

## **APPENDIX A**

# **PROPOSED CHANGES TO THE ECOLOGICAL RESERVE DETERMINATION METHODS FOR ESTUARIES**

## Data requirements

- a. It is proposed that measurements of *Particulate (and possibly also Dissolved) Organic Carbon*, both in river inflow and at selected locations in the estuary, be included to be able to quantify organic nutrient processes for heterotrophic production (e.g. through detritus).
- b. Where possible the hydrologist responsible for generating the different flow scenarios should be at the workshop.

## Determination of Present Status Category (Estuarine Health Index)

- a. Guidelines on EHI scoring regarding *Hydrodynamics and Mouth Conditions* need to be revised to also cater for systems that do not close annually, e.g. Bot and Orange.
- b. Guidelines on EHI scoring regarding *Hydrology* (i.e. periods of low flow) need to be revisited to establish whether these are adequate for dealing with reversal in seasonality of river flow.
- c. As part of the *Physical Habitat Alteration* in the EHI, consider including a component for supratidal habitat, e.g. flood plains.
- d. In the *Water Quality* Component of the EHI, it is proposed that the section on 'Suspended solids present in inflowing freshwater' be changed to 'Suspended solids and/or turbidity levels in the estuary' (Motivation: Levels in river water may stay the same, but due to modification in river inflow, levels in the estuary may be altered)

## Determination of Estuarine Importance

- a. In future, ecological importance rating when dealing with trans-boundary systems requires a more regional perspective (e.g. southern Africa), rather than only a national (SA) perspective.
- b. The functional importance of smaller estuaries, for example the fact that they could be of high importance on a regional context even though they support only a relatively small number of species, need to be motivated more explicitly in the methods.