Ensuring sustainability of DEWATS - a community-based O&M strategy in Nala

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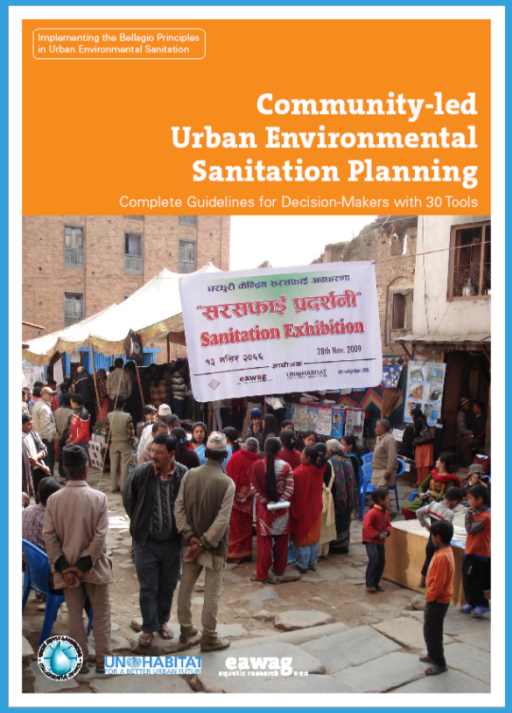
Project area: NALA

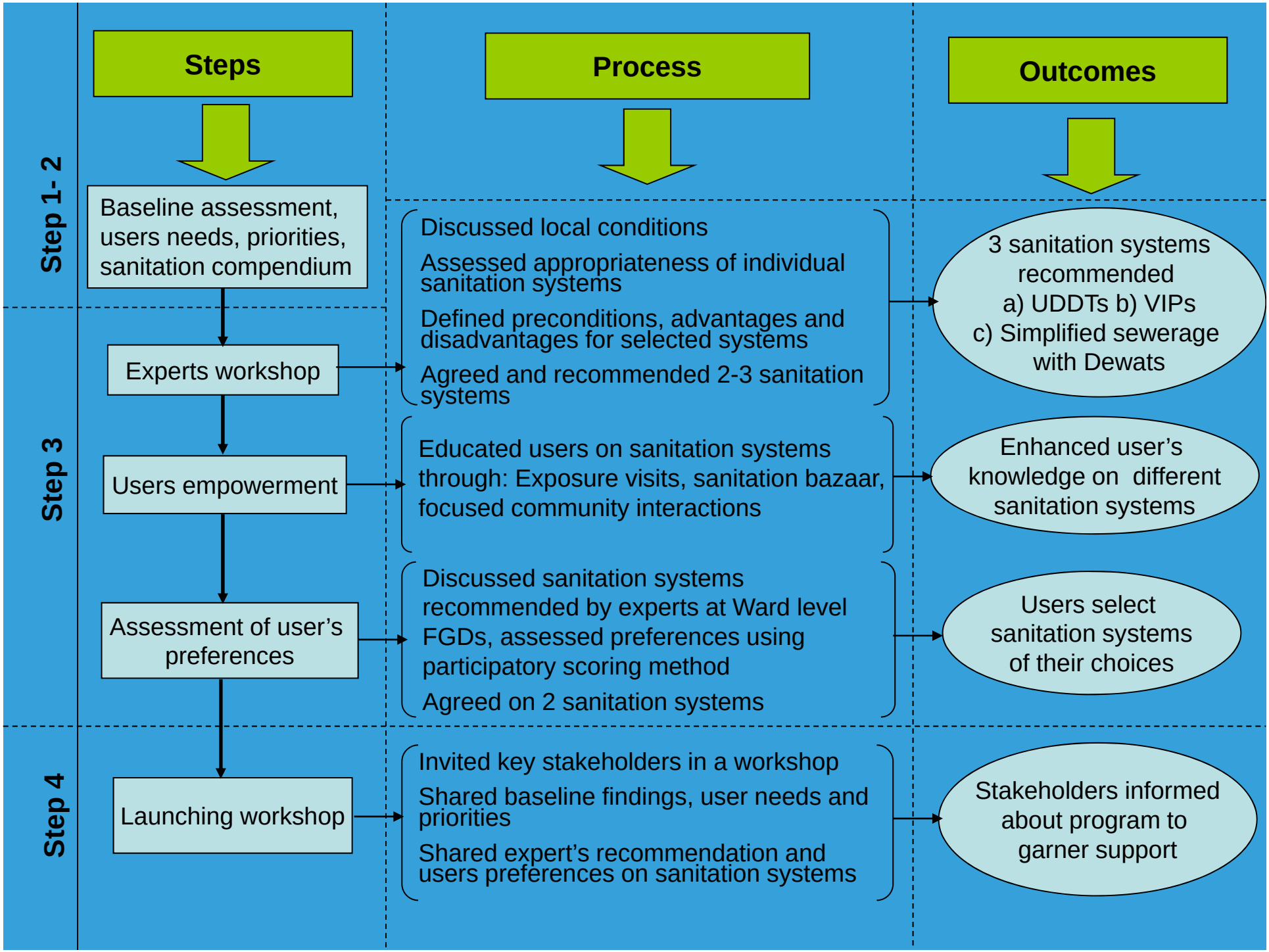
- Peri-urban settlement, located 35 kms from Kathmandu in Nepal
- Population: 2300 (388 households)
- Ward 1-4 of Nala VDC
- Cess-pits in majority of households, 20% have no toilets
- Strong demand from community to improve sanitation conditions

