

**ENVIRONMENTAL
IMPACT
ASSESSMENT**

PRINCIPLES AND APPLICATIONS

PAUL A. ERICKSON

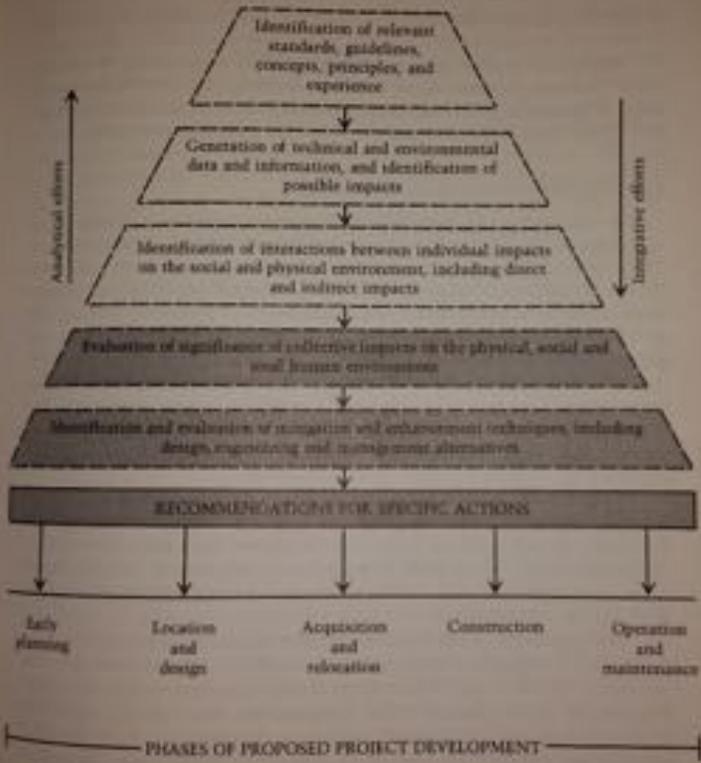


FIGURE 4.1. Analytic (unshaded) and integrative (shaded) tasks required to affect decision-making during project development.

impacts and, therefore, in the selection of impacts for the major attention of decision-makers that the assessment process demonstrates the usefulness of impact assessment as a decision-making tool. Contrarily, if the assessment process never gets beyond a picayune examination of individual environmental components, the decision-maker will be faced with an overload of highly specialized information, none of which he or she knows how to use.



**ARTIFICIAL REEF
DEVELOPMENT CENTER**

**ARTIFICIAL REEF
DEVELOPMENT FOR
RECREATIONAL FISHING:
A PLANNING GUIDE**

TABLE OF CONTENTS

| | |
|--|----|
| Introduction | 1 |
| Phase 1: Advance Planning | 5 |
| Phase 2: Location and Design | 21 |
| Phase 3: Permitting Procedures | 28 |
| Phase 4: Construction and Deployment | 34 |
| Phase 5: Operation and Maintenance | 44 |
| Phase 6: Project Evaluation | 52 |
| Bibliography | 60 |
| Appendix A | 63 |

Site Considerations

1985 National Artificial Reef Program

1. geologic factors (bottom types, slope, etc.)
2. hydrographic (bathymetry, waves, currents and tides
3. water quality (turbidity, salinity, B.O.D and D.O.D.)
4. Biological considerations (live bottom, etc.)
5. Specific Site Evaluation

GIS ATTRIBUTES

- WATER DEPTH WATER TEMPERATURE GEOLOGY/SLOPE
- SUBSTRATE – LIVE BOTTOM PROFILES High and Low TURBIDITY
- EUPHOTIC ZONES DISSOLVED O₂ SALINITY WAVES
- NATURAL REEF SNAG OR HANG LOCATIONS MATERIAL TYPES
- NAVIGATION AID LOCATIONS (BUOYS) FUNCTION RESTRICTIONS
- MARINE SANCTUARIES SEAFLOOR LEASES MARINE MINING
- MILITARY EXCLUSION AREAS TRAWLING GROUNDS CABLES
- PIPELINES WINDFARMS OIL RIGS SMZs SHIPPING LANES