

PR39

# Environmental Impact Assessment of Human Rabies Vaccine Project.

Human Biologicals Institute,  
National Dairy Development Board, Ooty

*Report on the Trial-operation phase*



## PROJECT TEAM

*P A Azeez, R Sivakumar, S Bhupathy, R Mohanraj, D Stephen and P Kannan*



**Salim Ali Centre For ornithology & Natural history  
Coimbatore, Tamil Nadu**

2000

SACON Library



PR39

**Environmental Impact Assessment of  
Human Rabies Vaccine Project,  
Human Biologicals Institute,  
National Dairy Development Board, Ooty**

*Report on the Trial-operation phase*

FOR REFERENCE ONLY



**PROJECT TEAM**

*P A Azeez, R Sivakumar, S Bhupathy, R Mohanraj, D Stephen and P Kannan*



FOR REFERENCE ONLY

**Salim Ali Centre For ornithology & Natural history  
Coimbatore, Tamil Nadu**

2000

# CONTENTS

THE PROJECT: THE HUMAN BIOLOGICALS INSTITUTE .....	1
Utilities and off-site facilities .....	2
THE PRESENT STUDY .....	2
Scope and Objectives .....	2
Study area .....	2
METHODOLOGY .....	3
OBSERVATIONS .....	4
Meteorology .....	4
Air quality .....	6
Water quality .....	7
Noise levels .....	9
Floristic composition at project location and its environs .....	10
Flora in the environs of the project .....	11
Fauna in the project locations and environs .....	15
Amphibians and reptiles .....	15
Birds and mammals .....	15
Endangered species .....	16
POLLUTION CONTROL MEASURES .....	18
Liquid effluent .....	18
Thermal sterilization .....	18
Conventional treatment of effluents .....	19
Solid waste disposal .....	20
Gaseous emissions .....	20
ENVIRONMENTAL IMPACTS OF THE PROJECT .....	22
Impacts during construction .....	22
Impacts of construction on abiotic environmental characteristics .....	22
Impacts of construction on biotic environmental characteristics .....	23
Impacts on abiotic environmental characteristics during the operation .....	24
Impacts on biotic characteristics .....	25
Impacts on socio-economic characteristics of the area .....	26
Proposed environment management practices .....	26
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS .....	29
REFERENCES .....	31
APPENDICES .....	35
ACKNOWLEDGEMENTS .....	45

## **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

The National Dairy Development Board has established Human Biologicals Institute (HBI) in Ooty, to manufacture human rabies vaccine based on vero cell micro carrier technology.

Prior to the operation of HBI a study was conducted to assess the possible impacts of the project on environment and also to assess the baseline data on selected components of the environment. The parameters examined were flora, fauna, air, water and soil quality, and socio-economics. Area falling within ten kilometer radial distance from the project site, assumed as the impact zone of this project was studied intensively.

The environs of the project, which falls under the study area is mostly agricultural land, human habitations, eucalyptus, wattle and social forestry plantations and built-up area. The dominant vegetation type is plantations and agricultural lands. Most of the faunal species found in the project area are highly adaptable and have wider distribution elsewhere in India.

The pre-operation stage EIA, examined the possible impacts and concluded them as negligible. The present study was undertaken as a continuation of that study to cross check the conclusions.

The project requires approximately 20 m<sup>3</sup>/d of water and release almost the same quantity as effluents. The effluents undergo a series of treatment to make it environmentally and hygienically safe. The effluents from restricted area of the plant undergo thermal sterilization, prior to being let off into the general effluent treatment plant. This assures that no live particle enter the general environment.

The discharge from the ETP is found to satisfy the concerned standards, such as that for release into environment and use in irrigation. However, no liquid discharge is released outside the HBI campus. The treated effluents are used for gardening inside the campus. Since, the discharge is not expected to have any recalcitrant pollutants or heavy organic load, the use of the effluent for gardening is not suspected to contaminate the surface or ground water quality.

The gaseous emissions from the HBI arises basically from the boiler and generator. Both the equipment comply with the statutory regulations. Moreover, the exhausts are

not found to hike any of air pollution parameters examined during the study, probably because of the low quantity and proper dispersal.

The solid waste generation from HBI is small. HBI also has efficient means to handle the same. No solid waste handled carelessly to cause environmental or health concerns were found in HBI campus.

No notable distinction could be found in floral / faunal species diversity or species composition according to the distance from the project site and that could attributed to the operation of the firm. Since whatever small quantity of air pollutants released from HBI are well dispersed and do not make any change on the ambient concentration no alteration in floral and faunal species composition was also expected.

In the long-term perspective, the project does not pose any serious environmental problem. However, it needs to be ensured that the treatment plants for the liquid effluents, the generator sets and boiler are maintained properly, to curtail deterioration of performance and resulting contamination of environment during operation.