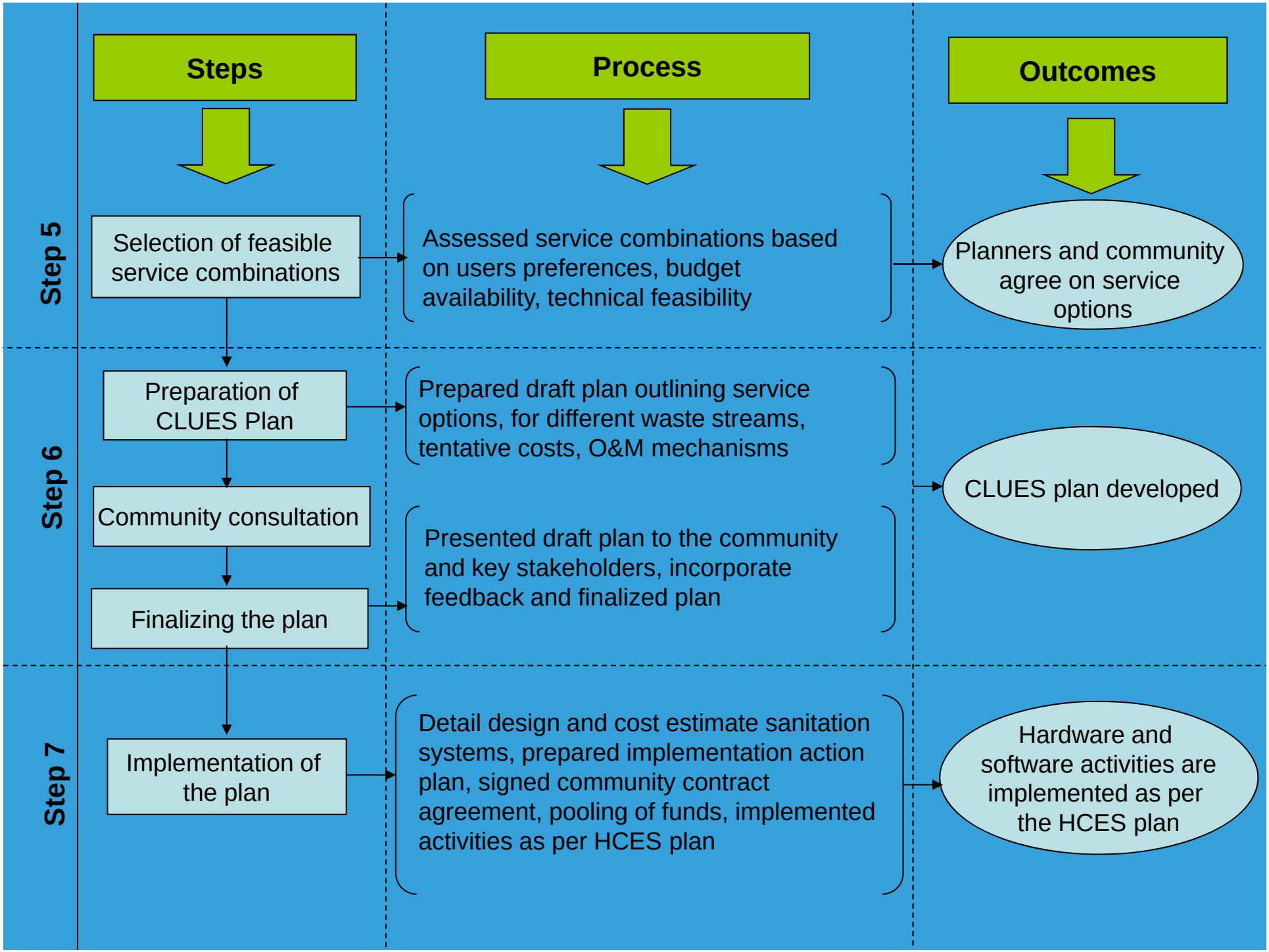
Planning process

The CLUES planning approach:

- **area based planning approach targeting unserved and under served urban communities**
- **focuses on household decisions on service needs and then move outwards to neighbourhood**
- **based on a seven steps approach**

