

**No.16-12/2005-IA-III**  
Government of India  
Ministry of Environment & Forests  
(IA-III Division)

Paryavaran Bhawan,  
CGO Complex, Lodi Road,  
New Delhi – 110003.

Dated the 8<sup>th</sup> September, 2005

**Sub: Invitation for bids for preparing “National Plan of Action for preventing pollution of Coastal Waters from land based activities” – regarding.**

- i. The Ministry of Environment and Forests proposes to bring National Plan of Action (NPA) for preventing pollution of Coastal Waters from land based activities.
- ii. The terms of reference (TOR) for the preparation of the NPA is given at Annexure-I.
- iii. The interested institution(s) namely National Public/Private Institutions may apply. Individual consultants are not permitted to apply.
- iv. An interested institution /organization, wishing to prepare the above report on behalf of Government of India, may submit their technical and financial bids, in separate sealed envelopes, shall be received by the undersigned on or before 11:00 A.M. on 15.10.2005; bids received after this, would not be entertained. The technical bids would be opened on the same day (15.10.2005) at 3:00 P.M. and would thereafter be evaluated by a Screening Committee constituted for the purpose. The financial bids of only those institutions, who have qualified during the screening of technical bids, would be opened and evaluated.
- v. The selected institution(s) has to start the work immediately after its award, and the report should be completed as per the time frame. In case the selected institute declines to take up the study after a notice of award has been issued, it would be barred from applying for any study, evaluation or assistance of any kind from Ministry of Environment and Forests, Government of India for a period of 3 years from the date of award.
  - vi. The application alongwith the technical and financial bids for preparing the NPA should be submitted to the Director, IA-III Division, Ministry of Environment and Forests, Paryavaran Bhawan, CGO Complex, Lodhi Road, New Delhi – 110003 on/or before 15<sup>th</sup> October, 2005 by post. Application received after the deadline will not be accepted.
  - vii. The decision of Ministry of Environment and Forests shall be final. And no enquiries, or application for review, shall be entertained.

**(Dr. N. H. Hosabettu)**  
**Director**  
**Government of India**  
**Ministry of Environment and Forests**  
**IA-III Division**

## Annexure-I

### **Sub: The preparation of the National Plan of Action (NPA) for preventing pollution of coastal water's from land based activities.**

#### OBJECTIVE:

To develop comprehensive, continuing and adaptive programmes of action within the framework of Integrated coastal area management which should include provisions for:

- a. Identification and assessment of problems;
- b. Establishment of priorities;
- c. Setting management objectives for priority problems;
- d. Identification, evaluation and selection of strategies and measures, including management approaches;
- e. Criteria for evaluating the effectiveness of strategies and programmes;
- f. Programme support elements.

#### A. Identification and assessment of problems

The identification and assessment of problems is a process of combining five elements:

##### (a) Identification of the nature and severity of problems in relation to:

- (i) Food security and poverty alleviation;
- (ii) Public health;
- (iii) Coastal and marine resources and ecosystem health, including biological diversity;
- (iv) Economic and social benefits and uses, including cultural values;

##### (b) Contaminants: (not listed in order of priority)

- (i) Sewage;
- (ii) Persistent organic pollutants;
- (iii) Radioactive substances;
- (iv) Heavy metals;
- (v) Oils (hydrocarbons);
- (vi) Nutrients;
- (vii) Sediment mobilization;
- (viii) Litter;

##### (c) Physical alteration, including habitat modification and destruction in areas of concern;

##### (d) Sources of degradation:

###### (i) Point sources (coastal and upstream), such as: (not listed in order of priority)

- a. Waste-water treatment facilities;
- b. Industrial facilities;

- c. Power plants;
- d. Military installations;
- e. Recreational/tourism facilities;
- f. Construction works (e.g., dams, coastal structures, harbour works and urban expansion);
- g. Coastal mining (e.g., sand and gravel);
- h. Research centres;
- i. Aquaculture;
- j. Habitat modification (e.g., dredging, filling of wetlands or clearing of mangrove areas);
- k. Introduction of invasive species;

