

Water Treatment Technology Selection Guide Team

Siwei Oon and Li Hui Goh

Fall 2011

Detailed Tasks List

- Research on the criteria (e.g. technical, socio-economic aspects) for selecting water treatment technologies, with a focus on application in resource-poor communities
 - Scour e-journals, textbooks and consultant reports on selection guidelines practiced in real-world scenarios
- Literature review of sustainable and affordable water treatment technologies (e.g. coagulation, flocculation, sedimentation, filtration, chlorination, etc), which is targetted towards small to medium sized communities
 - Learn about the capabilities and limitations of the AguaClara technology (from the Honduras team)
 - Develop a graphic illustration and layperson description for technologies under consideration (for incorporation into the Selection Guide)
- Literature review of water quality parameters targetted for removal by treatment processes - coagulation, flocculation, sedimentation, filtration, chlorination, etc
 - Identifying a list of water quality parameters as part of guide inputs for Selection Guide,
 - Coming up with simple descriptions / visual aids for technical terms to aid laypersons' understanding, e.g. depth-of-visibility option for turbidity
- Establishing performance efficiencies of unit treatment processes
 - Develop a table to quantify limits of treatment for specific water quality parameter, with performance efficiencies

- Develop combinations of unit treatment processes, to treat water of various qualities
 - Establish rules of grouping treatment processes, with reference to common industry practices, to address treatment requirements
- Research on various methods of Multi-Criteria Decision Making (MCDM)
 - Select an appropriate MCDM method for use in Selection Guide
 - Develop a decision tree, incorporating water quality inputs and inputs of the other technical and socio-economic criteria
- Develop a set of key questions to prompt a layperson to ask technology vendors upon recommendation of treatment technology by Selection Guide