Water quality coupled with a national socioeconomic survey in Indonesia

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Indonesia
Objective & Study Area: D.I. Yogyakarta Province

• To develop and test a water quality component into a well-established national socioeconomic survey
• To establish a baseline estimate for the SDG Target 6.1 on safe water (i.e. access to safely managed drinking water) in the study area as a model for other Provinces in Indonesia

Population: 3.6 million
Improved water source: 81%
Improved sanitation: 86%
Source: Susenas 2015
Sample collection in field

- Drinking water source sampling
- Household drinking water sampling
- Interview using household questionnaire
- Laboratory analysis
E. coli detection rate in household drinking water (HDW) and drinking water sources

<table>
<thead>
<tr>
<th>Drinking water sources</th>
<th>Household drinking water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>67% (923)</td>
</tr>
<tr>
<td>From local sources</td>
<td>71% (724)</td>
</tr>
<tr>
<td>From vendors</td>
<td>52% (199)</td>
</tr>
<tr>
<td>Drinking water sources</td>
<td>89% (724)</td>
</tr>
</tbody>
</table>

Note: Error bar represent upper and lower 95% confidence interval. Number in parenthesis denotes number of samples tested.
From improved drinking water source (MDGs) to safely managed drinking water (SDGs)

84.1% of communities in Yogyakarta province have improved drinking water sources (MDG).

Drinking water access in study communities in Yogyakarta province (%)

<table>
<thead>
<tr>
<th>Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved water sources (MDG)</td>
<td>84.1%</td>
</tr>
<tr>
<td>Improved + on premises</td>
<td></td>
</tr>
<tr>
<td>Improved + available</td>
<td></td>
</tr>
<tr>
<td>Improved + no E.coli detection</td>
<td></td>
</tr>
<tr>
<td>Safely managed (SDG)</td>
<td></td>
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</tbody>
</table>

Source: SKA joint analysis with BPS
What happens after the study?

• Dissemination and advocate the result to national and local stakeholders
• Improve the existing national survey and amalgamation between socio economic survey and water quality monitoring survey to capture the progress of SDGs 6.1 safely managed water
• Mapping out the existing condition on water quality monitoring
• Develop water quality monitoring implementation strategy (design, piloting, and roadmap)
• Linkage between safe water monitoring and evaluation with
  • Water Safety Plan
  • Sanitation and hygiene promotion program (Indonesia Community Led Sanitation-Sanitasi Berbasis Masyarakat)
Main feature of the proposed water quality monitoring

• Based on the type of water provider
  • local water enterprise
  • CBOs, water kiosk, etc

• Water quality standard based on the purpose of water
  i.e. standard for drinking and cooking and standard for
  hygiene and sanitation

• Continual improvement (parameter to be monitored
  direct examination, triangulation)

• Reporting by online system (mobile apps)

• Link to program: Water Safety Plan, Indonesia-
  CLTS/STBM, etc

Tested and reported by
sanitarian to District
Health Office
Rôles each ministries in water quality monitoring

- Ministry of Environment and Forestry
- Ministry of Health
- Ministry of Energy and Mineral Resources

Water Treatment Plan

- Ministry of Public Work and Housing
- Ministry of Health
- Water Supply Operator

Roles each ministries in water quality monitoring:

- Ministry of Health
- The National Agency of Drug and Food Control
- Community Based Operators (CBOs)

National Development Planning Agency as coordinator for water quality monitoring work
Ways forward

• Many local governments have not conducted water quality monitoring
  • Low prioritization
  • Limited budget
  • Still focus on the development or rehabilitation of infrastructure
• Few laboratories with accreditation
• Limited sanitarian, water test kit, reagent
• No database for water supply systems especially for community-based water supply and water kiosk
• Too many indicator to monitor (existing regulation too stringent)