

“Capacity Building and Strengthening Institutional Arrangement”

Analysis and sampling of water and water pollution

Elaboration of guidelines regarding how to respect the national and international law about water, and development of planning systems to assess the water monitoring systems

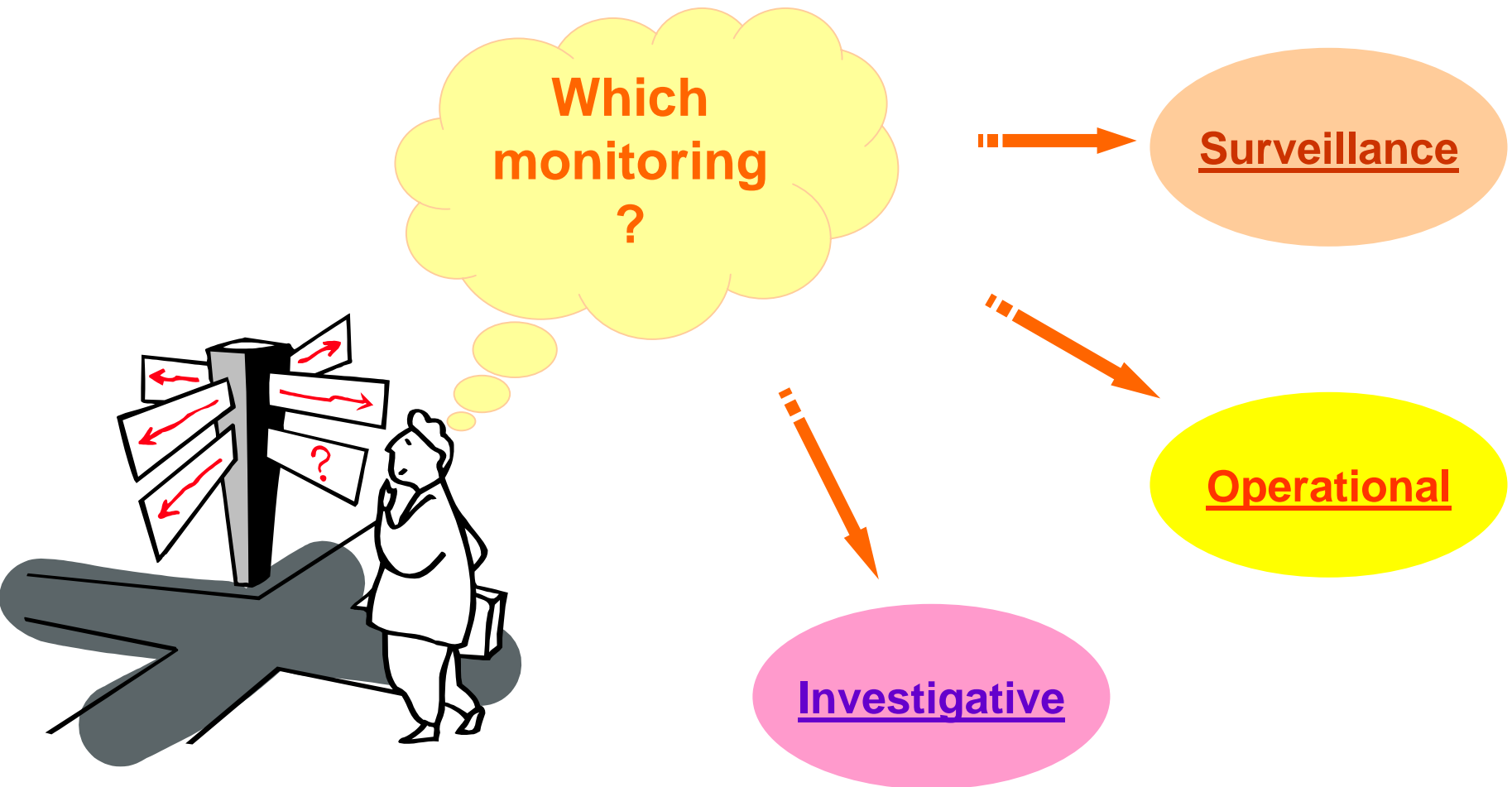
Part 2

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Monitoring



Surveillance Monitoring

Shall be carried out of sufficient water bodies to provide an assessment of the overall water status within each catchment.

Frequency of monitoring

- In order to achieve an acceptable level of confidence and precision.
- At least once during the surveillance monitoring period for biological and hydromorphological indicators; according to the seasonal variation for physico-chemical indicators.



