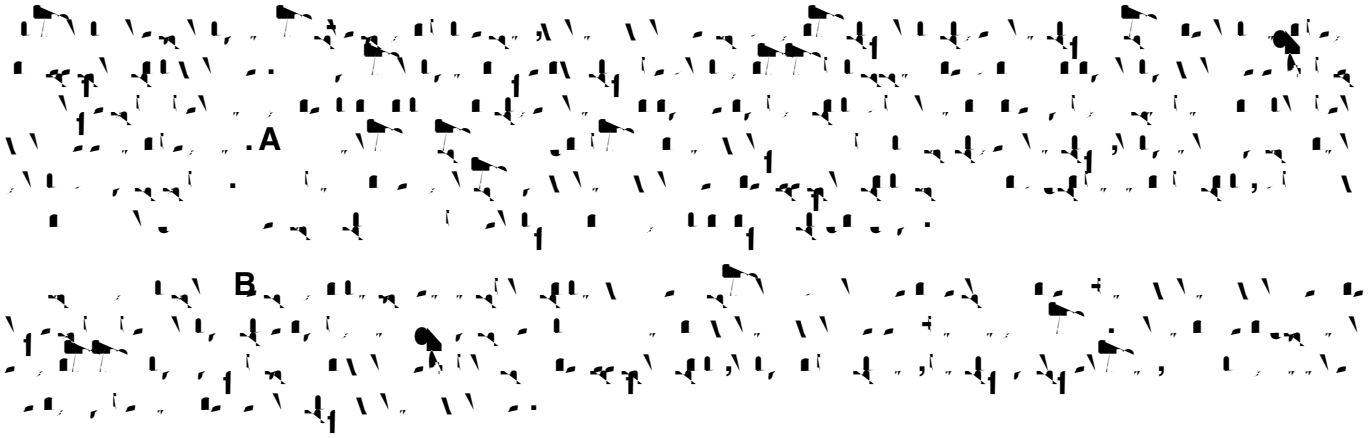
37. Re-use of wastewater



There are several questions to consider:

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Many communities in most developing countries do not have reliable access to supplies of clean water. As the demand for water increases, making more efficient use of water becomes more important. Water re-use should be seriously considered before water availability is matched by water demand (Figure 1). Note that not all water needs to be treated to potable standards. Most wastewater re-use is informal and goes largely unrecognized by the public and by many professionals.

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Wastewater may contain chemicals which are harmful to the growth and development of plants. It may also contain bacteria and other organisms which are harmful to agricultural workers and to those who handle, cook, or eat the plants. Wastewater may even contain bacteria and other organisms which, when eaten by animals, may in turn infect the people who eat the contaminated meat. Figure 2 examines the health risks in relation to the level of contamination and the re-used wastewater control measures.

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It is important to first consider which water uses are the major ones, and efforts should then be made to be more econ52b cvides2lTD0.0021 Tc0.0041 Tw(It is import9cmenie5hould e diffa84 -rB.B.BTD0.00des/econ5

Re-use of wastewater

No protective measures	High	High	High		High	High
Crop restriction	High	High	High		High	Safe
Application measures	High	High	Safe		Safe	Safe
Human exposure control	High	High	High		Low	Low
Partial treatment in ponds	Low	Low	Low		Safe	Low
Partial treatment by conventional methods	Low	Low	Low		Low	Low
Partial treatment in ponds, plus crop restriction	Low	Low	Low		Safe	Safe
Partial treatment by conventional methods, plus crop restriction	Low	Low	Low		Low	Safe
Partial treatment, plus human exposure control	Low	Low	Low		Safe	Low
Crop restriction, plus human exposure control	High	High	High		Low	Safe
Full treatment	Safe	Safe	Safe		Safe	Safe

2.

[a] In specific cases, local epidemiological, sociocultural, and environmental factors should be taken into account, and the guidelines modified accordingly.

[b] *Ascaris* and *Trichuris* species and hookworms.

[c] During the irrigation period.

[d] A more stringent guideline (200 faecal coliforms per 100 ml) is appropriate for public lawns, such as hotel lawns, with which the public may come into direct contact.

[e]