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SUMMARY OF FIRST DAY'S PROCEEDINGS

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I will attempt to summarise what I believe to be the main thrust evident from the papers which were heard yesterday.

Firstly, nutrient input may come from general run-off, either natural, urban or agricultural, or from point sources such as rivers, streams and specific effluent outfalls. However, there are other sources which are easy to overlook. The first, and by far the greatest of all sources of nutrients for the continental shelf is the throughput of oceanic water. The levels are low but the volumes are extremely high. Added to this, there is the input occasionally or in some cases frequently, of nutrients brought to the surface in shelf edge intrusions of deep water or from direct upwellings.

It is clear that all biological processes proceed as a function of nutrient concentration. Concentration is a function of supply and recycling. Supply is a function of input, mixing and circulation. Recycling is a function of biological processes.

The following principles apply in consideration of the effects of nutrients on living ecosystems:

- . there is some evidence of local response to specific point source inputs in some but not all cases;
- . ~~there is clear evidence of some deterioration in inshore reef systems.~~  
It is not clear whether this is man-induced;
- . there is general agreement that phosphate poses the most significant threat especially to corals and other calcifying organisms;
- . there is good general agreement on the phosphate levels above which some threat is posed;
- . the present inshore nutrient levels (particularly phosphate) are at or near threatening levels:
  - it is not clear for how long they have been at that level
  - ~~it is not certain whether human influences are involved~~
  - it is not clear how long we have before these levels reach hazardous limits.

These factors can be monitored and the outline of a management strategy could be formulated on the basis of knowledge of the participants present at this workshop to determine:

- the level of risk
- the rate of change towards higher risk
- the need for further controls.

Such monitoring will certainly need to be applied to

- specific areas such as Green Island/Cairns, the Whitsuridays, arid  
Townsville
- Great Barrier Reef-wide

The methodology and cost-effectiveness of monitoring have been considered to some extent in the papers and it is clear that reasonable strategies can be discussed at this time.