Operational monitoring

Shall be carried out for all those bodies of water which on the basis of either the impact assessment or surveillance monitoring are identified at risk or failing to meet the fixed objectives or for those bodies of water into which dangerous substances are discharged.

Frequency of monitoring have to be selected according to:

- In order to achieve an acceptable level of confidence and precision;
- The variability in parameters resulting from both natural and anthropogenic conditions. The times at which monitoring is undertaken shall be selected so as to minimise the impact of seasonal variation on the results, ensuring that they reflect changes in the water bodies as a result due to anthropogenic pressure.

Investigative monitoring

Shall be carried out when the reason for any exceedances is unknown, when the surveillance monitoring for a water body are not likely to be achieved and an operational monitoring has not already been established, in order to ascertain the causes of a water body failing to achieve the fixed objectives, to ascertain the magnitude and impacts of accidental pollution.

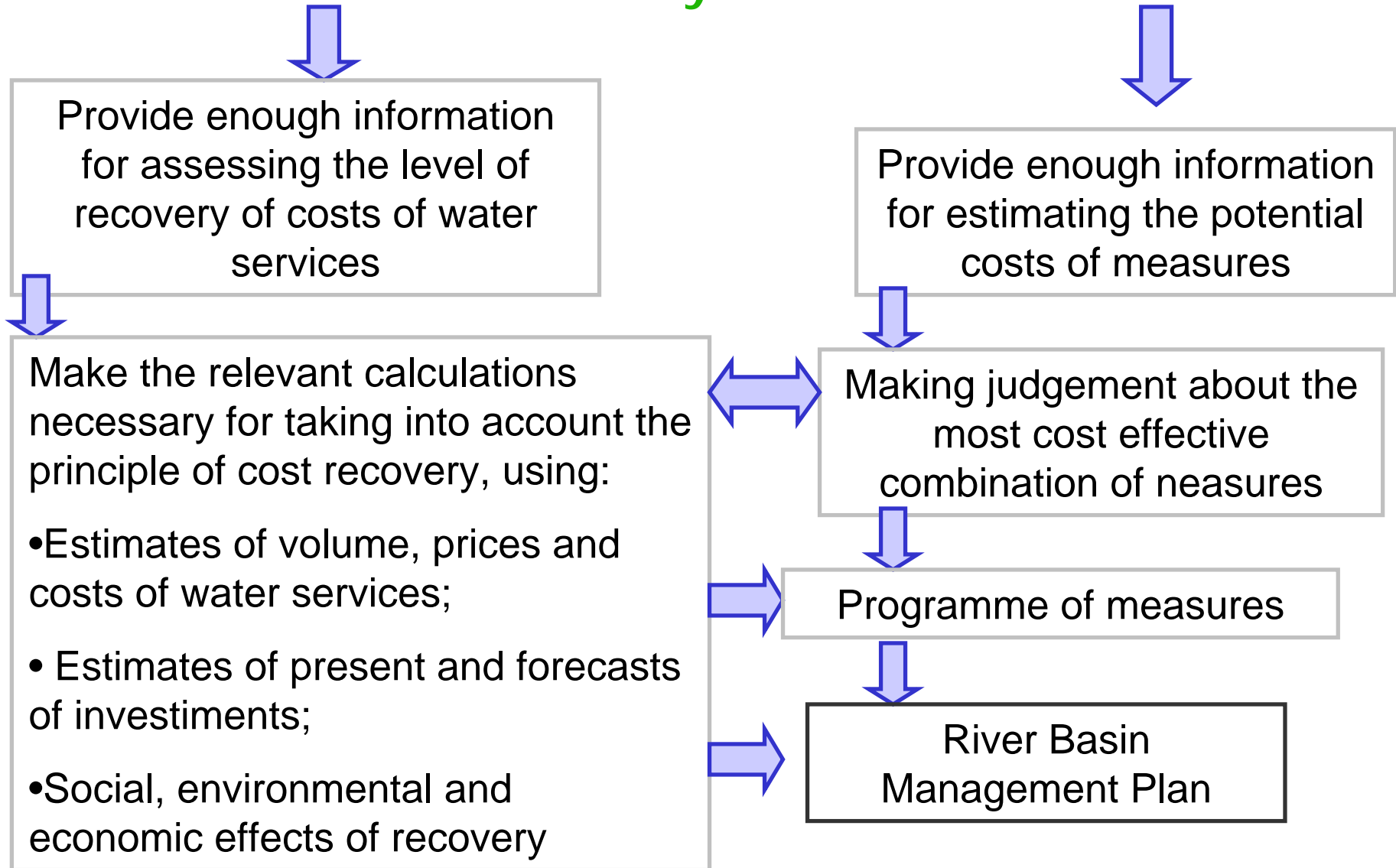
Frequency of monitoring

- In order to achieve an acceptable level of confidence and precision.
- It depends on the specific case of study.