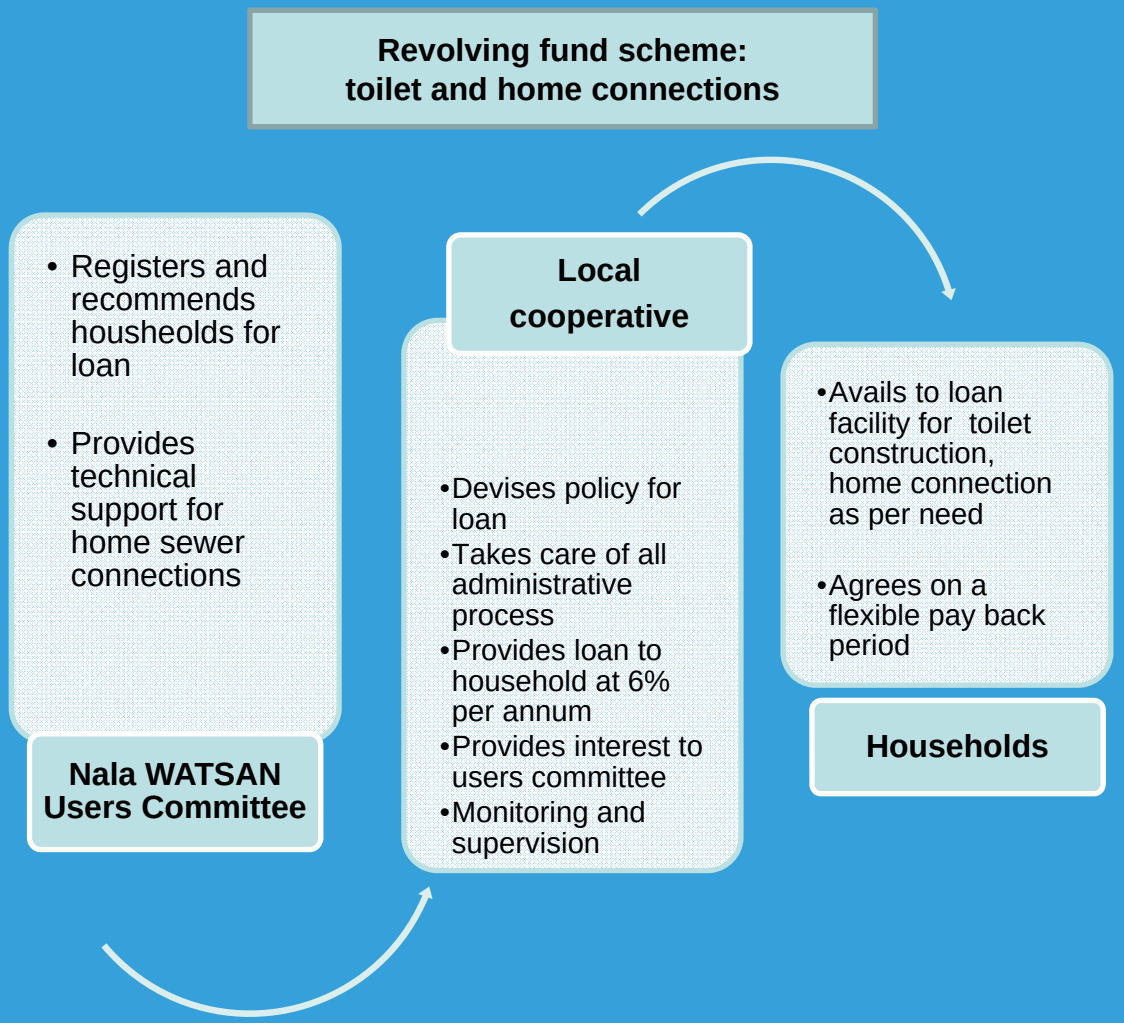



Steps
Process
Outcomes
Step 1- 2
Step 3
Step 4
Baseline assessment, users needs, priorities, sanitation compendium
Experts workshop
Users empowerment
Assessment of user's preferences
Launching workshop
Discussed local conditions
Assessed appropriateness of individual sanitation systems
Defined preconditions, advantages and disadvantages for selected systems
Agreed and recommended 2-3 sanitation systems
Educated users on sanitation systems through: Exposure visits, sanitation bazaar, focused community interactions
Discussed sanitation systems recommended by experts at Ward level FGDs, assessed preferences using participatory scoring method
Agreed on 2 sanitation systems
Invited key stakeholders in a workshop
Shared baseline findings, user needs and priorities
Shared expert's recommendation and users preferences on sanitation systems
3 sanitation systems recommended a) UDDTs b) VIPs c) Simplified sewerage with Dewats
Enhanced user's knowledge on different sanitation systems
Users select sanitation systems of their choices
Stakeholders informed about program to garner support


Steps
Process
Outcomes
Step 5
Selection of feasible service combinations
Assessed service combinations based on users preferences, budget availability, technical feasibility
Planners and community agree on service options
Step 6
Preparation of CLUES Plan
Prepared draft plan outlining service options, for different waste streams, tentative costs, O&M mechanisms
Community consultation
Finalizing the plan
Presented draft plan to the community and key stakeholders, incorporate feedback and finalized plan
CLUES plan developed
Step 7
Implementation of the plan
Detail design and cost estimate sanitation systems, prepared implementation action plan, signed community contract agreement, pooling of funds, implemented activities as per HCES plan
Hardware and software activities are implemented as per the HCES plan

