WHAT CAN GO WRONG AND WHAT ARE THE CONSEQUENT EFFECTS ?

- **Drought conditions** will result in lower levels in the dams, which mean that water has to be abstracted from the water close to or near the surface. This in turn, may result in poorer water quality due to high algal concentrations. There may also be an increase in the salt concentration due to higher evaporation.

- **Floods** will generally increase the risk of bacteriological (micro- organisms) contamination, and also increase the turbidity of the raw water, making the treatment and disinfection of the water difficult.

- **Pollution** from industrial affluent discharges, sewage works discharges, agricultural activities and dense settlements could potentially affect the water quality of dams negatively. The water quality of dams can also be negatively affected by **power boating**, which spill oils and fuels, albeit in small quantities per boat.

HOW WILL YOU KNOW?

- A **monitoring programme** to determine the water quality of the dam at the point of abstraction is essential. The data should be assessed as described earlier, but dams with a high nutrient load (Eutrophication) will show a greenish colour and definite taste and odour problems will be noticeable.

- Flood conditions will increase the risk of bacteriological pollution and if the source is suspected of being contaminated by external sources, the focus should be placed on toxic substances. Special analyses to determine lead and hydro-carbon contamination should be carried out if water is contaminated by oils and fuels.

WHAT TO DO?

- The best thing to do is to prevent any unwanted contamination of water in dams or lakes, since once a dam has been contaminated; it is difficult to rectify the situation. Once it is contaminated, the only viable option is to adapt water treatment processes to overcome the problem.

REFERENCES: DWAF (2002). Quality of domestic water supplies. Volume 5: Management Guide. WRC No. TT 162/01, pp. 34 an d 35