Steps of Knowledge and application of measures

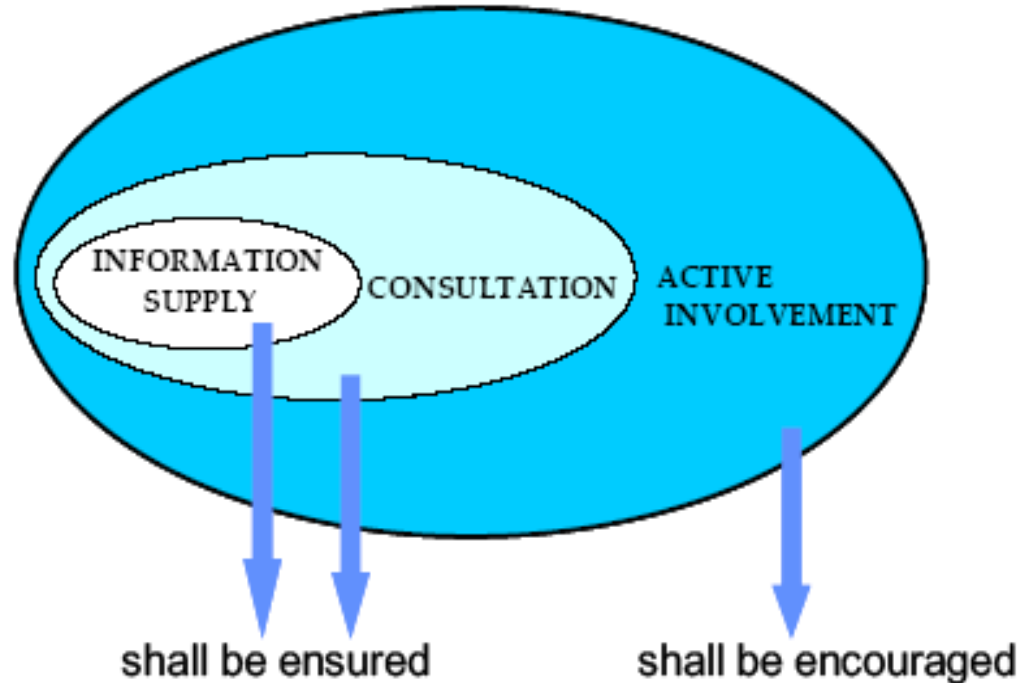
1. Identification of monitoring network;
2. Identification of sampling matrix: water-sediment-biota;
3. Identification of monitored parameters and/or monitored indicators;
4. Monitoring;
5. Classification of the state of quality of the water bodies and control according to the environmental objectives;
6. Application of measures according to the quality of the environmental components.

Economic analysis of water uses



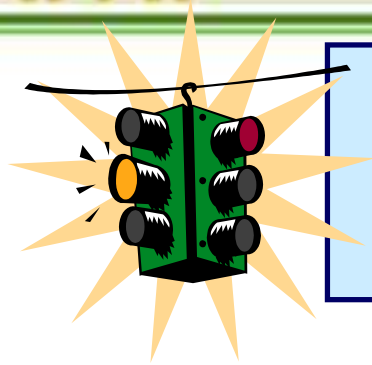
Public participation

In the whole implementation process sufficient information is necessary to enable active involvement of stakeholders and the public in general.



Consultation aims at learning from comments, perceptions, experiences and ideas of stakeholders.

Interested parties participate actively in the planning process by discussing issues and contributing to their solution.

