions (i.e., mitigation measures) within the context of an IEE

