

5.0 CONCLUSIONS AND RECOMMENDATIONS

The report provides the key concepts and a detailed framework for the economic analysis of three risk management scenarios proposed for the SEDCW site in Phnom Penh, Cambodia. The absence of site-specific designs and cost estimates for the three scenarios meant that costs were estimated generally using quantities and prices from elsewhere. The absence of a scientific relationship linking reduced POPs chemical exposure to reduced human health impact meant that no benefit stream could be estimated from first principles for subsequent comparison with the cost stream.

Therefore, the analysis asked two key questions: a) how much human health impact, expressed in DALYs is required to cover the costs of the three scenarios?; and, b) expressed as a percentage of the total DALY rate for the site, is it reasonable from an epidemiological point of view to expect that these cost-covering DALY levels can be achieved? With the above-cited qualifiers in mind, the analysis resulted in the following tentative conclusions:

- *Scenario 1:* There is a strong likelihood that the human health benefits of managing POPs contamination at the SEDCW site are sufficient to cover the cost of Scenario 1;
- *Scenarios 2:* It is likely that human health impact **alone** is insufficient to justify the investment cost of Scenario 2. Justification for the investment requires the inclusion of other benefits, the significance of which will determine whether an investment in Scenario 2 is warranted. Even keeping in mind that the benchmark is a minimum and may be larger, it is clear that significant additional economic, environmental and social benefits would be required to justify the investment in Scenario 2; and
- *Scenario 3:* It is likely that human health impact **alone** is insufficient to justify the investment cost of Scenario 3. Justification for the investment requires the inclusion of other benefits, the significance of which will determine whether an investment in Scenario 3 is warranted. Even though the benchmark may be larger, it appears that significant additional economic, environmental and social benefits would be required to justify the investment in Scenario 3.

The quantitative analysis suggests that investing in POPs risk management measures is an effective allocation of public resources, particularly health and safety training and containment. Breaking the contamination pathway is key, and this can be done cost-effectively at the SEDCW site. Decision makers must also consider the fact that health improvement policy can be pursued regardless of the outcome of the economic assessment. This is often the case in developed countries where uncertainty in the determination of costs and benefits cannot be used as an argument for inaction. Furthermore, there are moral and

ethical reasons to insist on investments that improve human health on the grounds that it is in the public interest and, as a result, outside of any economic consideration.

Finally, should the decision be made to proceed with risk management policies at the local and national level, attention and studies should focus on ensuring that the proposed measures are designed and implemented in a sound and cost-effective manner.