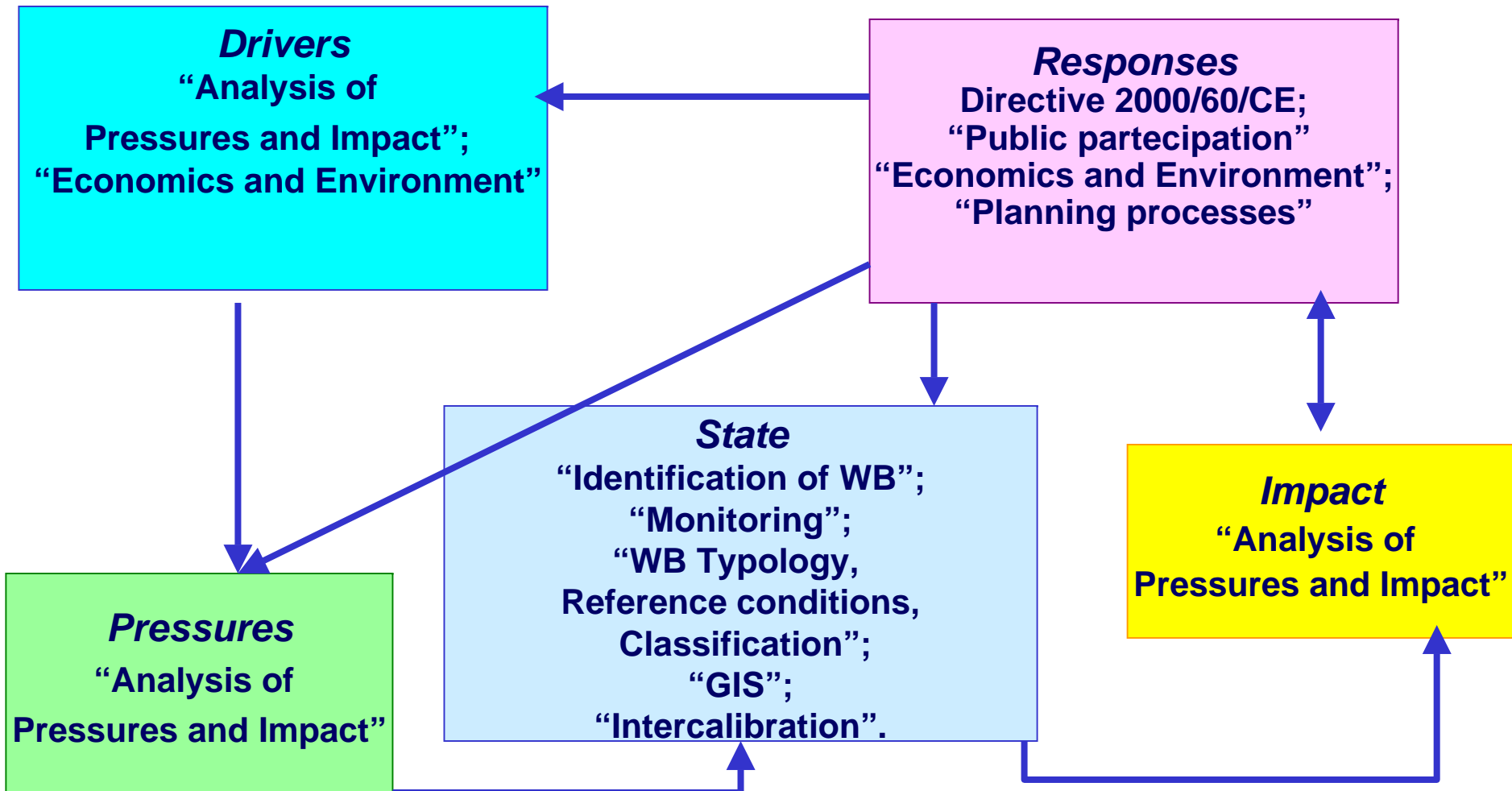


Public participation can generally be defined as allowing people to influence the outcome of plan and working process.