(ii) Non-point (diffuse) sources (coastal and upstream), such as: (not listed in order of priority)

- a. Urban run-off;
- b. Agricultural and horticultural run-off;
- c. Forestry run-off;
- d. Mining waste run-off;
- e. Construction run-off;
- f. Landfills and hazardous waste sites;
- g. Erosion as a result of physical modification of coastal features;

(iii) Atmospheric deposition caused by:

- a. Transportation (e.g., vehicle emissions);
- b. Power plants and industrial facilities;
- c. Incinerators;
- d. Agricultural operations;

(e) Areas of concern (what areas are affected or vulnerable): (not listed in order of priority)

- (i) Critical habitats, including coral reefs, wetlands, seagrass beds, coastal lagoons and mangrove forests;
- (ii) Habitats of endangered species;
- (iii) Ecosystem components, including spawning areas, nursery areas, feeding grounds and adult areas;
- (iv) Shorelines;
- (v) Coastal watersheds;
- (vi) Estuaries and their drainage basins;
- (vii) Specially protected marine and coastal areas; and
- (viii) Small islands.

## B. Establishment of priorities

Priorities for action should be established by assessing the five factors described above and should specifically reflect:

- (a) The relative importance of impacts upon food security, public health, coastal and marine resources, ecosystem health, and socio-economic benefits, including cultural values, in relation to:
  - (i) Source-categories (contaminants, physical alteration, and other forms of degradation and the source or practice from which they emanate);
  - (ii) The area affected (including its uses and the importance of its ecological characteristics);
- (b) The costs, benefits and feasibility of options for action, including the long-term cost of no action.

In the process of establishing priorities for action and throughout all stages of developing and implementing national programmes of action, States should:

- (a) Apply integrated coastal area management approaches, including provision to involve stakeholders, in particular local authorities and communities and relevant social and economic sectors, including non-governmental organizations, women, indigenous people and other major groups;
- (b) Recognize the basic linkages between the freshwater and marine environments through, inter alia, application of watershed management approaches;
- (c) Recognize the basic linkages between sustainable management of coastal and marine resources, poverty alleviation and protection of the marine environment;
- (d) Apply environmental impact assessment procedures in assessing options;
- (e) Take into account the need to view such programmes as an integrated part of existing or future comprehensive environmental programmes;
- (f) Take steps to protect: (i) critical habitats, using community-based participatory approaches that are consistent with current approaches to conservation and uses compatible with sustainable development; and (ii) endangered species;
- (g) Integrate national action with any relevant regional and global priorities, programmes and strategies;
- (h) Establish focal points to facilitate regional and international cooperation;
- (i) Apply the precautionary approach and the principle of intergenerational equity.

The precautionary approach should be applied through preventive and corrective measures based on existing knowledge, impact assessments, resources and capacities at national level, drawing on pertinent information and analyses at the subregional, regional and global levels. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing cost-effective measures to prevent the degradation of the marine environment.

### C. Setting management objectives for priority problems

On the basis of the priorities established, States should define specific management objectives, both with respect to source categories and areas affected. Such objectives should be set forth in terms of overall goals, targets and timetables, as well as specific targets and timetables for areas affected and for individual industrial, agricultural, urban and other sectors. Wherever possible, States should take immediate preventive and remedial action using existing knowledge, resources, plans and processes.

