SUSTAINABLE BUSINESS MODELS FOR WATER SUPPLY AND SANITATION IN VILLAGES AND SMALL TOWNS IN MOLDOVA

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Key policy measures for sustainable WSS
Why rural WSS is not sustainable in Moldova
A variety of business models for rural WSS
Criteria to assess business models for rural WSS
Zooming in, for Moldova
Recommendations
Key reforms for sustainable WSS

- New Water law and sub-law regulations
- EC-funded SPSP on water in Moldova and other donor support (EBRD&EIB, WB etc.)
- Master planning for WSS (GIZ) and Regionalisation of water utilities (EBRD)
- Rural Drinking water users associations (SDC-funded Apasan project)
- Large PPP project: Soroka-Balti water main (EBRD&EIB)
Why rural WSS is not sustainable in Moldova

- **Legacy**
  - The size of the infrastructure
  - Fragmentation of operators
- **Capacity**
  - In the service providers
  - In local public administrations
- **Affordability issues**
  - Low income of rural households
  - Seasonal variability of income
- **Uncertainty**
  - About water availability (climate change)
  - About water demand
A variety of business models for WSS

• In Moldova
  – Municipal water utility
  – WSS department in local public administration
  – Drinking water users associations (ApaSan project)
  – Small private operators (each servicing 1-2 villages)
  – Inter-communal co-operation in rural areas
  – (under preparation) regionalisation of vodokanals and a large PPP project (EBRD and EIB)

• Abroad
  – syndicates of municipalities
  – multi-purpose utilities
  – ...
Criteria to assess business models for rural water supply and sanitation

• Scale
• Scope
• Financial sustainability
• Role for the private sector
• Lessons from other countries
• Consultation process (“reality check”)
### Opportunities for intermunicipal cooperation

<table>
<thead>
<tr>
<th>Model 1. Decentralised</th>
<th>Model 2. Sub-urban localities served by utility from larger town</th>
<th>Model 3. Regionalisation – a single utility (e.g. on rayon level) servicing the whole territory</th>
</tr>
</thead>
</table>

![Diagram showing different cooperation models](image-url)
### Affordability

Drinking water supply service almost fully absorb the ability of rural households to pay for WSS services.

Piped sewerage and WWT will not be affordable for most remote villages.

<table>
<thead>
<tr>
<th>PE (Population equivalent)</th>
<th>Unit investment costs: WWTP, EURO/PE</th>
<th>Unit O&amp;M costs EURO/PE annually</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>€ 1.980.0</td>
<td>€ 90.00</td>
</tr>
<tr>
<td>10</td>
<td>€ 1.390.0</td>
<td>€ 70.00</td>
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<tr>
<td>25</td>
<td>€ 1.000.0</td>
<td>€ 64.10</td>
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<tr>
<td>50</td>
<td>€ 850.0</td>
<td>€ 64.00</td>
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<td>500</td>
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<td>1,000</td>
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<tr>
<td>100,000</td>
<td>€ 180.0</td>
<td>€ 14.20</td>
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</tbody>
</table>

Source: KPC.
## Recommendations for Moldova

<table>
<thead>
<tr>
<th>Type of rural area</th>
<th>Degree of regionalization</th>
<th>Service provision</th>
<th>Demand for outsourcing professional services</th>
<th>Technology</th>
<th>Sector financing: Tariffs +</th>
<th>Incentives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-urban</td>
<td>Regionalized</td>
<td>Joint stock company based on existing ApaCanal; or Multi-purpose utility</td>
<td>Small</td>
<td>Piped sewage + WWTP</td>
<td>Improved social programme (targeted support to the poor)</td>
<td>Fiscal incentives for capital investments + Performance based contracts</td>
</tr>
<tr>
<td>Agglomerations of villages</td>
<td>Regionalized</td>
<td>Association of localities or assets holding company hiring an operator</td>
<td>High, need for “light regionalization”</td>
<td>Piped sewage + WWTP, if above 6000 PE</td>
<td>Improved social programme + Solidarity funds (NEF, NFRD, revolving fund)</td>
<td>Fiscal incentives for capital investments + Performance based contracts</td>
</tr>
<tr>
<td>Remote localities</td>
<td>Decentralized</td>
<td>DWUA Municipal company Private operator</td>
<td>High, need for “light regionalization”</td>
<td>Small WWTPs Septic tanks or alternative on spot sanitation technologies (e.g. EcoSan toilets)</td>
<td>Improved social programme + Solidarity funds (NEF, NFRD, revolving fund)</td>
<td>Fiscal incentives for capital investments + Performance based contracts</td>
</tr>
</tbody>
</table>