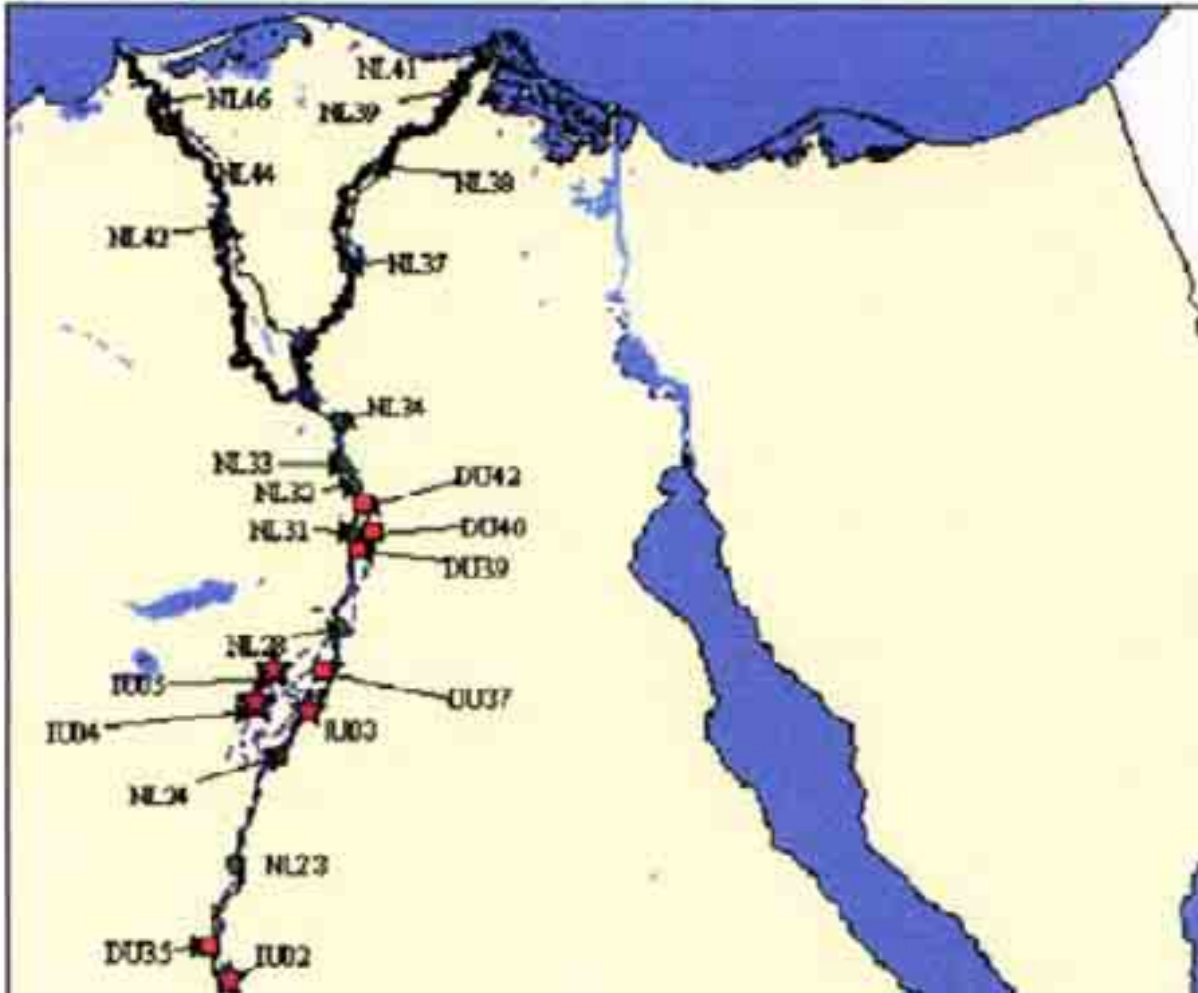
Typology of possible stakeholders

- **Professionals**: public and private sector organisations, professional voluntary groups and professional NGO (social, economic and environmental).
- **Authorities, elected people**: government departments, statutory agencies, municipalities, local authorities.
- **Local Groups**: non professional organised entities operating at a local level (communities centred on place – as residents associations – and communities centred on interest – farmers’ groups, fishermen, etc).
- **Individual citizens, farmers and companies** representing themselves.

Application of DPSIR model to the Water Framework Directive (2000/60/CE) and its Guidelines



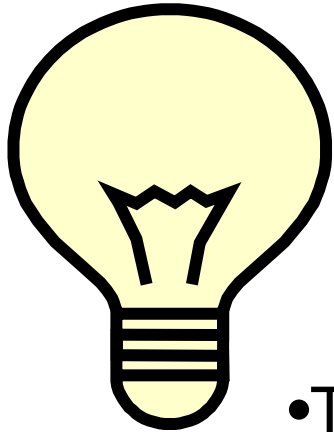
Water Quality Monitoring Network along the Nile



**How does
the MWRI set
the
monitorin
network up?**

Source: Egypt State of The Enviroment Report 2004

The methodology presented in this lesson must be adapted to the Egyptian national, governorate/local circumstances!



- This lesson proposes just an overall methodological approach.
- Because of the diversity of circumstances within each Country, the way to deal with the logical approach and address specific issues will vary from one river basin to the next (Nile and other??!).
- This proposed methodology may therefore need to be tailored to specific circumstances.