Outcomes

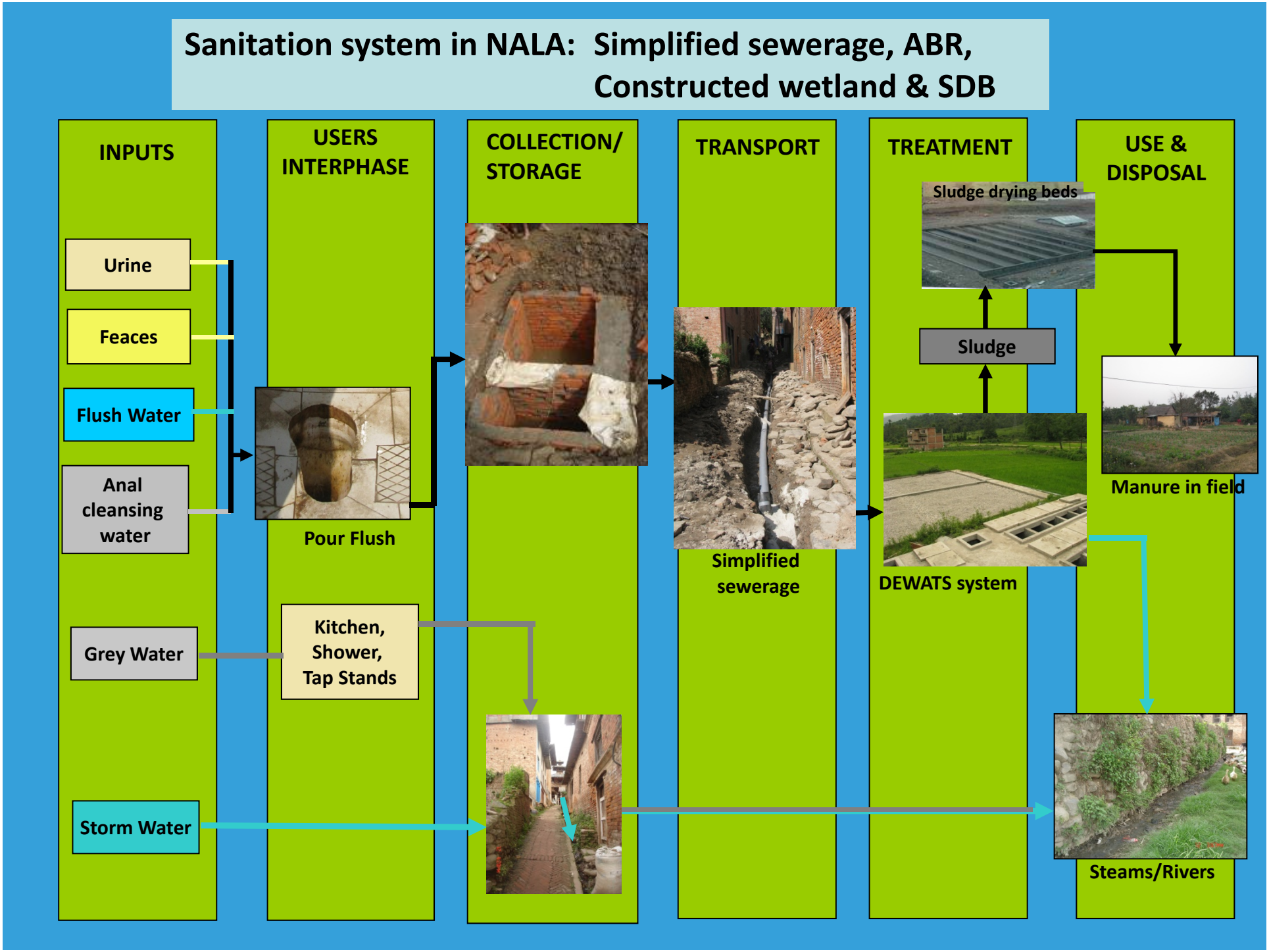
- Developed a CLUES planning document with concrete action plans
- Individual toilets, simplified sewerage & Dewats system developed
- Successful in pooling resources from multiple partners
- Black water addressed – other waste streams in pipeline
- Revolving fund mechanism successful in providing sanitation access



COSTS:

Per capita cost of planning:	**USD 10**
Per capita cost of Dewats:	**USD 64**
Cost contribution by users:	**>50%**

Sanitation system in NALA: Simplified sewerage, ABR, Constructed wetland & SDB



O&M planning:

- O&M planning process
  - Community meetings - Ward level FGDs
  - Identification of potential problems, issues
  - Site inspection of the sanitation system with participants
  - Preparation of the action plan (outlines series of activities)
- The plan:
  - Identified potential O&M problems & solutions (sludge emptying, inspecting manholes, bed clogging…)
  - Provided positive feedback for ongoing construction work and its improvement
  - Agreed on a annual O&M service fee
  - Increased responsibility of the users
  - Developed an O&M Manual

Ensuring sustainability

- **Institutional capacity building:**
  - Institutional merger and strengthening – a new WATSAN, legally registered users committee formed
  - Trainings & basic logistics provided for O&M of the systems
  - 2 staffs (administrative and technical) will be hired for daily O&M and management
- **Financial security:**
  - Revolving fund to be used as O&M reserve fund once returned
  - Continuous source of revenue through user fee: USD 6 per household
  - Established linkages with local authority
- **Technical support**
  - Partner NGOs are competent and are locally available. Will provide one year monitoring of the system
  - Linkages established with research students to study its performances

Conclusions and way foward

- Developing a participatory O&M plan helps users to visualize the overall system, identify problems and solutions together, builds awareness and increases ownership
- Developing an O&M plan is crucial for long term operation and sustenance
- Financial security and financing mechanism are integral part of the plan
- Collection of household service fee to meet operational costs should be made clear to the users from the beginning and not after the system is complete
- Institutional responsibility and sense of ownership should be strengthened – can be attained through a participatory planning process