#### D. Identification, evaluation and selection of strategies and measures

Strategies and programmes to achieve these management objectives should include a combination of:

- (a) Specific measures, including, as appropriate:
  - (i) Measures to promote sustainable use of coastal and marine resources and to prevent/reduce degradation of the marine environment, such as:
    - (a) Best available techniques and best environmental practices, including substitution of substances or processes entailing significant adverse effects;
    - (b) Introduction of clean production practices, including efficient use of energy and water in all economic and social sectors;
    - (c) Application of best management practices;
    - (d) Use of appropriate, environmentally sound and efficient technologies;
    - (e) Product substitution;
  - (ii) Measures to modify contaminants or other forms of degradation after generation, such as:
    - (a) Waste recovery;
    - (b) Recycling, including effluent reuse;
    - (c) Waste treatment;
  - (iii) Measures to prevent, reduce or ameliorate degradation of affected areas, such as:
    - (a) Environmental quality criteria, with biological, physical and/or chemical criteria for measuring progress;
    - (b) Land-use planning requirements, including criteria for siting of major facilities;
    - (c) Rehabilitation of degraded habitats;
- (b) Requirements and incentives to induce action to comply with measures, such as:
  - (i) Economic instruments and incentives, taking into account the "polluter pays" principle and the internalization of environmental costs;
  - (ii) Regulatory measures;
  - (iii) Technical assistance/cooperation, including training of personnel;
  - (iv) Education and public awareness;
- (c) Identification/designation of the institutional arrangement with the authority and resources to carry out management tasks associated with the strategies and programmes, including implementation of compliance provisions;
- (d) Identification of short-term and long-term data-collection and research needs;
- (e) Development of a monitoring and environmental-quality reporting system to review and, if necessary, help adapt the strategies and programmes;

- (f) Identification of sources of finance and mechanisms available to cover the costs of administering and managing the strategies and programmes.

#### E. Criteria for evaluating the effectiveness of strategies and measures

A key element in successful strategies and programmes is to develop ongoing means of determining whether they are meeting their management objectives. States should develop specific criteria to evaluate the effectiveness of such strategies and programmes. While such criteria must be tailored to the particular mix of elements (illustrated in section C above) in each strategy or programme, they should address:

- (a) Environmental effectiveness;
- (b) Economic costs and benefits;
- (c) Equity (costs and benefits of the strategy or programme are being shared fairly);
- (d) Flexibility in administration (the strategy or programme can adapt to changes in circumstances);
- (e) Effectiveness in administration (management of the strategy or programme is cost-effective and accountable);
- (f) Timing (the timetable needed to put the strategy or programme in place and to begin producing results);
- (g) Inter-media effects (the achievement of the objectives of the strategy or programme creates a net environmental benefit).

#### F. Programme support elements

The long-term objective of national programmes of action should be to develop integrated strategies and programmes to address all action priorities in relation to impacts upon the marine environment from land-based activities. In addition, the programmes of action must themselves be integrated with overall national objectives and other relevant programmes in relation to sustainable development. States therefore should seek to ensure that there are administrative and management structures necessary to support the national programmes of action. These include, as appropriate:

- (a) Organizational arrangements to coordinate among sectors and sectoral institutions;
- (b) Legal and enforcement mechanisms (e.g., need for new legislation);
- (c) Financial mechanisms (including innovative approaches to provide continuing and predictable programme funding);
- (d) Means of identifying and pursuing research and monitoring requirements in support of the programme;
- (e) Contingency planning;
- (f) Human resources development and education;

Public participation and awareness (e.g., based on integrated coastal area management principles).

#### G. Time Period of preparing the NPA:-

6 months from the date of awarding the contract.

- H. The Consultant shall prepare the NPA essentially based on available secondary data/documents collected from authentic sources such as Central and State Pollution Control Boards/Environment Departments of the Coastal State and Union Territories and reputed National Scientific Institutions and other relevant agencies like Coast Guard, Directorate General of Shipping, Industry Organizations, Urban, Municipal and local Government Authorities etc.
  
- I. The NPA prepared will lay down specific recommendations to control/prevent pollution of Coastal Waters from land based activities in short term, medium term and long term plan. Approximate financial expenditure for such prevention of pollution shall also be indicated.

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